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41ST CONGRESS, 2d Session. } HOUSE OF REPRESENTATIVES. { Ex. DOC. No. 102.

ANNUAL REPORT

OF THE

COMMISSIONER OF PATENTS

FOR

THE YEAR 1869.

VOLUME II.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1871.

IN THE SENATE OF THE UNITED STATES,
April 10, 1869.

Resolved by the Senate, (the House of Representatives concurring,) That there be printed 4,000 extra copies of the annual report of the Commissioner of Patents for 1869, for the use of the Senate, 10,000 extra copies of the same for the use of the House, and 5,000 extra copies of the same for distribution by the Commissioner of Patents.

Attest:

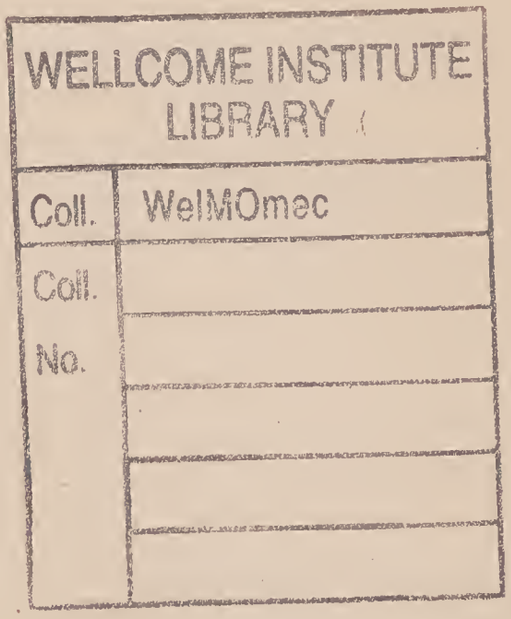
GEO. C. GORHAM,
Secretary,
By W. J. McDONALD,
Chief Clerk.

IN THE HOUSE OF REPRESENTATIVES U. S.,
February 21, 1870.

Resolved, That the House concur in the foregoing resolution of the Senate to print 4,000 extra copies of the annual report of the Commissioner of Patents for 1869, for the use of the Senate, and 10,000 extra copies of the same for the use of the House, and 5,000 extra copies of the same for distribution by the Commissioner of Patents.

Attest:

EDWARD McPHERSON,
Clerk,
By CLINTON LLOYD,
Chief Clerk.



DESCRIPTIONS.


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DESCRIPTIONS AND CLAIMS OF PATENTS

ISSUED IN THE YEAR 1869.

ILLUSTRATED WITH ENGRAVINGS.

VOLUME II.

87,317.—Nelson P. Akin, Philmont, N. Y.—*Machine for Drying and Finishing Tubular Knitted Fabrics.*—March 2, 1869.

Claim.—1. A hollow projecting close-surfaced core, with a closed end, heated internally, and over and from which the tubular fabric to be dried is drawn, substantially as set forth.

2. The combination of the holder B, for the long tubular web, with the closed hollow drying and smoothing-core A, supported and also provided with an inlet and outlet-passage or passages, D F, at one and the same end only, substantially as and for the purpose herein set forth.

3. The combination of the web-holder B, hollow drying and smoothing-core A, supported and provided with an inlet and outlet-passage or passages, at one end only, and drawing-off rollers H I, or their equivalents, substantially as and for the purpose described.

4. The combination of the web-holder, hollow drying and smoothing-core, supported and furnished with an inlet and outlet-passage or passages, at one end only, flat internal web-gauge J, or its equivalent, and drawing-off rollers, substantially as and for the purpose described.

5. The combination of the projecting web-holder B, with the drying and smoothing-core, of larger circumference than the said web-holder, as and for the purpose herein set forth.

6. The arrangement of the flexible or elastic rotary ring L, in combination with the combined web-holder and drying-core, substantially as and for the purpose described.

87,318.—Charles Ballinger, Pittsburg, Pa., assignor to McKee & Brothers, same place.—*Method of Securing Covers to Glass Pitchers.*—March 2, 1869.

Claim.—1. In combination with a glass pitcher or other article of glass, with recesses *a a* molded therein, the spring *i*, with its bent or hooked ends, for being united thereto, and forming a medium by which the cover may be attached and held, substantially as described.

2. In combination with the cover B, the hinge, strap, and shield, for the purpose of connecting it to and using said cover in connection with a pitcher or other glass-ware, substantially as described.

87,319.—W. P. Barker, Grand Rapids, Mich.—*Use of Nitrous Oxide as an Anæsthetic Agent.*—March 2, 1869; antedated February 20, 1869.

Claim.—Making and using nitrous oxide mixed with chloroform, or other anæsthetic, as and for the purpose specified.

87,320.—Joseph Barrett, Chicago, Ill.—*Medicated Cigar.*—March 2, 1869.

Claim.—A cigar, medicated with the compound herein named, as and for the purpose set forth.

87,321.—James Barrows, Hyde Park, Mass.—*Sprinkler for Watering-Pots.*—March 2, 1869.

Claim.—The within-described removable and reversible perforated cap for watering-pots, &c., operating substantially as and for the purpose set forth.

87,322.—Asahel G. Batchelder, Lowell Mass.—*Apple-Parer.*—March 2, 1869.

Claim.—The lever *n* and cam or projection *m*, when arranged to operate substantially as herein described and set forth.

87,323.—George S. Batcheller, Saratoga Springs, N. Y.—*Butter Tub.*—March 2, 1869.

Claim.—A pail, tub, firkin, or package, for butter, having the inner surface of its upper part rabbeted, to form a seat or chamber, to receive the lid, or cover B, flush, or otherwise, with the top of the body or main portion A, in connection with the rod D, of wood or metal, passing entirely through A, and the lid, or cover B, all arranged substantially in the manner as shown and described.

87,324.—Constant Baudoin and Alphonse Fteley, New York, N. Y.—*Apparatus for Destroying Insects on Trees.*—March 2, 1869.

Claim.—1. The fumigating apparatus, formed of the vessel *h*, frame *d*, funnel *e*, and pipe *f*, substantially as set forth.

2. The vessel *h*, formed with the overhanging sides 2, and the cap *k*, as and for the purposes set forth.

3. The fumigator: provided with a vessel to contain the material to be burnt, and a deflector for directing a current of air down upon the same, to insure proper combustion, as specified.

87,325.—John Frederick Bechmann, Abbot's Corners, N. Y.—*Process of Tanning.*—March 2, 1869.

Claim.—"Sweating" and tanning leather by the process herein described, viz: first, using oil of vitriol, in combination with red arsenic and warm water, for sweating, and subsequently using oil of vitriol, combined with water, for tanning, as herein specified.

87,326.—Bolivar Bisbee, Ames, Iowa.—*Concrete-Brick Machine.*—March 2, 1869.

Claim.—1. The combination of the jointed arm H I J, the lever N, the two cords *a b*, pulley X, and axle Y, arranged substantially as described, so that the continuous revolution of the said axle, in either direction, will give both the downward and upward movement to the plunger, in the manner and for the purposes specified.

2. In combination with the plunger, provided with the holes *l*, the movable perforated cap M, when connected to said plunger by means of pins *m*, passing through vertical slots in the sides of said cap, and operating in the manner set forth.

3. The combination of the sliding bottom P and plunger S, with the hopper R, when connected and operated by a lever T, substantially in the manner and for the purposes described.

4. The mold-box, composed of the bottom, *f*, with hinged sides, and the inner removable bottom *i*, with hinged ends, arranged to operate in the manner and for the purposes set forth.

87,327.—Smith W. Bullock, Elizabeth, N. J., assignor to Hamilton E. Towle, New York City.—*Furnace for Roasting Ores.*—March 2, 1869; antedated February 12, 1869.

Claim.—1. The application of two or more perforated walls in a roasting-furnaee, as and for the purposes set forth.

2. Setting the perforated walls at an inelination with the horizon, for the purposes stated.

3. The application of a pipe, or series of pipes, passing through a fire-chamber, or otherwise, and entering the openings of the perforated wall of a roasting-furnaee, as and for the purposes set forth.

4. The application of the gas-chambers I I, and the introdnction of the partition walls C C C C, in a gas-chamber, as and for the purposes set forth.

5. The construction and operation of a roasting-furnace, substantially as and for the purposes herein set forth.

87,328.—Albert H. Daniels, Manchester, N. H.—*Bale-Band Shears.*—March 2, 1869.

Claim.—The combination of the blades A D and handles B, E, and C, substantially as and for the purpose specified.

87,329.—Mark L. Deering, New York, N. Y.—*Sliding-Door Sheave.*—Mareh 2, 1869.

Claim.—The adjustable frame A A, attached to the frame E E, and operated by means of the inclined plane *a* and the serew B, together with the spiral spring *e*, or their eqnivalents, for the purposes hereinbefore set forth and described.

87,330.—Eben Eaton, Norwalk, Conn.—*Machine for Whipping Cloth.*—March 2, 1869.

Claim.—The combination, in a cloth-whipping maehine, of the whips *b* and *c*, shafts B and P, gears F and G, and beating-board N, arranged and constructed in the manner substantially as and for the purpose herein specified.

87,331.—George W. Eldridge, Cambridgeport, Mass.—*Scwing-Machine for Sewing Shoes.*—March 2, 1869.

Claim.—1. The combination of the grooved cam with its curved sides, the system of frietion-rollers *c c* and *b*, and spring S, with lever E, with its point *e*, the whole being so arranged as to give to the lever both a vertical and a horizontal motion, substantially as shown and described.

2. The arrangement of the lever H′, link H″, segment-gear K, and pinion K″, for operating the looper K′, substantially as described.

87,332.—James W. Evans, New York, N. Y.—*Machine for Packing Coiled Springs.*—March 2, 1869.

Claim.—1. The clamp F, tube *b*, and plnnger K, when combined and operating as and for the purposes specified.

2. The plnnger K K′, in the hollow shaft L, the pulleys H H′, the clutch I, the clutch-shifter *f*, the trip-levers *d d′*, and the cross-heads G′ G′, combined and operating substantially as and for the purposes specified.

3. The adjustable head-block D, with the clamp F, tube *b*, and plunger K, combined and operating snbstantially as and for the purpose specified.

87,333.—Benjamin C. Finfrock, Stephenson's Depot, Va.—*Boot-Crimp.*—March 2, 1869.

Claim.—1. Forming a boot-tree with the reduced leg, heel, and sole-parts *c c c c*, and providing the tree with a groove or channel, *d*, *e c*, substantially as described.

2. The construction and use of the peculiar flexible keying-levers *h i* J, or their equivalents, the jaw-gripes or clamps *s s t*, and the beveled slotted screw-nut O P, as shown and described.

3. The combination of said devices with the guide-rod and plate-appliance, the crank-like tension or tightening-rod K K, L L, *m m n*, all substantially in the manner set forth, shown, and described.

87,334.—Maurice Fitzgibbons, New York, N. Y.—*Fur-Box.*—March 2, 1869.

Claim.—The muff-box herein described, viz, when made of pasteboard, and lined with thin veneers of camphor or cedar wood, to preserve the furs from moths, all substantially as described.

87,335.—Charles H. Foster, San Francisco, Cal.—*Seat for Street-Cars.*—March 2, 1869.

Claim.—The movable seat B, when hinged at the edge or front of the fixed seat, and provided with a leg or support, S, which forms, when the seat is turned baek, an arm to divide the fixed seat, substantially as described.

87,336.—Eugene L. Fraker, Oshkosh, Wis.—*Fence.*—March 2, 1869.

Claim.—Securing the horizontal rails *a* to the post *b*, by means of the bolt *c*, when the said rails are splieed at their junction, snbstantially as shown, and for the purposes described.

87,337.—Robert Burns Goodyear, Elkton, Md., assignor to Barton H. Jenks, Bridesburg, Pa.—*Mechanism for Operating the Shuttle-Boxes in Looms.*—March 2, 1869.

Claim.—1. Two or more star-cams J J′, each provided with a ratehet-wheel, and placed upon a stud, so as to turn independently of each other, in combination with the bifurcated lever E, pawl-slide A, pawls *c c′* and B, lifting-levers G G′, and a studded pattern-cylinder, F, or its equivalent, substantially as deseribed.

2. The eombination of two or more independently acting cams, having their axes in line, and each provided with a ratchet and actuating pawl, with the shnttle-box lever and a pivoted lever or levers acted on at one end by the pattern-device, and attached at the other end to the actuating pawl or pawls, all constructed substantially as described and for the purpose set forth.

3. The slide A, provided with pawl B and pawls *c c′*, and arranged so as to operate the pattern-cylinder F, or its equivalent, and also the star-cams J J′, snbstantially as described.

87,338.—James A. House and Henry A. House, Bridgeport, Conn., assignors to the Wheeler & Wilson Manufacturing Company, New York City.—*Sewing-Machine for Working Button-Holes.*—March 2, 1869.

Claim.—1. The combination, substantially as set forth, of the vibrating cloth-plate with the vibrating take-up L.

2. The combination, in a sewing-machine, of the following instrumentalities, viz, an eye-pointed needle, a rotating hook, a take-up, L, and a laterally-vibrating cloth-plate, all substantially as and for the purpose set forth.

3. The combination, in a sewing-maehine, of an eye-pointed needle, a rotating hook, a take-up, L, a vibrating cloth-plate, and a revolvable stitching-plate, all substantially as and for the purpose set forth.

87,339.—Thomas J. House, Pittsburg, Pa.—*Printers' Furniture.*—March 2, 1869.

Claim.—A side-stick, consisting of two parallel bars, connected by spiral springs, or other equivalent device, with inclined bottomed grooves or slides in the inner faee of one or both the parallel bars, in which grooves or slides operate the qnoins, substantially as and for the purposes above set forth.

87,340.—Henry Janin, Virginia City, Nevada—*Process of Working Silver Ores.*—March 2, 1869.

Claim.—The nse and application of the dichloride of copper (Cu^2 C *l*) in the treatment of all classes of silver ores, tailings, or slimes, whether worked in pans, barrels, or amalgamating tubs, and whether the dichloride of copper be made ontside and apart from the ores, or whether it be made in the presence and during the treatment of the ores, tailings, and slimes, by the introduction into the pans, barrels, or amalgamating tubs of the appropriate and neeessary chemical ingredients.

87,341.—Barton H. Jenks, Bridesburg, Pa.—*Loom.*—March 2, 1869.

Claim.—1. The combination with treadles arranged at eaeh side of the loom of straps and rollers,

the straps being connected directly to the rollers from which the heddle-frames are suspended, and by which they are actuated, substantially as described.

2. The combination of laterally-sliding cams P, treadles E E, which are placed at both sides of the loom, and the suspension-rollers D, and straps connected directly to the rollers, substantially as described.

3. Drawing-down drums G, arranged beneath the heddles, and having the latter attached to them, substantially as described, in combination with treadles E E and straps c' c', arranged outside of the range of the heddle-frames, substantially as and for the purpose described.

4. Straps *d*, rollers D, heddles C, straps *e*, and drawing-down rollers G, combined and operating as and for the purpose described.

87,342.—Barton H. Jenks, Bridesburg, Pa.—*Carding-Engine.*—March 2, 1869.

Claim.—In combination with a poppet-head, the shaft C, the cylinder A, the flanged sleeved head A^1 B, set within the cylinder, and the sleeve D, with its end abutting against hub B, the cylinder, flanged sleeved head, and sleeve, being constructed and arranged as shown.

87,343.—Alexander Johnson, Brockport, N. Y.—*Medical Compound.*—March 2, 1869.

Claim.—A remedy for sore or inflamed eyes, composed of camphor-gum, one-quarter ounce; white vitriol, one ounce; alum, one ounce; calomel, one-eighth of an ounce; Tilden's extract of opium, one-eighth of an ounce; the whole to be dissolved in one quart of clean rain water, in the manner and for the purpose specified and described.

87,344.—Frederick W. Judd, New Britain, Conn.—*Toy-Bow.*—March 2, 1869.

Claim.—The combination of the cast-metal bow *a*, barrel *b*, hub *d*, tube *e*, and elastic cord *f*, the whole combined and arranged as herein set forth.

87,345.—Edmund E. Lauer and Henry W. Eisenhart, York, Pa.—*Horse-Rake.*—March 2, 1869.

Claim.—1. The arrangement of the driver's seat G upon thills which are hinged to the bottom edge of the eccentric oscillating axle-tree B and the teeth *b*, upon independent bearings located forward of the axle, on a shaft which is supported by said axle, and the slotted guides C, on the rear upper edge of said axle, all for joint operation, substantially in the manner and for the purpose described.

2. The arrangement of the eccentric oscillating axle-tree B, independently-pivoted teeth *b*, guides C, thills D, hinged at *n* to said axle, lever *h*, latch *j*, tripping or shifting-arm *g*, and the catches *a a*, upon the transporting-wheel A′, substantially in the manner and for the purpose herein described.

3. The arrangement of the adjusting arm *g*, thills D, joints *n*, and eccentric oscillating axle-tree B, substantially in the manner and for the purpose described.

4. The arrangement of the fork-teeth or rake-clearers *c*, thills D, joints *n*, and eccentric oscillating axle-tree B, substantially in the manner and for the purpose described.

5. The horse hay-rake, with its axle, its teeth, its thills, its seat, its guides, its clearers, and its discharging-devices, all constructed and combined substantially as described.

87,346.—Benjamin B. Lewis, Bristol, Conn.—*Prepared Coffee.*—March 2, 1869.

Claim.—A new article of manufacture and commerce, consisting of a preparation of coffee or its substitutes, in combination with a pulverized precipitant, substantially as described, and for the purpose herein set forth.

87,347.—Calvin Lobdell, Fort Hill, Ill.—*Horse-Hoe.*—March 2, 1869.

Claim.—The hiller S S, attached to the leveler, as and for the purpose set forth.

87,348.—Augustine L. McCrea, Chicago, Ill.—*Refrigerating-Car.*—March 2, 1869.

Claim.—The removable sections of horizontal tube C, each section supported centrally within the car by the frame *m*, and at the ends by the divided clamps *h*, through which the ends of the tubes pass, and which form tight joints around said tubes at their points of introduction to the air-chamber B, as herein described, for the purpose specified.

87,349.—Thomas McGrath, Albany, N. Y.—*Hoisting-Grapple.*—March 2, 1869.

Claim.—A grapple-iron, constructed with a long arm, *a*, furnished with recess *c* and the grasping-end *f*, in combination with the clevis *d* or chain B, as and for the purpose set forth as specified.

87,350.—David McKellar, Lowell, Mass.—*Composition for Printing Designs on Boots and Shoes.*—March 2, 1869.

Claim.—The composition, composed of coach-varnish, paint, and bronze-powders, in the proportions herein specified, or thereabouts, for printing designs on the toes and heels of boots and shoes, as herein set forth.

87,351.—John McLaughlin and Benjamin F. Dean, Columbia, Pa.—*Railway-Switch.*—March 2, 1969.

Claim.—The manner of confining the action of the tumbler or crank C in an open or closed slot, D, formed on or part of the switch-rod A, substantially in the manner shown, for the purpose specified.

87,352.—Joe V. Meigs, Washington, D. C.—*Metallic Cartridge.*—March 2, 1869.

Claim.—The method, herein described, of preventing accidental explosions in metallic cartridges, by placing the fulminate in such relation to the base, and to the anvil formed by the walls of the fulminate chamber, that it can only be exploded by a blow in a given direction, substantially as set forth,

87,353.—George R. Metten, Cleveland, Ohio.—*Mechanical Movement.*—March 2, 1869.

Claim.—1. The combination of drums B B′, applied loosely upon shaft A, and constructed with pulleys E E′ and internal friction-surfaces, arms C C^1, pitman F, dogs *g g′*, applied on arms G G, spring J, hub D, and shaft A, substantially as described.

2. The combination of the serrated dog or dogs *g*, pivoted to an arm, G, which has its fulcrum upon a hub, D, made fast to shaft A, and flanged drum, B, constructed with a pulley, E, and connected to a pitman by means of cords *a*, substantially as and for the purposes described.

87,354.—Joseph Miller, Olean, N. Y.—*Manner of Forming and Pressing Bricks.*—March 2, 1869.

Claim.—The sliding plates *h h h h*, fitted in and working up through an endless table, G, being operated by the inclined plate I and guiding-bars H H, in combination with the forming-spout F, in the receiver E, and the forcing-blades *b b*, all operating in the manner as herein described.

87,355.—Frederick Myers, New York, N. Y.—*Velocipede.*—March 2, 1869.

Claim.—1. The combination, with one wheel, A, having a double-cranked axle, of a frame supporting a treadle mechanism for operating the said axle, a seat and guiding-levers, when the said wheel is independent of any other wheel, as specified.

2. The combination with the wheel A and cranked axle of a frame supporting a seat and operating-mechanism, when the center of motion of the frame is below or eccentric to that of the said wheel, substantially as specified.

3. The combination of the wheel A, cranked axle-frame B, balancing-rim D, and wheels E, substantially as specified.

4. The combination with the cranked axle supporting the propelling-wheel of a reciprocating slide bar, connected thereto, and operating substantially as specified.

5. The combination with the plates B of the spring-seat supports H, seat-bar I, adjustable seat K, and guiding-levers O, substantially as specified.

87,356.—GEORGE NOTMAN, Deerfield, Ohio.—*Hilling-Plow.*—March 2, 1869.

Claim.—The shares E E, constructed and arranged as described, and connected with the handles D D and beam A by means of the braces F G G, substantially as herein set forth.

87,357.—ABRAM B. OVERBAUGH, Newark, N. J., assignor to OLIVER REEVES, same place.—*Ditching Machine.*—March 2, 1869.

Claim.—1. The loose vibratory sliding axles L and J, constructed and attached as shown, in combination with the frame A and scoop C, substantially as described.

2. The upright bar H and chain N, when combined with the pole M and frame A, in the manner and for the purpose herein above set forth.

87,358.—CALVIN H. PAINE, Providence, R. I., assignor to himself and WILLIAM E. BARRATT AND COMPANY, same place.—*Carriage-Jack.*—March 2, 1869.

Claim.—1. My improved jack, made as described; that is, with its toggle D and lever E arranged between, and so as to be covered by the standard A and the movable bar C, and to operate in chambers or recesses *g i*, arranged in the standard and bar, in manner substantially as specified.

2. The arrangement of the lower connection *e*, of the standard A, and the movable bar C, with the toggle D and the lever E, so as to constitute a stop, to arrest the latter, when in its lowest position, as described.

87,359.—HENRY L. PALMER, Stillwater, N.Y.—*Manufacture of Pasteboard.*—March 2, 1869.

Claim.—1. The method of uniting a continuous sheet of paper to sheets of pasteboard, as herein described.

2. Giving a convex form to the pasteboard at the line where the pasteboard and paper meet, by means of convex roller L and concave roller D, or their equivalents, for the purpose specified, substantially as described.

3. The combination of trough A, rollers B, C, D, and L, roller E or its equivalent, for holding the continuous sheet of paper, rollers G G′, and endless apron F, or its equivalent, for the purpose specified, substantially as described.

4. The combination of trough A, rollers B, C, D, and L, roller E, spring M, and endless apron F, or its equivalent, for the purpose specified, substantially as described.

5. The combination of trough A, rollers B, C, D, and L, apron F, and roller E, with a drying-cylinder, substantially as described.

87,360.—S. T. PEARCE, New York, N. Y.—*Centrifugal Ore-Separator.*—March 2, 1869.

Claim.—1. The combination of the annular receptacles C, provided with the openings E of the brushes D, and the distributing-disk B, or the equivalent of the latter, substantially as and for the purpose described.

2. The brushes D, supported upon the arms F, and connected to the sleeve G and the revolving rack H, substantially as and for the purpose specified.

3. The disk B, arranged for adjustment vertically, and for operation substantially as and for the purpose specified.

87,361.—S. T. PEARCE, New York, N. Y.—*Machine for Separating Ores and Other Granular Substances.*—March 2, 1869; antedated February 18, 1869.

Claim.—1. A rotating sieve, arranged to impel the substance to be sifted over its surface by centrifugal force, imparted by the rotation of the sieve, substantially as and for the purpose described.

2. The arrangement of a series of sieves, in the order herein described, substantially as and for the purpose set forth.

87,362.—LAWSON G. PEEL, Preston, Ga.—*Plow-Stock.*—March 2, 1869.

Claim.—1. Securing the plow-blade J by means of the forked foot E, shoulder-stop F, and rod G, all substantially as shown and described;

2. In combination with the plow-beam A, the forked foot E, rod G, band H, and wedge I, all constructed and operating substantially as shown and described.

87,363.—JOHN PERRY, Vernon, Ind., assignor to himself and BENJAMIN C. BAKER, same place.—*Horse-Rake.*—March 2, 1869.

Claim.—The adjustable thills G G and staples *h h*, arranged and combined to operate substantially in the manner and for the purposes as specified.

87,364.—THOMAS E. PHILLIPS, Coatesville, Ind.—*Fence.*—March 2, 1869.

Claim.—The combination and arrangement of the panels, composed of notched rails A B, rails C, post E, and vertical strips D, when constructed as described, with the braces F and stakes G, as set forth.

87,365.—ANTHONY PIRZ and MANUEL PIRZ, East New York, N. Y.—*Manufacture of Acetic Acid.*—March 2, 1869.

Claim.—The within-described method of extracting acetic acid from acetate of lime in a cold way, by means of pressure, as press, air, water, and steam-pressure, centrifugal power, or air-pump.

87,366.—THEODORE R. POWER, Arsenal Post Office, Pa.—*Car-Coupling.*—March 2, 1869.

Claim.—1. The hooks *d*, curving backward and upward from either or both edges of the upper or lower bars A A′ of a car-coupling, and so made that two adjacent draw-heads may be coupled by links passing over the hooks, or by a link inserted in a lug on one coupling passing over a hook on the other, substantially as described.

2. A car-coupling, having one or more hooks *d* on one side, and a curved arm, *d′*, on the other, the latter being so made as to have an upward curve just outside of its intersection with each bar A A′, substantially as and for the purposes above set forth.

87,367.—DANIEL C. RIPLEY, Pittsburg, Pa.—*Lamp.*—March 2, 1869.

Claim.—A footed hand-lamp, furnished with a detachable pedestal, substantially as and for the purposes hereinbefore set forth.

87,368.—A. M. ROSS, Ilion, N. Y.—*Garden-Hoe.*—March 2, 1869.

Claim.—The within described hoe, when constructed substantially as set forth, as an article of manufacture.

87,369.—JOSEPH RYALS, Terrysville, Conn.—*Construction of Shears.*—March 2, 1869.

Claim.—In the construction of shears, with malleable cast-iron handles, having steel cutting-surfaces welded thereto, the handles, with their stop and bearings cast so as to fit without grinding or filing, as set forth.

87,370.—WILLIAM SCHNEBLY, Hackensack, N. J.—*Truss.*—March 2, 1869.

Claim.—The capstan-arrangement, with adjustable pads, in combination with untempered sectional parts, forming a truss-hoop, or band entire, for the purposes substantially as described.

87,371.—TALIAFERRO P. SHAFFNER, Louisville, Ky.—*War and Signal Rocket.*—March 2, 1869,

Claim.—1. The construction of the walls of the priming-charge chamber *f f*, in Fig. 1, or *g g*, in Fig. 2, in or around the nitroleum, in such manner that the walls of the two apartments, as in Fig. 1, will be forced together on the explosion of the priming-charge, or, as in Fig. 2, by compressing the sides of the nitroleum-tube, by which, in both cases, the explosion of the nitroleum is effected by concussion.

2. The construction of the priming-charge chamber, as in Fig. 1, in such manner that the walls of the same will burst on the explosion of the priming-charge, and allow the flame to penetrate the confined nitroleum-charge, or, as in Fig. 2, the tube containing the nitroleum shall burst on the explosion of the priming-charge, and thus scatter the liquid in the flame of the said priming-charge, by which, in both cases, the explosion of the nitroleum is effected by the required 360° of heat, Fahrenheit.

87,372.—Taliaferro P. Shaffner, Louisville, Ky.—*Blasting in Oil-Wells, &c.*—March 2, 1869.

Claim.—1. As a method of blasting in oil-wells, artesian wells, &c., the arrangement of the "tamping," "blasting," and "resisting" charges within the strata to be acted upon, the former to be at or near the top thereof, the latter to be at the bottom of the strata, and the blasting-charge to be within the part desired to be disrupted. the whole to be exploded simultaneously, in the manner and for the purposes herein described.

2. The connection of the tamping and blasting-charges, by means of tubes, or pipes, and exploding the same at the same instant, in the manner and for the purposes described.

87,373.—David Slaughter, West Hempfield Township, Pa.—*Cultivator.*—March 2, 1869.

Claim.—The construction of the central shovel or scraper Q with its side wings R R′, hook-ends *r*, in combination with the connecting-straps P, the slide beams B B′, together with the wing-stay or guide Z, arranged and operating substantially in the manner and for the purpose set forth.

87,374.—Aaron W. Smith, Manchester, N. H.—*Flier for Spinning-Machine.*—March 2, 1869.

Claim.—1. The socket or open bands *g g′*, lug *a*, recess *i*, and catch *k*, employed in combination, substantially as herein described, to retain the foot-piece in position while at work, and permit its ready removal.

2. The leading notch *l* in the bar *f*, arranged directly under or in line with the tube or hollow arm A, substantially as and for the purposes specified.

87,375.—Cornelius T. Smith, Nyack, N. Y.—*Propelling Apparatus.*—March 2, 1869.

Claim.—1. In combination, the linear reciprocating-thrust propeller, the guard-frame, raising and lowering-guides, and means for adjusting to operate at different levels. all constructed and arranged for joint operation, as and for the purposes herein set forth.

2. The within-described specific construction of the linear reciprocating folding paddles F^1 f^1 and F^2 f^2, and their stops G^1 G^2, and cross-bar or back-stop H, all arranged relatively to each other and to the frame C, and means for reciprocating the same backward and forward in line, as and for the purposes herein set forth.

87,376.—Homer Smith, Kirksville, Mo.—*Corn Planter, Grain-Drill, and Harrow, Combined.*—March 2, 1869.

Claim.—1. The carrier G, with its apertures, and slides, and set-screws *h*, when constructed and operating substantially as and for the purposes specified.

2. In combination with the carrier G, the cross-pieces *m*, springs *n*, rods *o*, conduits *l*, and lever-valves, as described, when constructed and operating substantially as described.

3. The guides *a′*, in combination with a seed-sower, arranged and operating substantially as described.

4. The dog *s′*, in combination with a harrow, constructed and operating as specified.

5. The sliding frame P, when constructed, arranged, and operating substantially as and for the purposes described.

6. A combined corn-planter, seed-sower, and harrow, having carrier G, cross-bars *m*, spring *n*, rods *o*, flanches *r*, brake *s*, guides *a′*, levers *e′* and *g*, springs *y*, harrow W, with its slotted bar *j*, dog *s′*, and guide-wheels *a′*, constructed, arranged, and operating substantially as described.

87,377.—John Speight, Bradford, England.—*Spinning-Machine.*—March 2, 1869.

Claim.—1. Two sets of spindles or bobbin-studs F and H, arranged, respectively, upon parallel shafts, geared together and actuated substantially as described, so that, while one set is in position for spinning, the other set is in position for doffing.

2. The combination of the fliers C, suspended by their necks, and constructed substantially as set forth, with the means for lubricating the same, substantially as shown and described.

87,378.—Marietta Studley, South Yarmouth, Mass.—*Cradle-Chair.*—March 2, 1869.

Claim.—1. The combination, as described, of the permanent seat A, its legs D, single arm C, and back B, with the extension-slides *b b*, and legs F, and with the hinged guard G, and the separate seat I, and its two arms K K, the whole arranged and constructed substantially in manner and so as to operate together as explained.

2. The combination of the same and the auxiliary back H, the whole being as set forth.

87,379.—Retire C. Sturgis, Boston, Mass., assignor to "American Saddle Company."—*Sweat-Shield for Saddle-Pads.*—March 2, 1869.

Claim.—A sweat-shield for saddle-pads, composed of a bearing-surface of vulcanized rubber, which is combined with any suitable strengthening and protecting fibrous backing, and protected by an outer covering of leather or other suitable material, substantially as herein set forth.

87,380.—George Sugg and William Metz, Chicago, Ill.—*Bedstead-Fastening.*—March 2, 1869.

Claim.—We claim the curved semicircular bar C, its ends, projecting from the rail, being provided with lugs *b* connecting bar A, in combination with the female fastening adapted thereto, substantially as and for the purposes specified.

87,381.—William G. Tuttle, Geneva, N. Y.—*File for Gauging the Teeth of Crosscut Saws.*—March 2, 1869.

Claim.—1. The combination of the adjustable bars C C with the file-blade A, in the manner and for the purpose specified.

2. In combination with the above, the cross-pieces D D, and screws *b b c*, in the manner and for the purpose specified.

87,382.—P. H. Vander Weyde, New York, N. Y.—*Application of Grahamite in the manufacture of Gunpowder and Lamp-black.*—March 2, 1869; antedated February 13, 1869.

Claim.—1. The use of the mineral Grahamite as a superior material in the manufacture of gunpowder.

2. The use of the mineral Grahamite as a material for the manufacture of an improved lamp-black.

3. The introduction of chlorine-gas, in any quantity, into the furnace, when the imperfect combustion of the Grahamite, or other material, from which the lamp-black is manufactured, takes place.

87,383.—Moses N. Ward, Bangor, Me., assignor to himself, Benjamin S. Grant, and Thomas Hersey, same place.—*Hay-Spreader.*—March 2, 1869.

Claim.—1. The combination and arrangement of the two independent arms, the endless driving-chains, and their grooved supporting-wheels, with the rotary spreader and the thills or carriage-body, and the supporting wheels thereof.

2. The combination and arrangement of the springs I I, with the spreader, the two independent arms, the endless chains, and their supporting-wheels, and the carriage, as described.

87,384.—William Riekie Watson, Stockton, Cal.—*Horse-Shoe.*—March 2, 1869.

Claim.—The above-described shoe for horses, consisting of a toe-piece and two heel-pieces, adapted to fit together, but to be nailed on separately, substantially as described.

87,385.—Arthur S. Winchester, Boston, Mass., assignor to himself and James S. Parsons, same place.—*Metallic Screen for Paper-Pulp.*—March 2, 1869.

Claim.—1. The new or improved manufacture of paper-pulp screen, in which the sides of the slits are protected and the slits reduced in width, by means of layers of metal deposited on them, by means as set forth.

2. The process of making the slitted pulp-screen, viz., by sawing or making each of its slits by a tool or saw, and subsequently depositing on the opposite sides of such slit, or on the same, and the external

surface or surfaces of the metallic plate, a metallic plating, by means of an electro-plating bath, and its current and battery, as set forth.

87,386.—WILLIAM S. WOOTON, Richmond, Ind., assignor to himself and JOHN F. PIEHL, same place. —*School-Desk and Seat.*—March 2, 1869.

Claim.—The combination of the desk A and seat B, pivoted in the manner described, and provided with lugs $b\,b'$ and extension U U', operating together, to lock the desk, when the same is brought to its proper position, substantially as described.

87,387.—HORATIO ALLEN, New York, N. Y., assignor to the AMERICAN FIBER COMPANY.—*Valves of Steam-Guns for Separating and Disintegrating Fibers.*—March 2,1869.

Claim.—1. The employment, in connection with the discharge-valve of a fiber-gun, of an elastic or yielding buffer, to receive the impact or stroke of the valve, substantially as and for the purposes set forth.

2. The discharge-valve, and its vibratory supporting-arm, having a curved exterior surface, as described, in combination with a yielding buffer, upon which the curved surface of said arm, when the valve is thrown back, acts substantially in the manner specified.

3. The construction and arrangement, with relation to the hinged discharge-valve and its supporting-arm, of the hinged buffer, and the rubber, or other elastic body, upon which said buffer rests, as herein set forth and shown.

4. The employment, with the fiber-gun, of the conical lead valve, for closing the loading or the discharge aperture of the gun, in combination with the means herein described, or their equivalent, for forcing and holding said lead valve in its conical seat, substantially as and for the purposes set forth.

5. The combination with the valve-supporting arm or frame, of the double-catch lever and inclined plane, together with the means, substantially such as herein described, for actuating said lever and inclined plane, under the arrangement and for operation as set forth.

87,388.—ALBERT ANGELL, Newburgh, N. Y.—*Hulling-Machine.*—March 2, 1869.

Claim.—The arrangement of an endless belt and spring-strippers, constructed as described, with the elevator *d*, and a polishing-device, composed of the stationary brush S and endless serrated belt *m*, operating substantially as set forth.

87,389.—FREDERICK APP, Selin's Grove, Pa., assignor to himself and J. S. BURKHART, same place. —*Scaffold.*—March 2, 1869.

Claim.—1. The arrangement of the winch G, platforms H and I, and the rope and pulleys, with reference to the frame and the platform E, whereby the center of said platform is left unobstructed, both ends being raised and lowered simultaneously by the winch G, outside of one of the uprights, as herein shown and described.

2. The rest-plates K, and guard-plates L, arranged on the frame posts A, as described, in combination with the movable cross-bars J of the scaffold, and spring M, (or its equivalent,) all as and for the purpose set forth.

87,390.—JOHN Y. BETTS, Coventry, England, assignor to FREDERICK W. BETTS, New York City. —*Admission of Steam to Baking-Ovens.*—March 2, 1869; patented in England, April 20, 1865.

Claim.—The herein-described process for baking, consisting in the discharge into the oven, while containing the dough, of horizontal jets of steam above the dough, in the manner and for the purpose substantially as set forth.

87,391.—CHARLES D. BLINN, Port Huron, assignor to GEORGE CARY, Detroit, Mich.—*Preparation of Solder.*—March 2, 1869.

Claim.—1. Preventing the solder from oxidation by the process herein described, or its equivalent, so that the tinning-compound or flux, when added, will not change the nature of the solder.

2. Preparing solder with a flux, substantially as herein described, as a new article of commerce, by the use of zinc, muriatic acid, and sal-ammoniac, or their equivalents, so that the solder can be used in a dry state.

87,392.—NATHANIEL BRAND, Ilion, N. Y.—*Hay-Spreader.*—March 2, 1869.

Claim.—The combination and arrangement of pinion c', crank *e*, arm *g*, with the rock-shafts *d d*, operated separately or together, substantially as set forth and described.

87,393.—JOHN CARNRICK, New York, N. Y., assignor to REED, CARNRICK & ANDRUS, same place. —*Medical Compound.*—March 2, 1869.

Claim.—The improved medical compound, made by combining strychnia and ammonia, citrate of bismuth, or either of them, with pepsin, substantially as described.

87,394.—RILEY W. CARPENTER, Chicago, Ill.—*Attachment to Reed-Organs.*—March 2, 1869.

Claim.—1. A musical instrument constructed with reeds F, suspended in free air as described, and sounded by means of keys C, substantially as set forth.

2. The tracker-pin B, carrier D, provided with the tripper-pin G, or their equivalents, and reeds F, combined and arranged, substantially as described, in connection with the wind-reeds or pipes of a musical instrument, and operated simultaneously and by the same keys as said wind-reeds or pipes.

3. The combination of the tracker-pin B, and carrier D, secured together as and for the purpose set forth, with the stationary cams H and J, for the purpose described.

4. The combination and arrangement of the jack E with the tripper-pin G, spring K, and adjuster L, as and for the purpose described.

87,395.—RILEY W. CARPENTER, Chicago, Ill.—*Mode of Operating Tremolos in Organs.*—March 2, 1869.

Claim.—1. In combination with the wheel B, constructed and operating as set forth, the tremolo A of an organ or other musical instrument having a bellows.

2. In combination with the wheel B, or its equivalent, and the tremolo A, the flexible connection F, substantially as and for the purpose set forth.

87,396.—L. R. CHAPMAN, Grand Rapids, Mich., assignor to himself, GEORGE H. TRAXBURY and ELBERT WARD.—*Hinge.*—March 2, 1869; antedated February 26, 1869.

Claim.—The combination of the plate C, arm D, having an eye, or slot, formed in one end, and a bolt d^2, formed upon the other end, star-shaped catch-nut E, plate F, and arm G, having a catch I, formed upon one end, and having upon its other end an ear or pivoting-pin H, with an incline, h', formed upon its side, with each other, substantially as herein shown and described, and for the purpose set forth.

87,397.—JAMES CHRISTIE, Atlanta, Ill., and HENRY G. DAYTON, Maysville, Ky.—*Cattle-Food.*—March 2, 1869.

Claim.—The preparation of cattle-food in the manner substantially set forth.

87,398.—JOSEPH CLEES, Darbyville, Ohio.—*Plow-Truck.*—March 2, 1869.

Claim.—1. A plow-truck, having the axle constructed in two parts, and arranged to adjust either part vertically, without changing the other, substantially as specified.

2. The part D of the axle, carrying the guiding-wheel, arranged to be adjusted horizontally and vertically, independently of the other part of the said axle, substantially as specified.

3. The part C of the axle, carrying the small wheel, bent at right angles, and arranged for adjustment in the plate A, substantially as specified.

4. The combination, with the parts C and D of the axle, of the arm E, substantially as specified.

5. The combination, with the parts D and C, of the arms E and F, substantially as specified.

87,399.—Christopher C. Dow, Philadelphia, Pa., assignor to himself and Lionel Hylton, same place.—*Car-Jumper.*—March 2, 1869.

Claim.—1. The combination of the plates A A, having hinges *a* and a but-joint *b*, so as to form a solid arch over the hose, the said plates being provided with supplemental rails E, substantially in the manner and for the purpose above described.

2. The combination of the adjustable feet C with the plates A A, substantially in the manner and for the purpose specified.

3. The combination and arrangement of the supplemental plates A^1 and A^2 with the plates A, substantially in the manner above described, and for the purpose specified.

87,400.—Daniel S. Early, Hummelstown, Pa.—*Cultivator.*—March 2, 1869.

Claim.—The tongue *e*, in combination with the clevis *h*, as and for the purpose set forth.

2. The tooth A, in combination with the socket *d*, in the manner and for the purpose explained.

3. The tooth A, provided with the recesses *a a* and head *a'*, substantially as described.

4. The tooth A, provided with the recesses *a a* and head *a'*, in combination with the conjoined slots *b b'* and key *c*, substantially as described.

87,401.—Benjamin M. Ely, Perry, Mo., assignor to himself, L. T. Tulley, and William A. and Lyman P. Munger.—*Cultivator.*—March 2, 1869.

Claim.—1. A corn-cultivator, so constructed, of two equal and similar parts D D', which may be easily transposed, so that one may take the place of the other, that it can be used either as one implement or two distinct implements, substantially as and for the purposes described.

2 The adjustable bars A and B, when used in the construction of a double cultivator, constructed substantially as and for the purpose described.

3. The adjustable bar C, when used in the construction of a double corn-cultivator, constructed substantially as and for the purpose described.

4. The standards *m m'* and *n n'*, when so constructed as to be interchangeable, in a corn-cultivator, substantially as and for the purpose described.

5. The frame, composed of the bars A, B, and C, and the uprights G G', and beams E E, when used in the construction of a double corn-cultivator, substantially as and for the purposes described.

87,402.—William Fawcett, New York, N. Y., assignor to Fawcett Brothers and Richard Campbell, same place.—*Hames-Fastening.*—March 2, 1869.

Claim.—1. An improved hames-fastener, B, constructed substantially as herein shown and described, that is to say, formed with sockets or openings to receive the flat hooks a^1 of the hames A, whether provided with the loops b^1 b^2, either or both, or not, as and for the purpose set forth.

2. Forming flat hooks a^1 upon the lower ends of the hames A, to adapt them to the fastener B, substantially as herein shown and described.

87,403.—James A. Fegan, Brooklyn, N. Y.—*Spring-Bed Bottom.*—March 2, 1869.

Claim.—A hinge, made of four metal plates, united by three joints, in combination with the frames A C, springs B, and strips E F, substantially as described.

87,404.—Robert Fitts, Jr., Fitchburg, Mass., assignor to W. Haywood Chair Company, same place.—*Machine for Bending Wood.*—March 2, 1869.

Claim.—1. The revolving cam-gear H h^1, constructed substantially as herein shown and described, in combination with the stationary gear F, as and for the purpose set forth.

2. The former I, constructed substantially as herein shown and described, in combination with the former-seat J, stationary gear F, and revolving cam-gear H h^1, substantially as herein shown and described, and for the purpose set forth.

3. The former-seat J, and former-cap K, constructed and operating substantially as herein shown and described, in connection with the stationary gear F and revolving cam-gear H h^1, as and for the purpose set forth.

4. The adjustable and movable cam-tables U, constructed and operating substantially as herein shown and described, in combination with the revolving cam-gear H h^1, stationary gear F, former-seat J, and former-cap K, substantially as herein shown and described, and for the purpose set forth.

5. The extension crank wrench C', constructed substantially as herein shown and described, in combination with the cam-tables U, and caps $A' a^1 a^2$ of the strap Y, as and for the purpose set forth.

6. The sliding centering and clamping cam-bar Q R, in combination with the revolving cam-gear H h^1, revolving tables U, stationary gear F, former-seat J, former I, and former-cap K, substantially as herein shown and described, and for the purpose set forth.

87,405.—Jesse E. Folk, Brooklyn, N. Y.—*Match-Safe.*—March 2, 1869.

Claim.—In combination with the cover of a match-safe, the inverted box or receptacle D, arranged substantially as and for the purposes described.

87,406.—Edward H. Garrigues, St. Louis, Mo.—*Spark-Arrester.*—March 2, 1869.

Claim.—The jacket C, with wings F and rollers E, constructed and arranged, with reference to the perforated section B, as herein shown and described.

87,407.—William E. Hale, Chicago, Ill.—*Manufacture of Pasteboard.*—March 2, 1869; antedated October 6, 1868.

Claim.—1. Lining continuous strips of straw, or other thick paper, as it is made, with thin continuous strips of white or colored paper, substantially as described, for the purpose specified.

2. The combination of the paper-roll D, paste-roll E, and adjustable scraper H, with the box A B C, substantially as described, for the purpose specified.

87,408.—W. G. Hamilton, Milton, Wis.—*Water-Elevator.*—March 2, 1869.

Claim.—1. The combination of the crank-shaft G F, pulleys E, chains D, flange-plates S, and buckets C, with each other, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the cross-bar J, rod I, pivoted beam H, moving-weight N, rod K, and pivoted spout L, with each other, and with the endless chain of buckets, C D S, substantially as herein shown and described, and for the purposes set forth.

87,409.—Alexander Harroun, Jr., Onondaga, N. Y.—*Cloth-Guide for Sewing-Machine for Working Button-Holes.*—March 2, 1869.

Claim.—The slotted movable plate *g*, having sides, as described, and an opening in the center, the guides *c* and *d*, and the post *e*, when combined and operated substantially as set forth, and for the purpose mentioned.

87,410.—G. Hauschild, St. Louis, Mo.—*Roulette Apparatus.*—March 2, 1869.

Claim.—1. The revolving cone B, having compartments *b'*, and a base, B^2, with numbers marked thereon, substantially as set forth.

2. In combination with the foregoing, the cap-piece F, its orifice *e*, and the indicating-ball F, substantially as and for the purpose set forth.

87,411.—Francis Hayek, New York, N. Y.—*Lounge.*—March 2, 1869.

Claim.—The movable arm B, provided with a stop, and arranged near the foot-end of a lounge, so as to form an arm or foot-support, which can be moved out of the way, when not needed, substantially as herein shown and described.

87,412.—J. P. Hemmingsen, Marshalltown, Iowa.—*Smiths' Bellows.*—March 2, 1869.

Claim.—The arrangement of the bellows B, having a fixed top plate, which forms the bottom of the air-chamber C, the weighted flexible cover c^1, chamfered valve and seat H, nozzle I, valve-plate J, shaft

K, and lever L, with each other, as herein described, for the purpose specified.

87,413.—Birdsill Holly, Lockport, N. Y.—*Water-Supply Regulator for Water-Works.*—March 2, 1869.

Claim.—1. The combination of the piston-chamber G, piston H, weights L to L″, valve *a*, chamber M, and the pipes *c e* and D, substantially as described, for the purpose specified.

2. The belts P P′, shifter R, gate-operating mechanism S S′ S″, T T′ U T″, Q *p‴ p″* substantially as described, in combination with a piston-chamber, G, a piston, H, a valve, *a*, and a pipe, *c*, all as set forth.

3. The pipes A B C D, having check-valves, and a relief-valve, V, substantially as described, in combination with a piston-chamber, G, piston H, weights L to L″, valve *a*, and belts P P′, running on loose and fast pulleys, all as described, for the purpose of operating the gate-raising mechanism, all as set forth.

4. The gate-raising mechanism of water-works, operated by means of a piston-chamber and piston, or its equivalent, the weights L to L″, and gauge-valve *a*, operating substantially as described, for the purpose specified.

5. The hydrostatic relief-valve V, constructed and operating substantially as described, in combination with a pipe, B, piston H, and valve *a*, for the purpose of making its operation dependent upon the movement of the governing-piston, all as set forth.

6. The gate-operating mechanism, as shown at Fig. 5, all substantially as described, and for the purpose set forth, when in combination with the governing-piston and valve *a*, all as set forth.

7. The combination of a hydrostatic-valve, *a*, substantially as described, with a pressure-chamber and piston, H, substantially as described, when so connected that the valve and piston are dependent upon each other, and act, by the pressure of the water, to maintain an equable pressure against the said piston, all as set forth.

87,414.—John Jeffcoat, Onawa, Iowa.—*Hand Seed-Planter.*—March 2, 1869.

Claim.—1. The combination, in a hand seed-planter, of the box A, slide E, box F, plate C, slide H, and spring D, all arranged and operating substantially as herein shown and described.

2. The hand seed-planter, consisting of the box A, plate C, spring D, seed-slide H, slide E, box F, plunger M, spring J, and plate L, all arranged substantially as herein shown and described, with or without the combination with the spring I and lug *e*.

87,415.—J. I. Livingston, Pittsburg, Pa.—*Uncut Caps for Cans.*—March 2, 1869.

Claim.—The uncut cup A and cap C, constructed and arranged as described, and combined with the top of packing-cans, substantially as specified.

87,416.—Rembrandt Lockwood and Charles C. Schmitt, New York, N. Y.—*Brick-Machine.*—March 2, 1869.

Claim.—1. The arrangement of the followers L with the molds *a′*, the bar J, frame H′, and the adjustable stops K and P, all substantially as and for the purpose specified.

2. The combination with the reciprocating molds *a′*, followers L, and the grinding apparatus A, of the reciprocating carrier B, having a recess, *a*, substantially as and for the purpose specified.

3. The combination with the vertically-reciprocating mold *a′* of the carrier T and the endless chains, substantially as and for the purpose described.

4. The combination with the carrier T, provided with the swinging-catches K^2, of the reservoir R′ and carrying-boards R, substantially as and for the purpose described.

87,417.—J. E. Mansker, Clinton, La.—*Fan-Attachment for Tables.*—March 2, 1869.

Claim.—The combination of the tubular support A, reciprocating rod G, and fans B, when the latter are either pivoted to the support A and a hollow sleeve, D, or to a shaft secured to the said support, and a hollow tube, at right angles thereto and sliding thereon, all substantially as and for the purpose specified.

87,418.—Mahlon R. Margerum, Trenton, N. J.—*Sash-Fastener.*—March 2, 1869.

Claim.—The sash-lock A, with the cam-levers or arms B, spring E, in combination with key F and stud *g* and the slot *h* in the escutcheon I, all constructed and arranged as described.

87,419.—Horace Bartine Martin, San Francisco, Cal.—*Oscillating Engine.*—March 2, 1869.

Claim.—The arrangement of the tubular valve J, having its ports *g g′*, *f f′*, with relation to the ports *b b′*, *c c′*, and the semi-annular spaces *a a′*, as herein shown and described.

87,420.—E. G. Matthews, Newton, Mass.—*Plow.*—March 2, 1869.

Claim.—1. The combination with the under side of the plow-beam A of a slotted stock, D, for supporting the sward-cutter E, substantially as described.

2. The combination with the stock D and beam A of the intermediate guard-plate *e*, substantially as and for the purposes set forth.

3. The combination and relative arrangement of the parts marked A, C, D, E, and *e*, as shown and described.

87,421.—E. G. Matthews, Newton, Mass.—*Plow-Clevis.*—March 2, 1869.

Claim.—1. The combination of flanges *b d* with one or both of the side-pieces B of the clevis, substantially as and for the purposes set forth.

2. The combination with the front piece D of an eye or ring H, as and for the purposes stated.

3. The combination with the plow-beam A and front piece D of a side-draught rod, K, substantially as and for the purposes set forth.

4. The combination with the joint-bolt G of a catch-spring, *m*, substantially as shown and described.

87,422.—John McCloskey, New York, N. Y.—*Stench-Trap and Overflow for Basins.*—March 2, 1869.

Claim.—The plug-tube C, having orifices *a′* and strainer *e′*, in combination with the bowl A, provided with openings *a*, and the hollow metallic attachment B F, in which a partition, E, is placed, all constructed and arranged to operate substantially as and for the purpose specified.

87,423.—William McCully, Paterson, N. J.—*Lubricator.*—March 2, 1869.

Claim.—1. The cock D, in combination with the shell B and oil-reservoir A, arranged either with or without connections with the steam-boiler, substantially as and for the purposes described.

2. In combination with the cock D the valve O, in the oil-holder A, substantially as and for the purposes herein shown and described.

87,424.—Richard McGee, Martinsville, Ind.—*Mode of Fastening Trusses.*—March 2, 1869.

Claim.—The plates K and K, the knobs K′ K′, the knob *h*, and the button-holes A, H, and I, when the same are constructed, arranged, and used for the purpose and in the way substantially as herein set forth.

87,425.—Robert McLarn, Shirland, Pa.—*Thatching for Stacks of Hay and Grain.*—March 2, 1869.

Claim.—The thatched cover *a* a^1 a^2, when used in connection with the horizontal bands *c* c^1 c^2, the vertical cords *e e′*, the weights W W, pin *p*, and the cord *m*, all said parts being arranged and combined together as described and for the purpose specified.

87,426.—George Paddington, Springville, Iowa.—*Seeding-Machine.*—March 2, 1869.

Claim.—1. The arrangement of the arms L upon opposite sides of the axle D, with relation to the seed-slides I K, whereby the slides are operated directly from the axle, without intermediate gears or levers, as herein shown and described.

2. The brakes or plates P, attached to the shaft O, in the front part of the frame A, substantially as and for the purpose specified.

3. The truck F, supporting the rear of the frame beneath the seat E, and consisting of the frame G, the wheels, and the rods *a*, provided with springs *b*, inserted in the frame, all arranged as herein shown and described.

87,427.—Robert W. Pain, New York, N. Y., assignor to Brainard and Wing, same place.—*Tremolo for Wind-Instruments.*—March 2, 1869.

Claim.—A valve for the tremolo-attachment of a melodeon, or similar instrument, formed in the manner specified, so that when the valve opens the air can escape freely all around said valve, for the purposes specified.

87,428.—John F. Phelps, Havana, N. Y.—*Lamp-Shade.*—March 2, 1869.

Claim.—1. The combination with the shade A B of the spring-supports C, when arranged as specified.

2. The combination with the part A B of the detachable tubular extension G, substantially as specified.

87,429.—Henry Poth, Pittsburg, assignor to himself and G. A. Klages, Birmingham, Pa—*Fifth-Wheel for Carriages.*—March 2, 1869.

Claim.—A fifth-wheel for vehicles, comprising the several features of improvement referred to above by the letters *a*, *b b*, *d d*, *c e*, *f f*, substantially as and for the purpose herein shown and described, as a new article of manufacture.

87,430.—James H. Preston, Jefferson City, Mo.—*Carriage for Sawing Saddle-Tree Stuff.*—March 2, 1869.

Claim.—The arrangement, upon the bed A, of the beveled rests B B, adjustable hinges C D, beveled blocks E, and slotted adjusting plates G, when all the parts are constructed as described, for the purpose specified.

87,431.—N. L. Revere, Worcester, Mass.—*Centering-Deviee.*—March 2, 1869.

Claim.—The improved centering-device herein described, consisting of the several parts specified, all constructed, arranged, and operating substantially as shown and set forth.

87,432.—Louis S. Robbins, New York, N. Y., and John A. Southmayd, Elizabeth, N. J.—*Proeess of Preparing Bamboo-Fiber.*—March 2, 1869.

Claim.—1. The saturating of lignine, or the fiber of bamboo, with oleaginous substances and compounds, substantially as herein described.

2. The saturating of the lignine with oleaginous vapors, in combination with steam, substantially as described.

87,433.—Louis S. Robbins, New York, N. Y., and John A. Southmayd, Elizabeth, N. J.—*Manufacture of Floek from Bamboo or Cane-Fiber.*—March 2, 1869.

Claim.—1. The process for preparing flock from the fiber of cane or bamboo, the same consisting in first removing the joints, then splitting, grinding, boiling, and preparing the fiber of the cane, substantially as herein described.

2. Every use and application of said flock.

87,434.—Louis S. Robbins, New York, N. Y., and John A. Southmayd, Elizabeth, N. J.—*Manufacture of Oakum.*—March 2, 1869.

Claim.—1. The process of preparing oakum from bamboo, cane, or reed, substantially as herein described.

2. The use and application of the fibers of bamboo, cane, or reed, either separately or in combination with other materials, for the purpose of oakum, as a new article of manufacture.

87,435.—Joseph Ryan, St. Louis, Mo.—*Hydraulic Lifting-Jack.*—March 2, 1869.

Claim.—1. The base-block C, arranged with the sub-chamber *e*, and supporting the cylinder A, in such wise that the pressure of the ram A^1 shall be transmitted in the line of the axis of said ram, when combined with the reservoir B and pump D, substantially as set forth.

2. The pump D, having valves d^1, d^2, and d^{11}, and hollow plunger D^1, arranged and operated as and for the purpose described and set forth.

3. The vibrating arm D^2, when provided with a bushing, d^{13}, and elastic packing d^{14}, as described and shown.

4. The lever D^4, provided with an adjustable stop, d^{15}, in combination with the adjustable lever-rest *b*, when arranged as and for the purpose set forth.

5. The ground-rest A^2, when provided with a step, a^3, and a bearing-roller, a^4, all arranged as described and shown.

6. The plunger A^1, when provided with ground-rest A^2, and head-rest A^3, as described, and for the purpose set forth.

7. Stop-guard b^1, when arranged with the lever D^2, as and for the purpose set forth.

87,436.—D. B. Seeley, Portland, Ill.—*Pruning-Shears.*—March 2, 1869.

Claim.—The pruning-knife, constructed as described, of the hook-shaped blade A, on the handle B, provided at its center with the pin *b*, the short blade C, hung by its curved slot *e*, upon said pin, and the curved handle D, pivoted at *e* to the hook A, and at its end, *d*, to the inner end of the blade C, all arranged and operating as described, for the purpose specified.

87,437.—Franklin C. Sexton, Shelbyville, Ind.—*Tanner's Table.*—March 2, 1869.

Claim.—The sub-table A, or its equivalent, constructed substantially as described, or so that the hide will be raised and the liquid be allowed to pass therefrom, for the purposes set forth.

87,438.—Peter E. Shear, Sangerties, N. Y. assignor to himself and William Mulligan, same place.—*Door or Frame of Puddling-Furnaces.*—March 2, 1869.

Claim.—1. Providing the hollow metallic frame of a puddling-furnace door with an inclined back face, *b*, substantially as herein shown and described, for the purpose specified.

2. The sliding bit D, when fitted over the concave face of the sill C, for the purpose of not coming in contact with the metallic surface of the sill, as set forth.

3. The pin *d*, having the head *e* on one side, in combination with the sliding bit-plate D, all arranged substantially as herein shown and described.

87,439.—W. R. Smiley. New Lisbon, Ohio.—*Fire-Alarm Telegraph* —March 2, 1869.

Claim.—The combination and arrangement, in the said signal-apparatus, of the bell K, signal-key E, switch-key V, magnet M M, and its clapper-lever O P, with the several plates for turning the switch-key on, and the wires connecting the said plates with the accessory parts of the apparatus, all substantially as shown and described, and for the purpose set forth.

87,440.—George W. Spencer, South Grov e land, Mass.—*Shoe-Knife.*—March 2, 1869.

Claim.—1. The stock A, constructed as described, and adapted for holding the knife and gouge, and securing them to the machine, substantially as and for the purpose specified.

2. The combination, with the knife B, of the gouge E, substantially as and for the purpose specified.

87,441.—William P. Springer, Oswego, N. Y.—*Smut-Machine.*—March 2, 1869.

Claim.—The arrangement of the double fan D *d i*, scouring-cylinder A A′, connecting-pipe I, and surrounding air-chamber H, all constructed and operating substantially as herein set forth.

2. The shaft G, provided with the beaters B C, fan D *d i*, and scrapers *f*, and resting in the block N *n o*, removably fitted in the box M, and covered with a cap, *m*, in combination with the scouring-cylinder A A′, and chambers H F, all substantially as herein set forth.

87,442.—George J. Sturdy and Solomon W. Young, Providence, R. I—*Process of Cleaning Me-*

tallic Articles for Plating and Gilding.—March 2, 1869.

Claim.—1. For cleaning, burnishing, or polishing metallic articles, (as hooks and eyes, buttons, eyelets, and other articles of metal, in preparing them for gilding or plating,) revolving, shaking, or agitating such articles in a cylinder or other suitable vessel, when immersed in a solution of cyanide of potassium, substantially as described.

2. Preparing metalic articles for gilding or plating, by means of a mechanical and chemical process combined, substantially as described.

87,443.—Michael Sullivan and John Reedy, New York, N. Y.—*Paper-File.*—March 2, 1869.

Claim.—1. The back plate C, fastening-rod D, and fastening-strip I, in combination with the cover A B B, constructed, arranged, and operating substantially as herein shown and described, for the purpose set forth.

2. In combination with a paper-file, the fastening-strip I, or its equivalent, when used substantially as and for the purposes set forth and described.

87,444.—August Tappe, Johnstown, N. Y.—*Smoking-Pipe and Cigar-Holder.*—March 2, 1869.

Claim.—The hollow perforated cone C, perforated tube E, and diaphragm *a*, when arranged within the stem, or other part of a cigar-holder or smoking-pipe, substantially as herein shown and described, for the purpose specified.

87,445.—Theodore R. Timby, Saratoga, N. N.—*Railway-Car Wheel.*—March 2, 1869.

Claim.—A mortise-wheel, A B C, to be used upon street or other railways, constructed with the mortises D in the thread C, substantially as and for the purposes described.

87,446.—Theodore R. Timby, Saratoga, N. Y.—*Case for Preserving Butter, Cheese, and other Articles.*—March 2, 1869.

Claim.—1. The rack B, constructed and arranged substantially as and for the purposes set forth.

2. The combination of the rack B with the case A, for the purposes as described.

87,447.—Gustave Verplaetse, New York, N. Y.—*Barrel for Cooling Fluids.*—March 2, 1869.

Claim.—The open-work case N, encircling the ice-case B, and adapted to serve as a strengthener thereof, without materially retarding the transmission of caloric thereto, the ice-case B having a tightly-closable mouth, and all the parts being arranged relatively to each other and to the vessel A, substantially as and for the purposes herein set forth.

87,448.—Henry B. Verry, New York, N. Y., assignor to himself, G. Koonz, New York, and D. G. Whitman, North Kingston, R. I.—*Steam-Engine Valve-Gearing.*—March 2, 1869.

Claim.—The steam-chest C, and the valves *f f*, constructed and arranged in combination with a steam-engine cylinder, substantially as herein shown and described.

87,449.—Edgar Wakeman, Brooklyn, Cal.—*Boat-Detaching Apparatus.*—March 2, 1869.

Claim.—The slotted box-spout F, box D, and cam-lever E, having the arm *e'*, for the attachment of the rod G, with the recessed strap B, and headed bar C, all arranged and operating as described, for the purpose specified.

87,450.—Seth Wheeler, Albany, N. Y.—*Horse-Power.*—March 2, 1869.

Claim.—The series of independent rollers I, connected together by the rotating band *k*, on the outside thereof, in combination with the master-wheel and the track F, substantially as and for the purpose described.

87,451.—L. F. Whitman and O. P. Whitman, Macomb, Ill.—*Shoe-Fastening.*—March 2, 1869.

Claim.—1. A metallic spring shoe-fastener, when arranged as described, for the purpose set forth.

2. The shoe-fastener described, consisting of the spring *b* and rivets *a' a'*, when attached to a shoe, as and for the purpose described.

87,452.—Peter F. Whitney, Saugerties, N. Y.—*Apparatus for Loading Ice.*—March 2, 1869.

Claim.—The combination, with the frame A, roller D, carriage E, and chute B, of the friction-brake F, weight K, cords H and L, and the pulleys I I', arranged substantially as and for the purpose described.

87,453.—David Williamson, Elizabeth, Pa.—*Mining-Machine.*—March 2, 1869.

Claim.—1. The arms C C, pivoted upon a frame or carriage concentrically with the driving-axle of the machine, and carrying the saw-mandrel, in combination with the circular or segmental guides D D, as set forth.

2. The guide-rods *h h*, and spiral springs h^2 h^2, in combination with the cross-head H and saw-mandrel B, arranged and operating substantially as and for the purpose set forth.

3. The frame A, driving-shaft E, and driving-pulley E^1, in combination with the circular or segmental guides D, arms C, and saw-mandrel B, arranged and operating substantially as and for the purposes described.

4. A cylindrical saw, having teeth at its working-end, and spiral corrugations extending therefrom toward its opposite end, as well as openings in its periphery, for the escape of dust or chips, as set forth.

87,454.—Charles P. Winslow, Westborough, Mass.—*Safety Cattle-Tie.*—March 2, 1869.

Claim.—The arrangement, with reference to the cattle-stalls, of the sliding bar L, lever-pinion P, rods R, cross-piece J, rods *i i*, jointed tie-bolts C and the eyes *k k'*, as herein described, for the purpose specified.

87,455.—Henry Aiken, Pittsburgh, and Henry McAllister, Jr., and Henry G. Morris, Philadelphia, Pa.—*Burning-Kiln for Brick, Tiles, &c.*—March 2, 1869.

Claim.—The kiln A, with its double walls A' B, and system of induction-pipes C C' D, in combination with an independent gas-generator, F, and pipes N N', connected with a pressure-blast, for introducing the mingled gases and air into the kiln, for combustion under pressure, substantially as herein set forth.

87,456.—Henry Aland, London, England, assignor to Samuel and George Aland.—*Rotary Blowing-Fan for Furnaces, Gas-Works, &c.*—March 2, 1869.

Claim.—The directing a given pressure from the discharge of the fan-disk periphery, and injecting it into its center, as hereinbefore described.

87,457.—Daniel Arndt, Toledo, Ohio.—*Clothes-Mangle.*—March 2, 1869.

Claim.—The combination of the large roller F, mangle-board E, and roller *d*, levers G G and I I, rubber bands H H, and cams *e e*, all constructed and arranged substantially as and for the purposes herein set forth.

87,458.—John Ball, Canton, Ohio.—*Spring-Link for Plow-Clevis.*—March 2, 1869.

Claim.—A spring-link for plow-clevis, formed of one piece of metal, in the form substantially as shown, with a hook at one end and an eye at the other, substantially for the purposes specified.

87,459.—Joseph W. Bates, St. Paul, Minn.—*Stove-Pipe.*—March 2, 1862.

Claim.—1. Converting the horizontal draught of a stove-pipe into a perpendicular, or a perpendicular draught into a horizontal, substantially as and for the purposes herein set forth.

2. Constructing the end of a stove-pipe, where it joins the chimney-flue or main pipe, in such a manner that the current from said stove-pipe may be changed, and the two currents, at the time when they join each other, may be moving in the same direction, substantially as herein set forth.

87,460.—G. W. R. Bayley, Algiers, La.—*Lock-Nut Attachment for Railroad-Chairs.*—March 2, 1869.

Claim.—The method of locking the nut or nuts of railroad joint bolts, or of intermediate rail bolts, by means of the lip or lips of the railroad-chair, in the manner substantially as herein described and set forth.

87,461.—Samuel Boden, Louisville, Ky.—*Violin-Bridge.*—March 2, 1869.

Claim.—A bridge for stringed musical instruments, constructed substantially as shown and described, and for the purpose set forth.

87,462.—Benjamin Briscoe, Detroit, Mich.—*Locomotive Alarm-Bell.*—March 2, 1869.

Claim.—1. The lever G, vertical guides H, spiral spring I, springs J, rocking lever K, and connecting-rod M, when constructed and arranged to operate the hammer, F, on the bell C, substantially as and for the purposes set forth.

2. The arrangement of the hammer F, operated as described, in such a manner that each stroke of the same will tend to rotate the bell C, substantially as and for the purpose set forth.

87,463.—Smith S. Brown, Woonsocket, R. I.—*Invalid Bed and Bedstead.*—March 2, 1869.

Claim.—1. The base-plate A, legs B, standards C, rollers *a*, semicircular arms D, pin *e*, levers F and S, arbor *d*, spring *e*, and hangers *h*, substantially as and for the purposes specified.

2. The bed-frame E, bottom *s*, mattress I, ratchet H, jointed frame M, with its canvas elevator, as described, table R, straps *r*, hook *z*, and arm *v*, when constructed, arranged, and operating substantially as specified.

87,464.—Dennis C. Burdick, Milton, Wis.—*Punch, Shears, and Iron-Shrinker Combined.*—March 2, 1869.

Claim.—The arrangement upon the stand A of the centrally-bisected parts C D, supporting the bar F, cam L′, and lever G, gripes K L, part N, and gripes M N, punch and die H I, movable part P, and shear *c b*, the parts being adjusted, and all constructed to operate substantially as set forth.

87,465.—D. P. Butler, Boston, Mass.—*Lifting-Apparatus.*—March 2, 1869.

Claim.—1. For lifting in a vertical direction in the line of the spine the shoulder-strap harness, substantially as shown and described.

2. In combination with the vertical rod *b* the cross-bar *t* and the handles *u*, substantially as and for the purpose set forth.

3. The combination with the shoulder-strap harness of the handle *d*, substantially as described.

4. The arrangement of the handles, or of the handle, through which the effort of the gymnast is exerted, with screw-threads in connection with nut-threads, so that the height of the handles or handle above the platform can be adjusted without change in the position of the weight.

87,466.—Car Carpenter, Buffalo, N. Y.—*Manufacture of Illuminating Gas.*—March 2, 1869.

Claim.—In the manufacture of gas, the introduction of the vapor generated in a suitable vessel from crude petroleum, or other impure liquid hydrocarbon, into the retort containing the coal, and then passing the gaseous mixture therefrom, through one or more uncharged retorts, substantially as set forth.

2. The combination of the reservoir G, the tar-vaporizing boiler I, and retorts B C, substantially in the manner and for the purpose specified.

3. The arrangement within the retort B of the vaporizing-pan *k*, in combination with the reservoir G, substantially as set forth.

87,467.—John H. Cheever, New York, N.Y.—*Manufacture of India-Rubber Trunks, Valises, Boxes, &c.*—March 2, 1869.

Claim.—1. A trunk or valise, made of India-rubber, combined with fibrous matter, or with *papier-maché*, or the equivalent of the same, substantially in the manner herein described; that is to say, when the whole of the trunk, or the sections thereof, are shaped and vulcanized in molds.

2. As a new manufacture, the production of trunk-sections or parts, composed of India-rubber and fibrous matter, or *papier-maché*, or its equivalent, shaped and vulcanized in molds, in such manner that said parts may be readily united by any mechanical means to form a trunk or valise, substantially as set forth.

87,468.—Mirtillow R. Clapp, New York, assignor to himself and Edward D. Jones, Brooklyn, N. Y.—*Steam-Engine Mechanism.*—March 2, 1869.

Claim.—1. The arrangement of the bed-plate B, formed with induction and eduction passages in or through it, with reference to the cylinder D, valve-chest E, and boiler A, substantially as shown and described.

2. The arrangement of the stop-valve C with the bed-plate B, essentially as specified.

3. The arrangement of the exhaust pipe or pipes from the engine, substantially as described, whereby they are made to enter the boiler below the crown-sheet, and to pass up or establish connection through the latter, substantially as described and set forth.

87,469.—Edwin S. Collamer, Georgetown, D. C.—*Shutter-Fastener.*—March 2, 1869.

Claim.—The spring D, having the standard G, thumb-piece F, and notch *f*, constructed as described and shown, and arranged with the but, as and for the purpose described.

87,470.—S. W. Corbin, Bainbridge, N. Y.—*Post-Hole Auger.*—March 2, 1869.

Claim.—The combination of the handle A, flange B, lip C, and rim D, all constructed and arranged substantially as and for the purposes herein set forth.

87,471.—Joseph E. Coveney, Buchanan, Mich.—*Three-Horse Equalizer.*—March 2, 1869.

Claim.—The construction of a three-horse evener or equalizer, combining the bar A, straps B, pulleys C, C′, C″, C‴, and F, clevises G and J, and rope or chain K, when combined and arranged and operating substantially as herein described.

87,472.—Archibald C. Crary, Utica, N. Y.—*Railroad-Car Heater.*—March 2, 1869.

Claim.—1. The self-acting extension and flexible steam-conduit, and its equivalent, constructed substantially as hereinabove set forth, and its application to the transmission of steam from a steam-generator to a train of cars, or from the boiler of a locomotive to the cars, or as an intermediate between the steam-pipes of adjacent cars.

2. The steam-pipe E E and its equivalent, when located and used, substantially as herein set forth, in transmitting steam from the steam-chamber of a steam-generator longitudinally through the interior of the steam-generator, and longitudinally through the interior of the boiler, substantially as herein set forth.

3. Valve M, when used in connection with a steam-generator and steam-boiler as a safety-valve and regulator for the heating apparatus, substantially as set forth.

4. The self-acting or automatic valves V and R, and their equivalents, constructed and used substantially as herein set forth.

5. The self-connecting and self-disconnecting joint, formed by the pressure of the semispherical end of pipe P into socket Q with hood A, for the purpose of forming automatically a union between the steam-pipes of two adjacent cars, when used or applied substantially as hereinabove set forth.

6. The application and use of springs G and S, and their equivalents, in connection with valves, substantially as hereinabove set forth, in controlling and stopping the flow of steam to and from the railway-cars.

7. Pipe O′ is used in connection with pipes O and E E, substantially as herein set forth.

87,473.—J. B. Crosby, Boston, Mass.—*Nailing or Pegging Machine.*—March 2, 1869.

Claim.—The combination of the vertically-moving horn with the feeding-mechanism of the wire-like

material, so that the feed of said material shall be in proportion to the thickness of the stock at the points at which fastenings are to be inserted, substantially as described.

87,474.—Ferdinand Davison, Liberty, Va.—*Machine for Making Spikes.*—March 2, 1869.

Claim.—1. The form and construction of the holding and pointing dies on the rolls R and T, as and for the purpose specified.

2. The combination of the carrying and pointing rolls R and T, with the beveled cutter and holder-block P and reciprocating cutter and transferrer H, all arranged and operating together, substantially in the manner described.

3. In combination with subject-matter of second clause, the mechanism herein described, for feeding the blank-bar to the knives, as set forth.

87,475.—Jules George Dreyfus, New York, N. Y.—*Enameling Iron and Steel.*—March 2, 1869.

Claim.—The process herein described of enameling steel or iron, by first galvanizing the same, or coating it with copper, or its equivalent, substantially as specified, and afterward applying the enamel thereto, as herein set forth.

87,476.—Cyprien Marie Tessié du Motay, Paris, France, assignor to Edward Stern, New York.—*Apparatus for Burning Gases for Metallurgic and other Purposes.*—March 2, 1869.

Claim.—The apparatus for burning hydrogen, carbon, and other gases, constructed and applied either directly or indirectly to the apparatus which generates or supplies the gases, substantially in the manner herein shown and described.

87,477.—Cyprien Marie Tessié du Motay, Paris, France, assignor to Edward Stern, New York.—*Preparing Zirconia for Use in Producing Light, and for other Purposes.*—March 2, 1869.

Claim.—1. The employment of zirconia to develop and intensify the light of oxyhydrogen flame, substantially in the manner herein set forth.

2. The method of extracting and obtaining zirconia from its ores, substantially in the manner and by the means herein specified.

3. The manufacture of pencils, cylinders, &c., of zirconia, agglomerated and compressed, substantially as and for the purposes herein specified.

4. A compound pencil or cylinder, or its equivalent, for illuminating purposes, composed of zirconia and magnesia, clay, or like refractory substance, united substantially as and for the purposes herein set forth.

87,478.—Cyprien Marie Tessié du Motay, Paris, France, assignor to Edward Stern, New York.—*Process and Apparatus for Generating Combustible Gases.*—March 2, 1869.

Claim.—1. The method of generating or producing the gases herein specified, in the manner and by the means substantially such as shown and described.

2. An apparatus for generating, or producing, carbonic oxide, hydrogen, and carburetted hydrogens, the parts of which are combined and arranged for joint operation, substantially as shown and set forth

87,479.—Cyprien Marie Tessié du Motay, Paris, France, assignor to Edward Stern, New York.—*Manufacture of Iron and Steel.*—March 2, 1869.

Claim.—The method of effecting the transformation or conversion of iron and steel, substantially in the manner and by the means herein shown and set forth.

2. The apparatus for the manufacture or transformation of iron and steel, constructed and operating substantially as herein shown and described.

87,480.—Robert N. Eagle, Washington, D. C.—*Lamp-Burner.*—March 2, 1869.

Claim.—1. The body A of a lamp, when so constructed as to form a wick-chamber, B, and surrounding reservoir C, separated by a depression of the shell of the lamp, substantially as set forth.

2. The combination of the reservoir and wick-chamber, when both are formed from the continuous shell of the lamp, and so arranged that the top of the reservoir and the point of connection between the burner and wick-chamber shall be on the same, or nearly the same, level, substantially as described.

3. A lamp, constructed with an air-chamber, E, formed by a depression D D, of the shell of the lamp, substantially as and for the purpose set forth.

4. The depression a', formed in the top of the body of the lamp, to receive the head of the thumb-screw F′, substantially as and for the purpose set forth.

5. The combination of a lamp-body, having an annular air-chamber E, and the annular bridge o and o', substantially as and for the purpose set forth.

6. The combination of the wick, the porous capillary substance, and the mat; but this I claim only when the capillary substance is inclosed in a cage surrounded by the oil, and under and in contact with the wick, and when said mat is used to draw the oil from points outside of the cage to the capillary substance inclosed therein.

7. In combination with a lamp-burner, having a male screw on its lower end, and the neck of a lamp formed to receive and attach a burner by a catch, instead of a screw, an intermediate collar, G, which may be screwed to the burner, and also attached by a catch to the neck of the lamp, substantially as and for the purpose set forth.

87,481.—Hemon Eichler, New Lisbon, Wis.—*Leather-Cutting Machine.*—March 2, 1869.

Claim.—1. A leather-shaving machine, consisting of the stationary knife C, the adjustable roller D, and the roller E, mounted in a swinging frame, substantially as herein described.

2. In combination with the adjustable roller D, the wedge G, arranged to operate substantially as set forth.

87,482.—Charles J. Everett, New York, N. Y.—*Apparatus for Rendering Lard, Tallow, &c.*—March 2, 1869.

Claim.—1. Strengthening the digesters, and uniting the water-bottom under the same with the steam-space over the top thereof, to give circulation to the water, and uniformity of temperature in the jacket, by means of flues introduced therein, substantially as described.

2. Tying the bottom and top of the steam and water-jacket together, by means of bolts or rods passed through said flues in said digester, substantially as described.

3. The introduction of the noxious gases and vapors from the superheater into or under the furnace of the consumer, along with the current of hot air, created by the passage of said noxious gases and vapors from the superheater to the furnace, substantially as described.

4. Making the superheating-chamber between the plates composing the wall of the furnace, substantially as described.

5. Making the gas and air-jet orifices a part of the superheater, through which the gas and steam pass on their way to the fire, substantially as described.

87,483.—A. M. George, Nashua, N. H., assignor to himself and B. F. George, same place.—*Stone-Dressing Machine.*—March 2, 1869.

Claim.—Raising or lowering the frame of a stone-dressing machine by means of ratchets and pinions, substantially as set forth.

2. The bar s, clasp u, and lever L, constructed, arranged, and operating substantially as and for the purposes herein specified.

3. The trip-hammer herein described and shown, when working in combination with the bar s, clasp u, and lever L, substantially as specified.

87,484.—Edward C. Gero and James N. Cooley, Kalamazoo, Mich.—*Plow-Point.*—March 2, 1869.

Claim.—A steel socket plow-point, constructed in the manner described, the same being secured to and in combination with a cast-iron plow-point or share substantially as herein set forth.

87,485.—Samuel Gibbons, Freedom, Pa., assignor to Excelsior Oil-Manufacturing Com-

the lead ingot may be cast without contact with the tin, thus reducing the alloying of the two metals.

4. In the manufacture of the compound ingot, as herein described, the formation of the tin ingot of superposed inverted frusta of cones, the upper one being of larger diameter but proportionally shorter than the lower.

3,745.—HERMANN SCHMIDT, New York, N. Y.—*Hand-Screw Clamp.*—Patented August 14, 1866, No. 57,195; reissued November 23, 1869.

Claim.—A hand screw clamp, the nut or nuts of which are capable of being thrown in or out of gear with the clamping screw or screws, substantially in the manner and for the purpose herein set forth

3,746.—THE WOVEN-WIRE MATTRESS COMPANY, Hartford, Conn., assignees, by mesne assignments, of FRANZ RUDOLPH WEGMAN.—*Wire-Spring Mattress.*—Patented June 16, 1868, No. 79,040; patented in Saxony, March 6, 1865; reissued November 23, 1869.

Claim.—A fabric, formed of double-woven spiral springs, coiled and intertwined, in the manner described.

3,747.—WILLIAM WESTLAKE, JAMES F. DANE, and JOHN P. COVERT, Chicago, Ill., assignees of WILLIAM WESTLAKE.—*Lantern.*—Patented April 26, 1864, No. 42,520; reissued November 23, 1869.

Claim.—1. The lantern-guard *a*, constructed entire, without hinge or joints, so that, as a whole, it can be readily attached to or removed from the lantern, as set forth.

2. The disk *g*, in combination with the ring or band *b* of the guard, and fastenings *e*, substantially as and for the purposes specified.

3. The guard *a*, in combination with the disk *g*, fastenings *e*, and removable globe *d*, substantially as specified.

3,748.—CLEAVELAND F. DUNDERDALE, New York, N. Y.—*Apparatus for Generating and Carbureting Gas.*—Patented June 1, 1869, No. 90,644; reissued November 30, 1869.

Claim.—1. The manufacture of carbureted-hydrogen gas, by placing the hydrocarbon liquid and the diluted acid in different vessels or compartments, not in contact with each other, but in the same machine, and under the same cover, and near each other, for the purposes described.

2. The combination and arrangement of the cover B, containing the funnel-shaped cylinder D and annular chamber E, with pipes F and outlets M; the chamber D, as a regulator, conductor for the hydrogen-gas, and supporter for the hydrocarbon-chamber E, the tank A, water-chamber C, and feed-pipe H, the whole being combined in the manner and for the purpose substantially as herein set forth and described.

3,749.—JOHN F. FISHER, Greencastle, Pa., and DANIEL BREED, Washington, D. C., assignees of JOHN F. FISHER.—*Guano-Attachment for Seed-Drills.*—Patented June 1, 1869, No. 90,653; reissued November 30, 1869.

Claim.—1. The above-described screw bevel-gear, or its equivalent, for operating the stirrers of a guano-attachment to wheat-drills, or other fertilizer-machines, substantially as set forth.

2. The quarter pinion F and reciprocating rack-bar E, placed under the hopper, in combination with the swinging fingers, or stirrers, inside of the hopper, substantially as set forth.

3. In combination with the stirrers and quarter pinion, the reciprocating bar E, the rod D, crank C, pinion B, and gear-wheel A, substantially as set forth.

3,750.—THOMAS J. HALL, Bryan, Texas.—*Gang-Plow.*—Patented April 20, 1869, No. 89,144; reissued November 30, 1869.

Claim.—1. The combination of the up-and-down adjustable slotted cross-bar D, having the perforated plate *f*, with the plow-beams E, pins *e*, and pivoted levers G, all arranged and operating substantially as and for the purpose herein shown and described.

2. The levers G, pivoted to the up-and-down adjustable cross-bar D, connected at their front ends with the plow-beams, and adjusted with their rear ends on a cross-bar, *k*, all arranged and operating substantially as described, for the purpose of oscillating the plow-beams, as specified.

3. The brace or bridle P, when constructed and arranged with relation to the plow-beam and revolving cutter I, to support and strengthen the stock O, in the manner substantially as described.

3,751.—RICHMOND A. LEEDS, Stamford, Conn.—*Gate-Latch.*—Patented September 25, 1866, No. 58,268; reissued November 30, 1869.

Claim.—1. The arrangement, horizontally across the face of the front stile of a gate, of one or more eccentrically-hung dogs or plates, provided with a handle or handles, when used in combination with a stationary lug or projecting piece, secured to the fence-post, substantially as herein specified.

2. A latch for gates, consisting of two eccentrically-hung bolts or plates, D, provided with handles or arms, E, and arranged within an inclosing-case, F, in combination with a lug or projecting piece, H, substantially as herein specified.

3,752.—IRA WOOD, Woodstock, Vt.—*Composition of Liquids for Tanning.*—Patented September 14, 1869, No. 94,805; reissued November 30, 1869.

Claim.—1. A tanning-liquid, made of the leaves of the trees of the different varieties of alder, sycamore, elm, basswood, chestnut, walnut, hickory, apple, peach, poplar, and birch, hereinbefore described, used separately, or combined one with another, or two or more, or all, in equal or any proportions, for the purpose and in the manner above set forth.

2. A tanning-liquid made of the leaves of the different varieties of alder, sycamore, elm, basswood, chestnut, walnut, hickory, apple, peach, poplar, and birch trees, used separately, or two, or more, or all together, in combination with the leaves of the different varieties of oak, maple, willow, and beech trees, the leaves of the four last-mentioned varieties of trees being used separately, or two, or more, or all, in making the liquid, all the said varieties of leaves being mixed in equal or any proportions, for the purpose and in the manner above set forth,

3. A tanning-liquid, made of the different varieties of the alder, sycamore, elm, basswood, chestnut, walnut, hickory, apple, peach, poplar, and birch trees, used separately, or two, or more, or all of them together, in combination with alum, Glauber's salts, and nitric or sulphuric acid, in about the proportions above specified, and for the purpose and in the manner above set forth.

4. A tanning-liquid, made of the leaves of the different varieties of the alder, sycamore, elm, basswood, chestnut, walnut, hickory, apple, peach, poplar, birch, oak, maple, willow, and beech trees, in combination with alum, Glauber's salts, and nitric or sulphuric acid, in about the proportions above specified, and for the purpose and in the manner above set forth.

5. A tanning-liquid, made of the leaves of the different varieties of the oak, maple, willow, beech, alder, sycamore, elm, basswood, chestnut, walnut, hickory, apple, peach, poplar, and birch trees, used separately, or two, or more, or all of them together, in combination with a liquid made of hemlock bark, or oak bark, or catch, or other tanning-liquid used in the manufacture of leather, in equal or any proportions, for the purpose and in the manner above set forth.

6. The employment of my improved tanning-liquids, made of the leaves of the different varieties of the oak, maple, willow, beech, alder, sycamore, elm, basswood, chestnut, walnut, hickory, apple, peach, poplar, and birch trees, one, or more, or all together, in finishing leather tanned by the use of other liquids or processes.

3,753.—H. B. DURFEE, Decatur, Ill.—*Plow.*—Patented May 18, 1869, No. 90,246; reissued November 30, 1869.

Claim.—1. The construction and arrangement of the beam and short handle, for the purpose of leaving an open landside space and clearance, for the clogging material that drops over the mold-board, substantially as described.

2. In combination with the short handle D, a brace,

c, extending therefrom to the standard or beam, or both, substantially as and for the purpose described.

3,754.—LIVERUS HULL, Charlestown, Mass.—*Manufacture of Whip-Stocks.*—Patented January 8, 1867, No. 61,070; reissued November 30, 1869.

Claim.—1. In a whip-stock composed of a center-piece of one material, surrounded by several outside pieces or strips, the mode of producing the requisite shape or taper therein, by a turning-machine, the said process consisting of first butting each outside strip laterally against its contiguous strip, securing them together by glue, substantially as above described, and afterwards turning the same into proper shape by tools working transversely, without disarrangement of its several pieces or parts.

2. The improved whip-stock, when arranged and turned substantially as described.

3,755.—METROPOLITAN WASHING-MACHINE COMPANY, Middlefield, Conn., assignee of ALFRED M. BAILEY and JOHN O. COUCH.—*Clothes-Wringer.*—Patented January 14, 1862, No. 34,178; reissued November 30, 1869.

Claim.—1. In a clothes-wringer, of otherwise ordinary or suitable construction, elastic rolls so mounted in the frame and combined with springs that one end shall be free to play within the capacity of the springs, while the other is confined.

2. In combination with elastic rolls, mounted in the frame of a wringing-machine, as herein shown, so as to have a more limited play at the geared end than at the other, the employment of a spring or springs, having a central or common bearing at a point intermediate between the ends of the rolls.

3. The construction of wringing-machines in which the rolls are operated by gear-wheels in such manner as to allow play to the rolls at the end nearest the wheels, to an extent as will not permit them to be thrown out of gear, and at the other end allow a larger play against a spring or its equivalent, so as to operate upon masses of clothing of different thicknesses, as herein set forth.

3,756.—GEORGE W. LEE, Sandy, Ohio.—*Feed-Cutting Attachment to Thrashing-Machines.*—Patented May 4, 1869, No. 89,669; reissued December 7, 1869.

Claim.—1. The combination of a series of fixed saws with a spiked cylinder or its equivalent, for cutting feed, substantially as herein set forth.

2. The combination, with the toothed cylinder and toothed shell of a thrashing-machine, of the attachment D, provided with saws, and either permanently or detachably connected thereto, substantially as specified.

3. The aprons F G, combined with the attachment D and the casing H, and arranged substantially as specified.

4. The plate L, combined with the apron G, the casing H, and attachment D, when arranged substantially as specified.

3,757.—CHARLES GREEN, WILLIAM WILSON, Jr., HENRY DU PONT, E. I. DU PONT, L. DU PONT, and EUGENE DU PONT, Wilmington, Del., and CHARLES PRATT, New York, N. Y., assignees of JAMES WILSON, CHARLES GREEN, and WILLIAM WILSON, Jr.—*Powder-Keg.*—Patented July 12, 1859, No. 24,772; reissued January 6, 1863, No. 1,383; again reissued December 7, 1869.

Claim.—1. The method of closing the ends of sheet-metal cans by means of a countersunk head or cap fitting within the orifice to be closed, and provided with a flange, which rests upon the upright edges of the can around the orifice, and is formed, with said edges, into a lap-seam, against an external mandrel, as a support, substantially as shown and set forth.

2. The flaring lap-seam, formed by the union of the flange of the countersunk head with the upright edges of the can surrounding the orifice to which said head is applied, substantially as and for the purposes shown and set forth.

3. A sheet-metal can, composed of flanged and countersunk heads, in combination with corrugated or bulging sides, the two being united by a lap-seam, formed as specified, and brought within the compass of the bulging sides, so that the seam or seams may be protected from injury, as herein set forth.

4. The formation of a groove or recess in the body of the can, parallel with the lap-seam, and adjoining the edge of the turned-down flange of the countersunk head or cap, as and for the purposes set forth.

5. A sheet-metal can, one or both ends of which are closed by means of a flanged or countersunk head or cap, applied and secured to the can in the manner substantially as shown and set forth.

3,758.—SMITH, LATROBE AND COMPANY, Baltimore, Md., assignees of FREDERICK H. SMITH.—*Bridge.*—Patented October 26, 1869, No. 96,278; reissued December 7, 1869.

Claim.—1. The combination, in a beam-truss, of the strut or post with the adjusting-devices herein described, or their mechanical equivalent, applied directly to the foot or base of said post, for the purpose of contracting or elongating its working-length, substantially as set forth.

2. The herein-described construction and combination of the loops and pin constituting an adjusting-device applied to the foot of the post, in either beam or suspension-trusses, substantially as shown and set forth.

3. The arrangement of the chord-bars, provided, at their upper edge or edges, with flanges or stiffening-irons, for the purpose specified, and jointed to the pins upon which their ends are supported, substantially as shown and set forth.

4. The attachment of the lateral-bracing systems to the joint-pins, by means of the bolt which at once combines the pin, strut, loops, and adjustable ties into a hinged joint in the lateral plane of the truss, substantially as shown and specified.

5. The combination, with the feet of the struts or posts, of the adjustable loops and joint-pins, with which the lateral-bracing system is connected substantially as herein shown and set forth.

3,759.—REUBEN KIDEN HUNTOON, for himself and JOHN AUGUSTUS LYNCH, assignee, by mesne assignments, of REUBEN KIDEN HUNTOON, Boston, Mass.—*Steam-Engine Governor.*—Patented December 4, 1866, No. 60,192; reissued December 14, 1869.

Claim.—1. The combination of the bearing C, its passage *e* and stop-cock *d*, with the shaft B, the propeller D, and the cistern or vessel A, arranged as and for the purpose set forth.

2. The combination and arrangement of the deflector *e* with the cistern A, the shaft B, and the propeller D, arranged as and for the purpose set forth.

3. The combination and arrangement of the wings *a* with the cistern A, the shaft B, and propeller D, arranged as set forth.

4. The governor, as constructed of the propeller D, its shaft B, and case A, and with the long gear *g* applied to, so as to move endwise with the shaft B, and to operate with and be operated by the driving-gear of a shaft, *i*, as set forth.

3,760.—THEODORE MACE, New York, N. Y., assignee of GEORGE C. TAFT.—*Variable Crank for Boring-Machines.*—Patented December 10, 1867, No. 72,114; reissued December 14, 1869.

Claim.—1. Combining with the shaft *g* and gearing of the boring-machine, a crank-handle that is variable in its length, so that the leverage of the crank may be adapted to the work to be performed by the boring-tool, substantially as specified.

2. The arm *i*, attached at the end of the shaft *g*, and provided with the hub *k*, through which passes the rod *m*, to the handle *n*, substantially as set forth.

3,761.—H. OLDS, Syracuse, N. Y.—*Slide for Extension-Table.*—Patented September 10, 1867, No. 68,782; reissued December 14, 1869.

Claim.—The metal slides *a*, made in the form of a cross, as herein specifically set forth, and working in corresponding grooves in the slide-bars *b*, constructed, arranged, and combined as herein specified.

3,762.—CHARLES PRATT, New York, N. Y.—*Nozzle for Cans.*—Patented April 20, 1869, No. 89,167; reissued December 14, 1869.

Claim.—1. As a new article of manufacture, a combined nozzle and seal for cans, composed of a metallic nozzle, in combination with a cap of thin soft metal, applied and secured to the same, substantially as herein described.

2. The combination, with a nozzle for cans, of a soft-metal cap covering the mouth of the nozzle, and extending downward upon the sides of the same a sufficient distance to admit of the cap being soldered to the nozzle at a point removed from or below its mouth, substantially as and for the purposes set forth.

3. The formation, upon the soft-metal cap which covers the mouth of the nozzle, of a shoulder or ridge for the guidance of the cutting-instrument, as shown and set forth.

3,763.—CYRUS ROBERTS and JOHN A. THROP, Three Rivers, Mich.—*Horse-Power.*—Patented December 8, 1868, No. 84,766; reissued December 14, 1869.

Claim.—1. The combination of a V-shaped truck-frame, and its tranverse bolsters, with the bed-plate and gearing, the whole constructed for joint operation, substantially as set forth.

2. The combination, with the sweeps, of the diagonal braces, having their leading ends respectively connected with the sweeps, in advance thereof, at points outside of the sockets through which said sweeps pass, all constructed for joint operation substantially as set forth.

3. The combination of the line-shaft, the bed-plate, and the dished bevel-wheel, arranged below the bed-plate, all constructed for joint operation, substantially as set forth.

4. The combination of the bevel-wheel, united by the clutch to the pinion above it, the friction-roller rotating upon the upper surface of the wheel, above the pinion of the line-shaft, and the friction-roller at right angles thereto, all these parts being constructed to operate as set forth.

5. The combination of the annular master-wheel, the friction-rollers, the fixed bed-plates, and the guides, all these parts being constructed to operate as set forth.

6. The arrangement of the frame, the bed-plate, the line-shaft, and the hangers B^2, constructed as described.

3,764.—EDWARD SEELEY, Scranton, Pa.—*Composition for Concrete Pavements.*—Patented September 6, 1864, No. 44,117; reissued December 14, 1869.

Claim.—1. The combination of silica, gas-tar, and sulphur, substantially as and for the purposes described.

2. The within-described composition of silica and gas-tar, when prepared substantially in the manner and for the purposes set forth.

3. The herein-described process of preparing the composition, by heating the silica, and then mixing it with the heated gas-tar, substantially as and for the purposes described.

3,765.—BERNARD STEINMETZ, Paris, France.—*Carpet-Bag Lock.*—Patented August 1, 1865, No. 49,207; reissued December 14, 1869.

Claim.—1. The pivoted spring-lever D, with its catch-projection *m*, and the spring tumbling-block or bolt *v*, operated by a key, combined and arranged substantially as herein described, when applied to the jaws of a satchel, bag, or portmanteau, for the purpose specified.

2. The combination of the "eagle," or shield-knob T, constructed so as to cover the slot 2 in the lock-case C, the catch *m* of the spring-bar D, and the staple *h* of the jaw-frame B, as herein specified.

3,766.—A. J. WARREN and D. W. WILSON, West Eau Claire, Wis., assignors to themselves and NOAH SHAW, same place, and URIAH M. STONE, Augusta, Wis.—*Steam-Generator Furnaces.*—Patented June 22, 1869, No. 91,800; reissued December 14, 1869.

Claim.—1. The arrangement, upon the forward end of the boiler, of one or more inclined spouts, E E, which spouts are provided with self-acting valves, *y*, whereby the sawdust may be fed down from over the top of the boiler to the fire-box, and the valves close themselves to prevent the ascension of flame or other products of combustion, as set forth.

2. The combination of the boiler A, dome *d*, superheating-pipe C, inclined spouts E, and valves *y*, all substantially as set forth.

3,767.—PATRICK ADIE, of the Strand, London, England.—*Machine for Clipping Horses' Hair.*—Patented June 30, 1868, No. 97 293; patented in England April 24, 1867; reissued December 21, 1869.

Claim.—1. The arrangement and combination of the toothed plates A and B, screws I and I, and handle A H, with handle or lever L K D H, the whole constructed and operated substantially in the manner and for the purpose set forth and described.

2. The combination of the two teeth-plates of the clipping-machine, whereby the faces of the teeth are kept in proper contact, by reason of the elasticity of the teeth-cutting plates, all constructed substantially in the manner and for the purpose described.

3,768.—WILLIAM H. BLISS, Newport, R. I., assignee of himself and ROBERT B. LAWTON.—*Hose-Coupling.*—Patented February 22, 1859, No. 23,033; reissued December 21, 1869.

Claim.—1. The combination of the two thimbles C and D, by means of a pin, operating longitudinally through the outer thimble C, and against the inclined side of the groove in the thimble D, so that the two thimbles will be forced together by the inward movement of the pin, and be liberated by its outward movement, substantially as described.

2. The side of the groove in D nearest to the joint to be formed, or to the flanch, constructed with an incline, substantially as described.

3. The combination of the thimbles C and D, cap *i*, and pin *g*, when constructed and operated substantially as described.

3,769.—HENRY BUNDELL, Dayton, Ohio.—*Seeding-Machine.*—Patented January 23, 1866, No. 52,135; reissued December 21, 1869.

Claim.—1. Combining, with the shaft of seed-drills, the sets of zigzag channels *a a*, in the seed-delivery cylinder, with or without the interposed agitating-wheels E, when said channels are made substantially in the manner and for the purpose specified.

2. In combination with the zigzag channels and agitating wheel or wheels E, the sectional case and shield F, arranged substantially in the manner and for the purpose set forth.

3,770.—BETHEL BURTON, Brooklyn, and WILLIAM C. WARD, New York N. Y., assignees of BETHEL BURTON.—*Breech-Loading Fire-Arms.*—Patented December 20, 1859, No. 26,475; reissued December 21, 1869.

Claim.—1. The opening 13, arranged as described, in connection with the breech-piece and stock, for the purpose of allowing the escape of gas and smoke, preventing heating and clogging, and facilitating the lubrication of the parts, substantially as shown and described.

2. A breech-pin made in two or more pieces, with a broken joint or joints, when the front end has a reciprocating motion only, and the rear end a reciprocating and rotary motion, substantially as shown and described.

3. One or more projections on the forward end of the breech-pin, for guiding it and holding it in place, when made and operating as shown and described.

4. The L-shaped groove 11 in the breech-pin, in combination with the pin or projection 12 on the inside of the breech-piece, when arranged and operating as shown and described.

5. A concavity or depression on the front end of the reciprocating breech-pin receiving the conical rear end of the barrel, in combination with a sliding packing-ring in the rear end of the barrel, when made as shown and described.

6. The combination of the breech-piece, and the reciprocating breech-pin made to slide therein, when provided with sectional screws as shown and described.

3,771.—S. J. GENUNG, Waterloo, N. Y.—*Extension-Slide for Tables.*—Patented September 7, 1869, No. 94,486; reissued December 21, 1869.

Claim.—1. The combination, with the wooden bars of an extension-table, of separators at the ends, which receive the frictional contact at those points, without any intermediate connection of the bars, as herein described.

2. Forming the slides B with the dovetailed lugs *g* for attaching to the wood, in the manner and for the purpose specified.

3. In combination with the outside slides B B′, the central connection *a b*, substantially as described.

3,772.—THE KENNEDY ELECTRIC-CLOCK COMPANY, New York, N. Y., assignees of SAMUEL A. KENNEDY, S. W. HOLT, and JOSEPH GERLACH.—*Electric Clock.*—Patented December 3, 1867, No. 71,624; reissued December 21, 1869.

Claim.—1. Vibrating a pendulum having a magnet attached thereto, by means of two electric coils, arranged, one at each end of the magnet, the said maget and coils having their corresponding poles placed opposite to each other, as shown and described.

2. Actuating the driving-pawl of a clock-mechanism by a weight moved from a state of rest to a certain distance, and retracted by its own gravity.

3. Carrying the weighted pawl-driver intermittently to its point of limitation, and then leaving it to the action of gravity by means of an oscillating pendulum, in the manner set forth.

4. The combination of the ratchet-wheel E with the pendulum H, by means of the lever F, forked bar G, and pawl I, arranged and operating, in relation to each other, substantially as described and for the purposes specified.

3,773.—B. F. KOLLER, Shrewsbury, Pa., assignee of SAMUEL GIBSON.—*Scrubbing-Brush.*—Patented October 6, 1868, No. 82,705; reissued December 21, 1869.

Claim.—1. Attaching a strip of rubber to one side of a long-handle scrubbing-brush, so that it will be parallel with the rows of the bristles thereof, substantially as described.

2. In a long-handle scrubbing-brush, the arrangement of the strip of rubber D, so as to project from one and the same side of the brush with the bristles thereof, substantially as and for the purpose specified.

3. The arrangement of the shouldered plate A and flanged keeper E, inclosing the strips of rubber D upon the forward part of the bristle-brush G, all as herein shown and described.

3,774.—HENRY R. SENSENIG and MOSES W. MARTIN, Earl Township, Pa., assignees, by mesne assignments, of MARTIN W. ZIMMERMAN and JOHN ZIMMERMAN.—*Pump.*—Patented May 3, 1864, No. 42,617; reissued December 21, 1869.

Claim.—1. The rocker-heads B H, with their arms D C I J, and counterpoise L, when operated in unison by a single wire, W, by means of a crank, N, and wheel, M, substantially in the manner and for the purpose specified.

2. In combination with the foregoing arrangement, the adjusting-screw Y, with its burrs V V, when applied in the manner and for the purpose set forth.

3,775.—JOHN RALSTON, ABRAHAM L. THOMAS, and WILLIAM PARKINSON, for themselves and WILLIAM A. SHOEMAKER, Schuylkill County, and GEORGE E. BUCKLEY, Philadelphia, Pa., assignees of said RALSTON, THOMAS, and PARKINSON.—*Manufacture of Iron and Steel.*—Patented March 23, 1869, No. 88,208; reissued December 21, 1869.

Claim.—1. The manufacture of an improved article of wrought iron in the puddling-furnace, by using, in combination with molten cast iron therein, the micaceous, gray, magnetic iron-ore, substantially as described.

2. The manufacture of steel direct in the puddling-furnace, by using, in combination with molten cast iron therein, the micaceous, gray, magnetic iron-ore, substantially as herein described.

3,776.—P. J. CLEVER, Goliad, Texas.—*Sewing-Machine.*—Patented November 16, 1869, No. 96,866; reissued December 28, 1869.

Claim.—1. The combination of the treadle A and clamp A^2 with the machine-frame, whereby the treadle may be adjusted to either side or end of the frame, according to the direction of the feeding-movement, all substantially as specified.

2. The arrangement of the driving-wheel A^{11}, hinged supporting-frame B, eccentric plate B^3, adjustable hanger B^5, and spring D^4, substantially as specified.

3. The combination and arrangement of the vertically-adjustable driving friction-wheel A^{11}, loose friction-wheel B^7, ratchet-clutch B^{11}, spring B^{12}, fly-wheel B^{13}, and friction-lever B^{14}, all substantially as specified.

4. The combination, with the stand and table-plate, of the jointed brace B^{18} and sleeve B^{19}, when constructed and arranged as specified.

5. The crank-shaft B^3, adjustable connecting-rod C^1, oscillating plate C^3, rod C^4, connected by ball-joints with oscillating plate and needle-arm C^5, all constructed as described, and arranged as specified.

6. The combination, with the curved pivoted shuttle-carrying arm having spring-forks to retain the shuttle, of the crank-shaft B^8, when the shaft and shuttle-carrier are connected by the adjustable connecting-rod D^3, constructed as described, to compensate for the wear of parts, substantially as specified.

7. The combination, with the shuttle, of the tension-spring D^8, set-screw D^{10}, and guards D^{11}, when arranged, substantially as specified, to prevent the thread from catching on the adjusting-screw.

8. The combination of the feed-shoe E, vertically-sliding plate E^1, adjusting-spring E^5, set-screw E^8, carrier E^2, and cam E^7, all substantially as specified.

9. The combination, with the feed-carrier E^2 and notched bar F, of the inverted V-shaped frame F^2, stud-pins H, spring H^1, bar F^8, with stud F^9, vertical slide F^4, and cam F^7, all substantially as specified.

10. The combination, with the vertical slide F^4, and stud-pin F^6, of the bent arm H^3 H^4, and adjusting-screw, H^7, substantially as specified.

11. The combination, with tension-spring K, connected to the needle-arm support, as described, of the right-and-left threaded screw K^2, with movable nuts, the disk K^4, and friction-block K^5, all substantially as specified.

12. The spooling-device L, consisting of the vertical stock, arm L^4, grooved pulleys L^1 and L^2, and arranged relatively to the table and friction-wheel B^7, all substantially as specified.

3,777.—JOHN A. MCCLELLAND, Louisville, Ky.—(Division A.) *Preparing Compounds Containing Collodion.*—Patented April 28, 1868, No. 77,304; reissued December 28, 1869.

Claim.—1. The method of redissolving and working collodion and its compounds, prepared substantially as described.

2. Collodion and its compounds, dried and reduced to a granular or powdered state preparatory to being treated with the proper solvents, substantially as described.

3,778.—JOHN A. MCCLELLAND, Louisville, Ky.—(Division B.) *Material for Forming Dental Plates.*—Patented April 28, 1868, No. 77,304; reissued December 28, 1869.

Claim.—1. A base for artificial gums or dental plates, in which pyroxyline or collodion forms a component part, substantially as described.

2. A dental base, composed of a granulated compound of collodion and coloring-matter, substantially as described.

3. A dental base, composed of collodion and a resinous matter, substantially as described.

3,779.—BLAKEY PILKINGTON, Oakland, Cal., assignee, by mesne assignments, of JAMES D. JENKINS.—*Carbureting Air for the Production of Light and Heat.*—Patented January 28, 1868, No. 73,900; reissued December 28, 1869.

Claim.—1. The carbureting of air for lighting and heating purposes by driving a current of the same through a metallic chamber filled with absorbent material saturated with gasoline, or other carbon-oil, by means of a fan-blower, as is hereinbefore specified.

2. An apparatus for producing light or heat, consisting of a vessel or chamber filled with absorbent material saturated with gasoline or other carbon-fluid, and of a fan-blower for forcing air through said saturated material, substantially as herein shown and described.

3,780.—HENRY E. SHAFFER, Rochester, N. Y. —*Fruit Jar.*—Patented August 31, 1869, No. 94,248; reissued December 28, 1869.

Claim.—The arrangement of the clamp C, spring-bar E, and screw D, either connected or disconnected, when combined with the cover B, having the concavity *a*, whereby a natural spring of the bar is allowed, for giving elasticity to the cover, as herein described.

3,781.—THOMAS H. WHITNEY and S. A. WHITNEY, Glassborough, N. J., assignees of JOHN FOCER. —*Fruit-Jar.*—Patented June 12, 1866, No. 55,581; reissued December 28, 1869.

Claim.—1. The thin metal ring D, having screw-threads adapted to similar threads on the cover B and neck A of a preserving-jar, all substantially as and for the purpose herein set forth.

2. The combination, with a preserve-jar, the neck of which is constructed substantially as herein set forth, of the cover B, gasket C, and ring D, as and for the purpose specified.

3,782.—THOMAS J. HALL, Bryan, Texas, for himself, and HENRY P. STOCKTON and ROBERT P. LANE, Rockford, Ill., assignees of THOMAS J. HALL. —*Plow.*—Patented April 3, 1855, No. 12,627; extended seven years; reissued December 28, 1869.

Claim.—1. The cutter or colter-wheel B, freely revolving on its own axis, when attached to the beam A of a plow, so that it will swivel or turn in such attachment, and the wheel-colter be free to vibrate laterally, and follow the line of draught or direction given to the beam of the plow, in the manner described.

2. The combination of the slotted rod *b*, curved arms *c c*, and wheel-colter B, with the swiveling of the rod *b* in the beam A, in the manner and for the purpose substantially as herein described.

3,783.—J. M. JONES, HENRY JOHNSON and GEORGE M. BOWMAN, Palmyra, N. Y., assignees of J. M. JONES.—*Printing-Press.*—Patented August 11, 1868, No. 80,865; reissued December 28, 1869.

Claim.—1. The arm or arms N, or its or their equivalents, in combination with the platen Q, or its equivalent, when arranged to engage with the said platen or its yoke, and to draw it against the form, to which it has been previously raised, substantially as and for the purpose described.

2. The rocker-arm or arms Q^2, or its or their equivalents, arranged for operation upon the arm or arms N, or equivalent therefor, substantially as described, for the purpose specified.

3. The lever or levers M^3, or equivalent therefor, when arranged for operation upon the rocker-arm or arms Q^2, of the lifting device, to the impression-arms N, substantially as and for the purpose described.

4. A movable hook or clasp, for holding the chase to the bed of the press, when operated by lever *d*, and arranged for operation substantially as specified.

5. The lever G^3, or its equivalent, in combination with the frame carrying the ink-rollers to the press, when arranged for operation therewith, substantially as and for the purpose described.

6. A box or receptacle, in combination with the frame carrying the platen, when arranged thereon for operation, substantially as and for the purpose set forth.

7. As a means of distribution, and for other purposes, detaining the inking-rollers in contact with the distributing-cylinder, during the will or requirements of the operator, with or without stopping the other parts of the machine, such detention being produced by means of the lever G^3, or its equivalent, substantially as and for the purpose described.

PANY, of Pennsylvania.—*Manufacture of Lubricating-Oils from Petroleum.*—March 2, 1869.

Claim.—1. The within described process of preparing petroleum or hydrocarbon-oils, for lubricating purposes, as specified.

2. The preparing of petroleum or hydrocarbon-oils, for lubricating purposes, by reducing the gravity of the same by the direct action of steam, or superheated steam, upon the crude petroleum, while in a still, tank, or retort, substantially as set forth.

3. The reducing of petroleum in a still, or retort, with or without dependent chambers, and with one or more jet-pipes, by the direct action of steam, or superheated steam, substantially as and for the purposes specified.

4. The reducing of crude petroleum, for lubricating purposes, either in bulk or fractional quantities, by the direct action of steam, or superheated steam, substantially as set forth.

5. As a new manufacture, an oil-product, as above described, when produced from crude petroleum, by evaporation of the lighter oils, and removing of all earthy acids, grit, and sediment, by the direct action of steam, substantially as set forth.

6. The improved lubricating-oil, for machinery, as herein described, prepared from petroleum by the direct application of steam, or superheated steam, to the crude petroleum, as set forth.

7. Petroleum, for lubricating purposes, when the same has been prepared or reduced to the proper gravity, in the manner set forth.

8. The employment of steam or superheated steam-treated petroleum, holding water in suspension, for summer lubricating purposes, as described.

9. The employment of steam or superheated steam-treated petroleum, after the water has been removed, for winter lubricating purposes, as set forth.

87,486.—JOHN C. GOVE, Cleveland, Ohio.—*Street-Car Draw-Bar.*—March 2, 1869.

Claim.—The arrangement of the sliding frame D, rounded at its forward end, roller F, draw-iron H, rubber springs I I, and washer *a*, with the platform A and sill B of a street-car, substantially as and for the purposes herein set forth.

87,487.—WILLIAM H. GUILD, Brooklyn, (E. D.,) N. Y.—*Process of Purging and Draining Sugar.*—March 2, 1869.

Claim.—Subjecting sugar, while being purged or drained, to the action of steam or vapor, substantially as and for the purpose herein described.

87,488.—JOHN C. HALL, Monroe, Wis.—*Harvester.*—March 2, 1869; antedated February 20, 1869.

Claim.—1. The rock-shaft C, arranged radially to the driving-axle, and recessed or bent, for a portion of its length, so that its axis of rotation shall be at a distance from the side of the driving-wheel, on which the cams are placed, equal to one-half the depth of the cams.

2. The combination of the rock-arms C^1 C^1, either slotted, or having a number of holes therein, with the adjustable pallets c^1 c^1, and nuts c^3 c^3, substantially as described.

2. The slotted caster-wheel supports E^2, hinged rod *e*, and arms e^1 e^4, for raising and lowering the finger-beam and cutter-bar, as set forth.

4. The combination of the stationary cam J and pivoted guide K, when arranged and operating as and for the purpose set forth.

5. Connecting the reel shaft and rake-shaft by the ball-and-socket joint i^2 in the reel-shaft, and the jointed links, as set forth.

6. The combination and arrangement of the horizontal pieces *a a*, and diagonal pieces *a' a'* when the driver's seat is attached to the latter, whereby the seat can be elevated above the driving wheel, as set forth.

87,489.—J. JOHN HARRIS, Pewamo, Mich.—*Bed-Bottom.*—March 2, 1869.

Claim.—1. The cross-bars D, when formed in hinged sections, in combination with the bent springs B, substantially as set forth.

2. The combination of the cross-bars A, bent springs B, cross-bars D, hinged in sections, slats E, side-rails F, hooks G, pins H, head-board I, and stays J, when arranged and operating substantially as set forth

87,490.—ALEXANDER HATHAWAY, Independence, Iowa.—*Seed-Sower.*—March 2, 1869.

Claim.—1. Raising the teeth or cultivators of a seed-sower out of the ground, when the machine is turning around, by means of a swinging wheel, having suitable connections with said teeth or cultivators, and without the assistance of the operator, substantially as set forth.

2. The arrangement of the arms J J, forked lever K, wheel L, rope *e*, pulley *f*, and bar H, all substantially as and for the purposes herein set forth.

3. The arrangement of the shaft F, with agitators *d*, spring *a*, arm *b*, and cogs *c c*, all substantially as and for the purposes herein set forth.

87,491.—RANDOLPH HAYDEN, Middletown, Conn., assignor to FERREE & HAYDEN, same place.—*Ice-Tongs.*—March 2, 1869.

Claim.—Cast-metal ice-tongs, constructed substantially as shown and described, as an improved article of manufacture.

87,492.—GEORGE J. HAYES, Ionia, Mich.—*Cultivator.*—March 2, 1869.

Claim.—1. The combination of the tongue, axle-frame, and cultivator-frame, when united to each other, and the cultivator-frame is capable of being raised upward, and swung slightly backward, by a lever and its appliances, operating as herein described and represented.

2. In combination with a cultivator-frame, that is moved backward as it is raised upward, as herein described, a drag, or harrow, attached thereto, and moving therewith, but capable of being raised or lowered independently of the cultivator, substantially as and for the purpose described.

87,493.—F. A. HENCKELL, New York, N. Y.—*Machine for Bundling Cigars.*—March 2, 1869.

Claim.—1. The jaws B B′, provided with one or more recesses, to receive the tapes or ribbons, in combination with the platform A and lever C, substantially in the manner set forth.

2. The abutment F, in combination with the jaws B B′, platform A, and lever C, substantially as described.

3. The top bars E, (one or more,) in combination with the jaws B B′, lever C, and platform A, substantially in the manner specified.

87,494.—WILLIAM H. HENDERSON, Franklin, Ind.—*Device for Soldering Tin Cans.*—March 2, 1869; antedated February 20, 1869.

Claim.—The combination of the elongated cone A and its spring F with the interior cone C, its screw B, spring D, and the clamp G and cam-lever H, all constructed and operating substantially as herein set forth.

87,495.—JOSEPH W. HOPKINS, Brooklyn, N. Y., assignor to himself and CHARLES B. HARDICK, same place.—*Machine for Brushing and Napping Hats.*—March 2, 1869.

Claim.—A pair of brushing-cylinders, one of which is mounted so as to yield, in combination with the means, substantially as specified, for presenting the hat-body to the action of the brushing-cylinders, substantially as described.

87,496.—ROBERT B. HUGUNIN, Cleveland, Ohio.—*Car-Wheel.*—March 2, 1869.

Claim.—1. The car-wheel herein described, constructed by forcing the sections A and A′ over the axle F, and clamping the tire C, by means of the spring on said section, reacted on the tire, substantially as and for the purposes herein set forth.

2. The car-wheel, formed by forcing sections A and A′, with seats B and B′ and projections E and E′, onto the tire C, constructed in corresponding form on its under side, over the axle F, as and for the purposes herein set forth.

3. In combination with the above-claimed car-wheel, the interposed rubber packing, as and for the purposes herein set forth.

87,497.—THEODORE ITZSTEIN, New York, N. Y.—*Device for Checking Horses.*—March 2, 1869.

Claim.—1. The checking apparatus, consisting of the check-reins E F, combined with the winkers or blinds A, and spring B, substantially as described.

2. The combination of the winkers A, the spring B, the check-reins E F, and the lug or front-piece C, substantially as described and shown.

3. The combination of the throat-strap J, check-reins E F, winkers A, and spring B, substantially as described.

4. The safety-strap L, in combination with the winkers A and check-reins E F, substantially as set forth.

87,498.—R. H. JONES, San Francisco, Cal.—*Projectile.*—March 2, 1869; antedated February 21, 1869.

Claim.—The combination of the shells B C and cap F with the shell A, when said cap and shells B C are beveled at the top, and provided with circumferential shoulders *g g*, and when said shell C is provided with a screw-bottom, D, there being combustion-chambers between shells A and B, and B and C, all substantially as herein shown and described.

87,499.—SAMUEL B. KLINE, Mechanicsburg, Pa.—*Fly-Net for Horses.*—March 2, 1869; antedated February 27, 1869.

Claim.—1. The double loop or stitch, when used in constructing fly-nets, substantially as and for the purpose herein shown and described.

2. A fly-net, constructed in the manner substantially as shown.

87,500.—LE GRAND KNIFFEN, Rochester, Pa.—*Buckle for Grain-Bands, Bag-Ties, &c.*—March 2, 1869.

Claim.—1. The buckle, constructed as set forth, with an opening in the frame, for the insertion laterally of the cord.

2. The combination of the body and tongue with the binding-cord passing through both, substantially as set forth.

87,501.—E. LANE, Philadelphia, Pa.—*Thill-Coupling.*—March 2, 1869.

Claim.—The combination of the coupling A with its arms *a* and *a'*, packing-strip J, spring-plate I, and plate F, carrying a thumb-screw, H, the whole being arranged and operating substantially as and for the purpose herein set forth.

87,502.—ALEXANDER LEE, Scranton, Pa.—*Wash-Boiler.*—March 2, 1869.

Claim.—The metallic shell or case B, constructed and arranged within the wash-boiler, in the manner described, and provided with water and steam-discharge pipes, substantially as and for the purposes set forth.

87,503.—WILLIAM B. MASON, Boston, Mass.—*Flat-Iron Scraper, Polisher, and Stand.*—March 2, 1869.

Claim.—1. For the specified purpose, a bed or table, provided with one or more scraping-edges or angles, substantially as described.

2. For the specified purpose, a bed or table, surfaced with abrasive or polishing material, substantially as described.

3. A bed or table, having bars *b*, made removable and adjustable, to operate as clamps in holding sheets of abrasive or surfacing material, substantially as described.

87,504.—G. M. L. MCMILLEN, Dayton, Ohio.—*Horse-Rake.*—March 2, 1869.

Claim.—The device herein shown and described, consisting essentially of the right-angled lever M, having a spring, *s*, under its flange, at one end, and a snap-catch, *c*, at the other end, when constructed and applied to a rake in connection with the lever L, rod R, and teeth *t t*, as shown, and employed for the purpose herein set forth.

87,505.—J. J. MORRISON, Atlanta, assignor to himself and V. A. GASKELL, Fulton, Ga.—*Cotton-Press.*—March 2, 1869.

Claim.—1. The combination of the box and frame A B, sash E', vertically-acting follower C, horizontally-acting follower J, screw E, and hollow shaft N, with its drums H and M, all operating substantially as and for the purposes set forth.

2. The arrangement of the shaft *d*, turned by its crank F, with the drums G and K, connected by means of bands to the drums on the hollow shaft N, for operating the follower J, and a drum, O, for operating the crank D, which works the compresser C, all substantially as shown and described.

87,506.—THOMAS G. OTTERSON, Philadelphia, Pa., assignor to S. B. ROWLEY, same place.—*Glass-Mold.*—March 2, 1869.

Claim.—1. The stripper-plate C, adapted to the base D and cover-plate B, substantially as and for the purpose herein set forth.

2. The annular rib *b*, on a central piece, D', arranged to slide in the base D, as set forth, for the purpose specified.

87,507.—DAVID O. PAIGE, Detroit, Mich.—*Apparatus for Hardening Steel.*—March 2, 1869.

Claim.—1. The hardening of sheets of steel, by forcing thin sheets of cold water into contact with the center of said sheets of steel, substantially as herein described.

2. The plungers L, operated substantially as described, in combination with compartments B and H, valves G, space D, and aperture I, of vat A, when constructed, arranged, and operated substantially as and for the purpose set forth.

3. The frame J, provided with serrated racks K, when constructed and operating substantially as specified, in combination with the well H and the vat or box A, as herein described and shown.

87,508.—ROBERT PEBERDY, Philadelphia, Pa., assignor to JAMES CREIGHTON, same place.—*Knitting-Machine.*—March 2, 1869.

Claim.—1. The combination of two or more series of self-acting needles, arranged in a row, and adjustable laterally, independently of each other, and a series of guides, *b*, operating in connection with the needles, substantially as described.

2. The combination of the above, the two parallel knocking-over bars *c c'*, and a second series of needles and another series of guides, the whole being arranged and operating substantially as specified.

87,509.—DAVID T. PECK, New York, N. Y.—*Piano-Forte.*—March 2, 1869.

Claim.—The additional case D, hinged to the top of the main case A of a piano-forte, and provided with a secondary sounding-board, E, substantially in the manner and for the purpose set forth.

87,510.—FRANK P. PFLEGHAR, New Haven, Conn.—*Reversible Knob-Latch.*—March 2, 1869.

Claim.—The combination of the spiral spring L and its rods *g i* and *h l*, with the horse-shoe and slide G G, when constructed and fitted for use, substantially as herein described.

87,511.—JOHN PONS, Baltimore, Md., assignor to himself, JOHN S. RUSSELL, and HENRY VOGLER, same place.—*Lamp-Extinguisher.*—March 2, 1869.

Claim.—1. Constructing the cap of a lamp in two parts, *c c'*, each pivoted as at *t t'*, and the two parts having their edges meeting or overlapping in the line of the wick-tube, substantially as and for the purpose set forth.

2. In combination with the two parts *c c'* the springs *s s* and chimney G, constructed and arranged to operate in the manner and for the purposes described.

3. Providing the two pivoted parts, *c c'*, of the cap with the auxiliary blades *a a'*, substantially as and for the purpose specified.

4. A lamp-extinguisher, *c c'*, or *a a'*, so constructed and operating that the weight of the chimney resting upon it keeps its jaws open, and when that weight is removed, by the overturning of the lamp or otherwise, the jaws will close and put out the light.

87,512.—GEORGE REYNOLDS, Collinsville, Conn.—*Machine for Rolling Metals.*—March 2, 1869.

Claim.—1. Arranging the mechanism for raising and lowering the roll in a sliding frame, F, substantially in the manner herein described, so that it will move up and down with the roll.

2. The combination of the segmental gearing J, the wheels P and Q, the arbor L, the wheels O and O′, the arbor M, the sliding frame F, the screw S, and the frame H, for the purpose of raising and lowering a roll, substantially as herein specified.

3. The nippers *e e*, in combination with the rolls and with the raising and lowering mechanism, for the purpose of introducing any article between the rolls at the right time.

87,513.—IRA ROBBINS, Hughesville, Pa.—*Water-Meter.*—March 2, 1869.

Claim.—The spring-valve F, arranged within a channel, through which the water must pass, in combination with a cock or valve, controlled by the valve F, and with devices by which the water discharged from the said cock is caused to operate the registering-devices, substantially as set forth.

87,514.—IRA ROBBINS, Hughesville, Pa.—*Lock for Drawers, &c.*—March 2, 1869.

Claim.—The recessed tumblers *b* and lever D, with its cams *c c*, in combination with the bolt C, its cross-piece *d*, and inclined edges *x x*, the whole being constructed, arranged within a case A, in respect to openings *n*, and operating substantially as and for the purpose described.

87,515.—S. B. ROWLEY, Philadelphia, Pa.—*Screw-Fastening for the Covers of Fruit-Jars.*—March 6, 1869.

Claim.—A screw-bail or fastening for preserving vessels, consisting of a wire coil, rendered rigid by suitable strips, which extend across the coil, and are so bent, or otherwise arranged, that they can be brought to bear on the cover of a fruit-jar, substantially as described.

87,516.—THOMAS A. SEARLE, Providence, R. I.—*Liquid-Meter.*—March 2, 1869.

Claim.—The arrangement of the cylinder A and jacket B, with their intervening space C, relatively to the inlet F and outlet G, perforated diaphragms *a b*, and cylinder E, with its flutter or registering-wheel H, substantially as specified.

87,517.—JOHN Y. SMITH, Pittsburg, Pa.—*Wooden Railway.*—March 2, 1869.

Claim.—1. The construction of the cross-tie with the beveled surface to receive the corresponding surface of the wedge, and with the opposite surface of its recess beveled to correspond with the beveled surface of the rail, substantially as shown and described.

2. The combination of the above-described rail A, tie B, and wedge C, substantially as shown and described.

87,518.—F. W. SMITH jr., Bridgeport, Conn.—*Key for Locks.*—March 2, 1869.

Claim.—The arrangement in a key of one or more of several bits upon a pivot, so as to be turned thereon to different angles, to a bearing, to operate in the manner and for the purpose substantially as specified.

87,519.—EARL SPAULDING, Ionia, Mich.—*Furnace-Stove and Register.*—March 2, 1869.

Claim.—1. The arranging, within the furnace or fire-box of a stove, the air-heating pipes or passages B C E, in combination with the passing of the conducting-pipe, which conveys the hot air, through the smoke-pipe or passage, substantially as and for the purpose described.

2. In combination with the hot-air passages and pipe D, the head G and its register and disseminator, as and for the purpose described.

87,520.—GEORGE H. SPAULDING, Rockford, Ill.—*Rocking-Chair.*—March 2, 1869.

Claim.—A rocking-chair, constructed as herein specified, and having hinged joint *b*, elastic steel spring E, and foot-board D, arranged and operating substantially as described.

87,521.—EDWIN P. SPENCER, Scott, N. Y.—*Milk-Cooler.*—March 2, 1869.

Claim.—1. The combination of the pan B, provided with the distributing-trough S and the pan C, arranged to operate substantially as described.

2. The pan B, provided with the escape-pipe H, emptying-pipe G, and pipe L, the two latter being provided with cocks, substantially as and for the purpose set forth.

3. In combination with the pans B and C, constructed as set forth, the frame A, provided with shelf D, and the eccentrics O, arranged to operate as herein described.

4. In a milk-tempering apparatus, the distributing-pipe or trough S, so arranged as to deliver the inflowing water at points across the entire end, or nearly so, of the water-pan, substantially as herein described.

87,522.—MATTHIAS STRATTON, Philadelphia, Pa.—*Gas-Cock.*—March 2, 1869.

Claim.—A cock, having a passage through it, independently of that afforded by the usual plug, or valve, when the said passage can be opened or closed by a supplementary plug, or its equivalent, substantially as and for the purpose herein set forth.

87,523.—BENJAMIN F. STURTEVANT, Boston, Mass.—*Blower-Case.*—March 2, 1869.

Claim.—1. The arrangement of the side plates and the peripheral arched sections, connected together, so as to constitute a blower-case.

2. Each side plate, as made with a dovetailed concentric groove, *a*, extending about its opening, and arranged as set forth.

87,524.—ROBERT R. TAYLOR, Reading, Pa., assignor to himself, JEREMIAH H. BOONE, JONATHAN M. HELLER, and C. B. BERTOLETTE.—*Car-Starter.*—March 2, 1869.

Claim.—1. The clutch L, applied to the axle of a car, in combination with suitable springs, and with gearing substantially as herein described, by which, through the medium of the clutch, the power required to stop the car is transmitted to the spring with increased force, and the recoiling power of the spring is transmitted to the wheels, to start the car, with a force greater than that of the spring itself, all substantially as set forth.

2. In combination with the above, the brake-wheel T and brake-levers W W.

87,525.—GEORGE TEFFT, Salem, N. Y.—*Railway-Rail Chair.*—March 2, 1869.

Claim.—The railroad-chair, consisting of the pieces B and C, constructed and arranged for use in the manner herein shown and described.

87,526.—Canceled.

87,527.—JOHN J. WALDRON, East Durham, N. Y., assignor to himself, TIMOTHY G. PALMER, and HENRY BROWN.—*Shifting-Rail for Carriage-Tops.*—March 2, 1869.

Claim.—The shifting-frame *h*, fitting the seat, and from which the bars *g* rise and connect to the parts carrying the carriage-top, in combination with the hooks *i i* and *l*, and plates *k* and *n*, substantially as and for the purposes specified.

87,528.—HENRY WEBER, New York, N. Y.—*Stop-Motion Mechanism for Warping-Machine.*—March 2, 1869.

Claim.—1. The combination, with the yarn-weights D D, of the rocking board or beam F, latch I operated by a pitman, G, and spring or springs J, substantially as specified.

2. The combination, with the rocking-beam F and hinged latch I, operated as described, of the bars K L, eccentric rotating pin *e*, and catch-lever P, for operating the belt-shifter in both directions of the machine's travel, essentially as herein set forth.

3. The combination of the rising and falling weight S, set in motion by the reel, with the lever T and its spring *r*, rod V, spring U, and arm W, substantially as and for the purposes herein set forth.

87,529.—WILLIAM WHARTON, Jr., Philadelphia, Pa.—*Railway-Switch.*—March 2, 1869.

Claim.—1. The combination of the permanent rails A and A′ of the main track, the rails B and B′ of the turn-out, the switch-rails D and D′, and the permanent guard-rail H, the whole being arranged and operating substantially as and for the purpose described.

2. In combination with the above, the base-plate *c*, for the purpose specified.

3. In combination with the above, and with the base-plate *c*, the guard-rail G, arranged substantially as and for the purpose described.

4. The combination of the inclined switch-rail D, with the inclined pointed switch-rail D′, substantially as and for the purpose described.

87,530.—CORNELIUS WHITEHOUSE, Bridgtown, near Cannock, England.—*Pick for Dressing Mill-Stones.*—March 2, 1869.

Claim.—A mill-bill, or pick, for dressing stone, the head or frame of which is composed of two parts, the one fixed, the other movable, and sliding upon the handle, the said parts being notched and constructed to gripe and be in contact with that portion of the removable chisel, or acting-ends, placed between them, substantially as and for the purposes shown and set forth.

87,531.—DARIUS WILCOX, Ansonia, Conn., assignor to himself and EDWARD A. JOHNSON, same place.—*Wrench for Bit-Braces.*—March 2, 1869.

Claim.—The herein-described wrench, consisting of the spindle A and socket D, arranged in the head C, so that the said socket may be operated by turning the spindle, substantially in the manner herein set forth.

87,532.—WILLIAM H. BEAL, Philadelphia, Pa.—*Railroad-Car Heater.*—March 9, 1869; antedated November 16, 1868.

Claim.—1. The flanges *h h*, sockets *h′*, and springs I I, and general mode of attachment of the heater to the car, substantially as set forth.

2. The rod D, the horizontal doors or valves C″, and the wire rods or hooks *c*, constructed and combined with the car and the detachable fire-box, substantially as and for the purposes set forth.

87,533.—JAMES F. BENTON, Penn Yan, N. Y.—*Plow.*—March 9, 1869.

Claim.—The grooved or channeled landside B, in combination with the mold-board C, when made and arranged as specified, and used in connection with the beam A, substantially as and for the purpose herein set forth.

87,534.—LA FAYETTE BLAIR, Painesville, Ohio.—*Feather-Renovator.*—March 9, 1869.

Claim.—1. A cylinder or feather-receiver, with the hopper attachment B, the hook C, and the drop-doors D.

2. In combination with the coiled tube J the boiler I, whereby the air is heated before being conveyed to the feathers, as set forth.

3. The arrangement of devices herein shown, or equivalent means, for introducing among the feathers a current of air heated by boiling water, as and for the purpose set forth.

4. The arrangement, as herein shown and described, or in any equivalent manner, of a bellows, or other suitable device, for forcing a blast of heated air among the feathers, when said bellows or equivalent is situated outside of the heating chamber, as set forth.

5. The dome-shaped top H′ of the furnace, in combination with the water-boiler K, the whole arranged, constructed, and combined, and used in combination with and for the purpose specified.

87,535.—JOHN D. BRACKETT and WYMAN DEARBORN, Boston, Mass.—*Cotton-Gin.*—March 9, 1869; antedated March 2, 1869.

Claim.—1. The arrangement of knife-blade *n*, by screws *o* passing through slots in said knife-blade upon clearer-bar *m*, so as to be adjustable, substantially as described.

2. The pressure-bar C, as arranged with roll *d* and adjusting springs *g*, substantially as described.

87,536.—JOHN I. BRINKERHOFF, Auburn, N. Y.—*Potato-Digger.*—March 9, 1869.

Claim.—1. The semicircular bar G, or its equivalent, when attached and operated substantially in the manner and for the purpose herein set forth.

2. The combination of the bar G with handles F F, when constructed and operated in the manner described.

87,537.—CHARLES H. BUDD, Philadelphia, assignor to himself and GEORGE D. WOLFF, Norristown, Pa.—*Apparatus for Continuous Distillation.*—March 9, 1869; antedated February 26, 1869.

Claim.—1. The vaporizing of wash or other fluid, by causing it to pass through a casing in which revolves a steam-heated coil, or its equivalent, all substantially as herein set forth.

2. Causing the vapor of wash or other fluid to pass into and through a reservoir or casing, immersed, or partly immersed, in the spent wash or residuum of distillation, all substantially as and for the purpose herein set forth.

3. Causing the vapor arising from distillation to pass through tubes in a casing or vessel through which the wash passes prior to distillation, all substantially as and for the purpose specified.

4. The chamber W and its diaphragm *p*, arranged between the tubed casing G and reservoir E, substantially as set forth, for the purpose described.

5. The utilizing of the exhaust steam, by admitting it into the chamber W, where it rectifies the dilute alcohol, as set forth.

87,538.—A. R. BUFFINGTON, United States Army.—*Steam-Engine Rotary Valve.*—March 9, 1869.

Claim.—The improved revolving valve, for steam and other engines, consisting of devices herein described, embracing the valve-plate *a*, with the two concentric circular slots *d* and *e* and the groove *k*, for the reception of the annular packing *l*, the cut-off devices F and G, sleeve *h*, seat *m*, with its groove *k* and ports *y y* and *x x*, arranged to operate substantially as herein set forth.

87,539.—GEORGE E. BURT, Harvard, Mass.—*Mowing-Machine.*—March 9, 1869.

Claim.—1. The finger-bar E, when supported by mechanism so constructed and arranged that the finger-bar will yield to and pass over firm and abrupt obstacles without arresting the team or injuring the machine, substantially as described.

2. The seat S, when supported by mechanism so arranged that the operator's weight in the seat shall tend to hold the finger-bar in position while operating, substantially as described, and for the purpose set forth.

3. The finger-bar E, when connected with the foot-lever *r* and hand-lever *e*, in such a manner that the bar may be folded or unfolded by the operator while in the seat, substantially as described, for the purposes set forth.

4. The slipper *h*, when so arranged and connected with the finger-bar that the cutter-bar is thrown out of gear when the finger-bar is elevated, substantially as described.

5. The combination of the finger-beam, the foot-lever *r*, the crank *b*, and the elevating chain *o*, when said chain is so arranged as to pass over the turning center of the crank *b*, so that the chain shall at first raise the finger-bar, and then, by slackening, allow the points of the fingers to be lowered, substantially as described and set forth.

6. The combination of the finger-beam, the foot-lever *r*, crank *b*, and chain *o*, for the purpose of lifting the finger-bar over slight obstructions, while keeping it nearly parallel to the ground, substantially as shown and described.

7. The combination of the seat S, spring C, arm *j*, the connection *y*, and the arm *e′* with the axle R, pivoted and arranged substantially as described, and for the purpose set forth.

8. The seat-spring C, the projecting arm *g*, and the shipper *h*, in combination with the clutch 3′ and spring 2, arranged substantially as described, and for the purpose set forth.

9. The hanger D, the ring *x*, and the finger-bar E, in combination with the shaft R, connected and ar-

ranged substantially as described, and for the purpose set forth.

10. The combination of the projecting arm *s*, the connecting-arm *c*, and the lever *r*, substantially as described, for the purpose set forth.

11. The combination of the pitman *d*, the guide *v*, the standard M, and the cutter-bar E′, substantially as described.

87,540.—JOHN W. CARDWELL, Richmond, Va., assignor to himself and SAMUEL FREEDLEY.—*Thresher and Separator.*—March 9, 1869.

Claim.—1. The revolving cylinder E, constructed with the curved tangential arms *e*, and interposed between the threshing-cylinder C and the separator H H, in connection with the separate concave F, substantially as and for the purpose set forth.

2. The straw-carrier and separator, composed of the troughs, or sections, H, constructed with the perforated bottoms or floors *h′* and notched-edge flanges, or "sides," *h″*, and operating substantially in the manner described, for the purposes specified.

3. The double shoe J J′, constructed and operated substantially as and for the purpose described.

4. Operating the upper shoe J, by means of the notched cam L, on the cam-shaft, through the arm or lever *j*, as described.

5. Operating the lower shoe J′, by means of the crank-shaft M, connecting rod N, and crank O, on the carrier-crank shaft I, as specified.

87,541.—JOHN S. CARSON, Brook Haven, Miss. *Cotton-Bale Tie.*—March 9, 1869.

Claim.—The bale-tie, formed of a plate, X, of sheet-iron, having the loops A, B, C, D, F, *f*, and G, and latch H *h h′*, the whole being formed and arranged substantially as set forth.

87,542.—JOHN S. CASEMENT, Cleveland, Ohio, and JOHN ELLIOTT, Erie, Pa.—*Gravel-Spreader.*—March 9, 1869.

Claim.—1. The gravel-spreader E, when constructed, arranged, and adapted to be connected to a platform or other car, and to operate in the manner and by the means substantially as described.

2. Adjusting the spreader E to different widths of grade, by means of the braces *a a a* and bar *c*, having pin-holes, post *b*, and pin *d*, substantially as set forth.

3. Adjusting the spreader E to different heights of grade, by means of lever G, standard C, and hinges D D, substantially in the manner described.

87,543.—H. E. CHURCHILL, Portland, Me.—*Portable Head-Rest.*—March 9, 1869.

Claim.—The combination of the back, *a*, pivoted arms *b b′*, with the forks *c c′ c″ c‴*, so as to form a portable head-rest, constructed and operated substantially as and for the purpose shown and specified.

87,544.—GEORGE CLARK, jr., Boston, Mass.—*Fire-Extinguisher.*—March 9, 1869.

Claim.—1. The combination of the perforated charger B, hook *b*, eye *c*, and stopple C, the latter being made to fit the aperture *a*, in the receiver, and secured, when in its place, by hasp and button, or their equivalents, substantially as specified.

2. The charger B, provided with a hinged bottom, or valve, secured, when closed, by paste or cement, soluble in water, applied to a cloth, or other equivalent seal, made to unite the free end of the valve with the body of the receiver, essentially as herein set forth.

87,545.—AARON HARVEY CLAY, Pottsgrove Township, Pa.—*Apparatus for Pasting and Hanging Wall-Paper.*—March 9, 1869.

Claim.—A peculiar combination of rollers, revolving in a reservoir, whereby paste is uniformly applied to wall-paper, while being hung upon the wall, as shown in the accompanying drawings and specifications.

87,546.—JUDSON A. CLEAVELAND, Logansport, Ind.—*Machine for Threading Screws.*—March 9, 1869.

Claim.—The arrangement herein specified and shown, of the several parts of the mechanism on the supporting-frame, in the manner described, and for the purposes set forth.

87,547.—LORING COES, Worcester, Mass.—*Wrench.*—March 9, 1869.

Claim.—1. The combination of the ferrule of the screw-bearing of the wrench, with the shank of the fixed jaw thereof, by means of the projections formed respectively upon the interior of said ferrule and upon the shank, substantially as before set forth.

2. The combination of said ferrule of the screw-bearing, the shank, and the projections, with the handle of the wrench, in such manner that the handle, when in place, prevents the disengagement of the said ferrule, substantially as before set forth.

87,548.—HENRY H. COTTRILL, Vinton Station, Ohio.—*Animal-Trap.*—March 9, 1869.

Claim.—In an animal-trap of the described construction, the frame D, with its connecting-levers d^1 E, and doors F, when constructed as described, and combined with the resetting-devices C^1 C^3 C^5 and bait-trigger I, as and for the purpose set forth.

87,549.—GEORGE CROUCH, New York, N. Y.—*Catch for Carpet-Bags.*—March 9, 1869.

Claim.—The perforated plate of metal C, in combination with the tongue D, with its hook *d*, spring G, and eye E, when the same shall be constructed and operate substantially as and for the purposes set forth.

87,550.—GEORGE H. DEANE, CHARLES P. DEANE, and J. B. GARDINER, Springfield, Mass.—*Direct-Acting Steam-Engine.*—March 9, 1869; antedated December 21, 1868.

Claim.—1. The construction and arrangement of the spring *b*, as shown, forming a part of, or directly attached to, the valve-rod, substantially as shown and described.

2. The arrangement of the cams E and F, in combination with the valve-rod A and spring *b*, constructed substantially as described.

3. The arrangement of the spring *h* behind the cam F, the cam E being attached to the valve-rod, which is constructed substantially as shown.

4. The arrangement of the projection *d* on the valve-rod, pivoted cam M, and spring *g*, substantially in the manner described.

87,551.—THOMAS DICKINSON, jr., Buffalo, N. Y., assignor to himself and THOMAS DICKINSON, same place.—*Revolving Frame for Showing Goods.*—March 9, 1869.

Claim.—A revolving frame for show-goods, as a new article of manufacture, consisting of the horizontal shaft A, and radial arms B, the same being constructed and operating in the manner herein described, and for the purposes set forth.

87,552.—MORRIS DICKLE and E. P. COWAN, Ottumwa, Iowa.—*Machine for Marking Corn-Ground, with Rake-Attachment.*—March 9, 1869.

Claim.—The construction of a series of runners, A A, forming a sled, having movable shovels B B on each runner in front, and rake-cleaners J J, bracing the sled lengthwise, with a movable and adjustable rake, C, in the rear, when arranged and operated as herein described, and for the purposes set forth.

87,553.—HARRISON DOOLITTLE, East Cleveland, Ohio.—*Fingered Scoop.*—March 9, 1869.

Claim.—The perforated plate B, having the notched lugs D at the lower edge, near the holes, for securing the fingers C in position, as shown, and the fingers C, in combination, as a new mode of constructing a scoop, for the purposes described.

87,554.—JACOB EDSON, Boston, Mass., assignor to JOHN CLARK, same place.—*Hose-Coupling.*—March 9, 1869.

Claim.—1. My improved arrangement of the coupling-screws *c f*, chamber *g*, and frustum *d*, of the neck C, and clamping-collar D, of each portion, A B, of the hose-coupling.

2. The arrangement and combination of the groove *e*, with the coupling-screws *c f*, the tapering cham-

ber *g*, and frustum *d*, of the neck C, and clamping-collar D.

87,555.—WILLIAM A. FOSKETT, Meriden, Conn.—*Rotary Wire-Feed.*—March 9, 1869.

Claim.—The variable cam F, operating upon the smooth roll, or barrel D, or its equivalent, when used upon a rotary feed, in the manner and for the purpose substantially as set forth.

87,556.—WILLIAM FOSTER, jr., and GEORGE P. GANSTER, New York, N. Y.—*Gas Apparatus.*—March 9, 1869.

Claim.—1. Forming a tight connection between the interior of the dome A^1 and the external atmosphere, so as to safely discharge the gaseous contents of the dome, in case of a backward motion of vapor through the apparatus, as herein set forth.

2. The drain-pipe G, and pit A^3, arranged relatively to each other, and to the evaporating-chambers and their appurtenances, so as to allow of a constant drainage of the unevaporated liquid, substantially as and for the purposes herein set forth.

3. The squeezers E^1 E^2, and the right and left handed screw F, arranged to operate substantially as and for the purposes herein set forth.

4. In gas-apparatus, the measuring-wheel I I', turning in a chamber, A^4, kept filled to a uniform level, and supplying the gasoline or its equivalent to the evaporating-chambers, as and for the purposes herein set forth.

5. The within-described provision for varying the proportions of the liquid relatively to the air passed into the vaporizing-chambers, by mounting the mechanism, or independent shafts *i* and *b*, with a changeable communication of motion, all substantially as and for the purposes herein set forth.

87,557.—THADDEUS FOWLER, Seymour, Conn.—*Machine for Manufacture of Wire Strips.*—March 9, 1869.

Claim.—In combination with a pair of creasing-rollers and a guiding-table, a pair of compressing-rollers, for thickening up the edges of the strip, preparatory to its being creased, or cut into wires, substantially as and for the purpose described.

87,558.—MELVIN J. GASKILL, Pleasant Plain, Ohio.—*Fence.*—March 9, 1869.

Claim.—The arrangement of the dovetail notch, tongue, and throat, in connection with the key, cleats, and triangular braces, operating in such a manner as to permanently join and fasten the several panels and braces of a fence together, substantially as shown and for the purpose specified.

87,559.—EDWARD D. GIRD, Cedar Lake, N.Y.—*Sewing-Machine for Making Shirt-Bosoms.*—March 9, 1869.

Claim.—1. The gathering rollers V V, when constructed substantially as shown and described.

2. The adjustable folder X, constructed substantially as shown and described.

3. The combination and arrangement of the gathering-rollers V V, and the folder X, when constructed substantially as shown and described.

4. The combination of the reel *u*, gathering-rollers V V, folder X, final folder and feed-rollers S S', substantially as shown and described.

5. The combination of the presser-feet and fold-lifters, substantially as shown and described.

6. The arrangement of the levers, pins, springs, and cam-shaft, for raising and lowering the presser-feet, substantially as shown and described.

7. The combination of the slotted hemmer-plate and hemmers, the curved supports T^1, and the reel W, substantially as shown and described.

87,560.—BARTHOLOMEW GOMMENGINGER and CHARLES W. TROTTER, Rochester, N. Y.—*Register-Frame.*—March 9, 1869.

Claim.—A fire-proof and extension register-frame, made in two parts, *a* and *b*, forming, when put together, a hollow air-chamber, A A, with perforations *e e e* and *g g g*, in the manner and for the purpose herein described and set forth.

87,561.—ALVARO B. GRAHAM, Waukegan, Ill.—*Harvester.*—March 9, 1869.

Claim.—1. The combination of the ratchet-wheel and spring-pawl thereof with two pins, arranged substantially as before set forth, so as to hold the pawl out of and in gear.

2. The combination of the pillow-block, cap, spanner, and perforated lug, substantially as before set forth.

3. The combination of the shipping-lever, clutch, and skewed rim, substantially as before set forth.

4. The combination of the tongue, gearing-carriage, hinges, notched plate, and wedge, substantially as before set forth.

5. The combination of the finger-beam, vibratable link, lifting-lever, and forked chain, substantially as before set forth.

6. The combination of the gearing-carriage with a carrying-bar, for the finger-beam, supported upon the axle-arm, for a ground wheel, outside the hub of said wheel, substantially as set forth.

7. The combination of the finger-beam with a spring-hook, to hold the cutter, substantially as before set forth.

87,562.—J. H. HALL, New York, N. Y.—*Mode of Preserving Eggs.*—March 9, 1869; antedated March 3, 1869.

Claim.—1. The use of the charcoal-water in the process of preserving eggs, substantially as herein specified.

2. The process herein described, as a whole, substantially as set forth.

3. The immersion of the eggs in vinegar, or moistening them therewith, previous to boiling, for the purpose set forth.

87,563.—MARTIN HANELINE, Huntington, Ind.—*Buckle.*—March 9, 1869; antedated February 27, 1869.

Claim.—The construction of the within-described buckle, the same consisting of the frame A, having two rigidly-connected transverse bars, B C, on one of which are hinged the two tongues D E, so that one shall bear on one end of the frame, and the other on the other bar, and both on the upper side of the frame, as herein represented and described.

87,564.—MICHAEL HELBLING, Allegheny City, Pa., assignor to himself and JOHN F. MCKINNEY same place.—*Grate-Bar.*—March 9, 1869.

Claim.—A reticulated grate-bar, or grating for furnaces, consisting of side ribs *a* a', ends *b* b', and diagonal cross-ribs *e*, intersecting each other, substantially as and for the purposes hereinbefore set forth.

87,565.—JOHN A. HEYL, Boston, Mass., assignor to himself and JOHN H. WIGGINS, same place.—*Horseshoe.*—March 9, 1869.

Claim.—1. The arrangement of the flank dovetail connections, so as to run transversely across the flanks of the shoe, in combination with the arrangement of the keys within the dovetail sockets, and so as to complete the flank dovetail tenons, as set forth.

2. The combination and arrangement of the holding-screws with the dovetail keys, and sockets, and semi-tenons, arranged in or with the main and supporting parts A B of the shoe, in the manner as set forth.

87,566.—O. A. HILL, Westbrook, Me.—*Bridge for Playing Pool.*—March 9, 1869.

Claim.—The improved pool-bridge, as herein shown and described.

87,567.—HENRY S. HUIDEKOPER, Meadville, Pa.—*Apparatus for Heating Water by Steam.*—March 9, 1869.

Claim.—The construction described, whereby the cold water from a tank or stream may be let into the exhaust-pipe or steam-pipe A K, in two or more streams, by the means of the watering-can head C D', for the purposes set forth.

87,568.—GEORGE H. JOHNSON, Buffalo, N. Y.—*Fire-Proof Grain-Bin.*—March 9, 1869.

Claim.—The combination of a series of concentric, hollow partition-walls, of any suitable porous materials, with the interior of a cylindrical or polygonal grain-bin, substantially as and for the purpose herein set forth.

87,569.—GEORGE H. JOHNSON, Buffalo, N. Y.—*Bracing for Cylindrical Structures.*—March 9, 1869.

Claim.—1. A series of annular tension-bars, or rods, placed horizontally within the walls of cylindrical or polygonal elevator grain-bins, or other similar structures of masonry, and combined therewith, substantially in the manner herein set forth.

2. In combination with a series of horizontal annular tension-bars, or rods, inserted within the walls of a grain-bin or other cylindrical or polygonal structure of masonry, vertical bars or plates, framed and united or secured to said tension-bars, substantially as herein described.

87,570.—PATRICK JOYCE, Rochester, N. Y.—*Coffin-Bier.*—March 9, 1869.

Claim.—1. The platform B, provided with pivot or screw B^1, in combination with the bier A, having a nut or box, for reception of said pivot, or screw, substantially as specified.

2. In combination with the platform B, the arrangement of the screws D D, or supports E, substantially as and for the purpose set forth.

87,571.—H. R. LADD, Orwell, Ohio.—*Axle-Set.*—March 9, 1869.

Claim.—The combination of the several devices herein described, for holding and bending axles, all constructed, arranged, and operating as set forth.

87,572.—JACOB C. LANGE, Pittsburg, Pa.—*Substitute for Tobacco.*—March 9, 1869.

Claim.—1. The tobacco-substitute, compounded of the several ingredients specified.

2. The pressing into plugs, resembling plugs of tobacco, any and all kinds of preparations substituted for tobacco, or used as antidotes or medicines, to annul the effects of tobacco.

87,573.—JASON LUSK, Fredonia, Mich.—*Machine for Grating Fodder.*—March 9, 1869.

Claim.—The toothed concave D, eccentrically adjustable by means of the screws *i* and *j*, when so arranged, with relation to the toothed cylinder C, that said toothed surfaces are removed from contact with each other, and a clear space is formed gradually tapering, between them, whereby the fodder is not cut and crushed, but relieved of its hard covering and ends, as and for the purpose herein shown and described.

87,574.—ALFRED MCQUEEN, Philadelphia, Pa.—*Dinner-Pail.*—March 9, 1869.

Claim.—The lid D E, forming an entirely closed receptacle, and having spout F, and a central opening, in combination with the pail A and its chimney G, which extends through the body of the pail and the central opening of the receptacle-lid, substantially as and for the purpose described.

87,575.—EUGENE CHARLES MALDANT, Paris, France, assignor to MARIUS CAUNE, Crawford, N. J.—*Regulator for Gas, Steam, and other Fluids.*—March 9, 1869.

Claim.—The new and useful manufacture, consisting of a gas and steam regulator, constructed substantially in the manner described.

87,576.—F. H. MANNY, Rockford, Ill.—*Seed-Sower.*—March 9, 1869.

Claim.—1. The lever *i*, guide J with stop *j*, spring-bar K with socket K′, and clutch I, when combined and arranged as described, for the purpose set forth.

2. The slotted-iron N with cross piece *n*, when used in connection with cultivator tooth and drag-bar, substantially as described for the purpose set orth.

87,577.—NELSON B. MARSH, Marengo, Ill., assignor to himself and I. R. MILLER, same place.—*Harrow.*—March 9, 1869.

Claim.—1. The improved arrangement of the sections A B C D, in connection with each other, substantially as and for the purpose described.

2. The arrangement of the draught-rod E, in combination with the sections A, B, and C, substantially as and for the purpose described.

87,578.—HUGH MCDONALD, Pittsburg, Pa., assignor to himself and WILLIAM STUART, same place.—*Puddling and other Furnaces.*—March 9, 1869.

Claim.—The mode hereinbefore described, of making the several parts of a puddling or boiling-furnace, by casting such part or parts on or around one or more notched, grooved, serrated, or corrugated bars, iron or steel, substantially as described.

87,579.—WILLIAM MCKERAHAN, Pittsburg, Pa.—*Velocipede.*—March 9, 1869.

Claim.—Connecting with the hub S, of each wheel, a short shaft or axle, *e*, frame K, vertical rods T, cross-bar E, vibrating lever N, connecting-rods *b b*, crank *a*, pedals *c c*, curved bar B, projecting arms *d–h*, and handles *f*, the several parts being constructed, combined, arranged, and operating with relation to each other, substantially in the manner shown and for the purpose described.

87,580.—F. MCMANUS, Ellenburgh Centre, N. Y.—*Wagon-Axle.*—March 9, 1869; antedated February 27, 1869.

Claim.—The nut D, as formed, threaded, and flanged, and screwed upon the axle A within the metal box C′, in the manner and for the purposes herein set forth and described.

87,581.—NORMAN MILLINGTON, South Shaftsbury, Vt., assignor to EAGLE SQUARE COMPANY, same place.—*Machine for Figuring Carpenters' Squares, &c.*—March 9, 1869.

Claim.—1. The combination and arrangement of the stamping-chases and dies with the shaft C, for the purpose of being revolved and successively brought into position, to act on the square as herein set forth.

2. The combination of the frame B, and its revolving chases E, with the treadle J, and spring N, for moving the chases successively forward and backward, substantially as herein set forth.

3. In combination with the above, the revolving gauge or cam R, connected and operated substantially as and for the purposes herein shown and described.

4. The spring I, combined and arranged as represented, relatively to the chases E *e e*, eye-bolts H, and dies G, for the purposes herein set forth.

87,582.—HENRY T. MOODY, Newburyport, Mass.—*Car-Coupling.*—March 9, 1869.

Claim.—The combination of link E and tongue or arm H, (when acting auxiliary to each other,) with the draw-head A, having chamber B, and shoulder F, draw-head A′, and shackle-pins D and D′, all constructed and operating relatively to each other, substantially as described and specified.

87,583.—WILLIAM A. MORSE, Philadelphia, Pa.—*Combined Pen and Pencil-Holder and Knife.*—March 9, 1869.

Claim.—1. A knife-handle C, with cylindrical spring-clasp B, substantially as shown and described.

2. The above-described instrument, in combination with a pencil or pen-holder, substantially as shown, and for the purpose specified.

87,584.—HIRAM W. NEARY, Princeton, N. J., assignor to himself and NATHANIEL SCHENCK, same place.—*Work-Bench.*—March 9, 1869.

Claim.—1. A work-bench, having a recess adapted for the reception of the jaw H, and an adjustable block D, sliding in said recess, all substantially as and for the purpose described.

2. The jaw H, with its screw F, arranged upon a bench, substantially as described, in combination with a nut, J, having projections *h*, and with a lever, *i*, hung to the screw F, for operating the nut, substantially as specified.

3. The jaw H, its screw F, and guide K, the pawl *m*, weight *q*, straps *s*, and staples *t t*, all constructed and arranged as set forth.

87,585.—JESSE NEWLIN, Philadelphia, Pa.—*Turbine Water-Wheel.*—Mareh 9, 1869.

Claim.—The combination with the turbine of the pivoted buckets, adjusting-plate and lifting-rod, substantially as set forth.

87,586.—CHARLES OHLEMACHER and OTTO KROMER, Sandusky, Ohio.—*Dovetailing-Machine.*—Mareh 9, 1869.

Claim.—1. The adjustable eutters D D′ and eutter H, the upright reciproeating table or earriage S, arranged with relation to each other, and to operate in the manner substantially as deseribed.

2. The adjustable pivoted stays or yokes E E, earrying shafts F and adjusting-serews *b*, arranged with relation to and affecting the position of entters D D′, in the manner and for the purpose set forth.

3. The series of disks B′, eutting-blades C′, adjustable washers *c* on shaft A, the upright reciprocating and vibrating table D′, all constructed and arranged to operate in the manner and for the purpose deseribed.

87,587.—ANDREW OVEREND, Philadelphia, Pa., assignor to RICHARD M. HOE, New York, N. Y.—*Register-Point for Printing-Presses.*—March 9, 1869.

Claim.—1. The combination with the roeking-arm *j* of a series of points, *m m*, to puncture the paper upon the feed-board by a proper movement of the arm *j* and the springs *n n*, for stripping the paper from the points, substantially as deseribed, and for the purpose specified.

2. The eombination with the rocking-arm *j*, provided with points *m m* and strippers *n n*, of the disks *o o* on the feed-board, substantially as described, and for the purpose speeified.

87,588.—FRANK L. PENNEY, Boston, Mass.—*Branding-Iron.*—Mareh 9, 1869.

Claim.—In a branding-iron or stamp, eomposed of a fixed and a removable bloek, as deseribed, the arrangement within the fixed block, recessed and slotted as herein speeified, of a removable letter-block fitting in said reeess, and provided with a perforated tongue passing up through said slot, so as to receive the tightening-pin by whieh the two bloeks are held firmly together in the manner shown and set forth.

87,589.—JACOB B. PLATT, Augusta, Ga.—*Canopy or Mosquito-Bar.*—Mareh 9, 1869.

Claim.—A bed, tent, or mosquito-bar canopy, having one or more covered openings in or through it, and suitable applianees by whieh they can be opened or uneovered, so that any inseets inside of the bar may be driven out or allowed to eseape through sueh openings, substantially as and for the purpose described.

87,590.—MICAH H. POOL, East Abington, Mass.—*Last.*—March 9, 1869.

Claim.—1. An extension-last, eomposed of parts A and B, rods *a a′* and *a″*, and spring *b*, substantially as and for the purposes set forth.

2. An extension-last, eomposed of parts A′ and B′, tongue *c*, and groove *d*, as shown in Fig. 2, as equivalents of eonstruetion shown in Fig. 1.

87,591.—GEORGE RICE, Framingham, Mass.—*Portable Map-Holder.*—Mareh 9, 1869.

Claim.—1. The within-deseribed map holder, eonsisting of the box A, eover B, operated by quadrants *b b* and stops *a a*, with the eleats *a′*, upon which maps may be suspended in the manner shown, substantially as deseribed, and for the purpose speeified.

2. The slides F F, &e., placed upon or within the front and rear sides of the map-holder, and with their inner upper corners rabbeted out, so as to receive one end of the map-files, substantially as and for the purpose shown.

3. The strips G and G′, provided with the niehes *g*, and secured to the sides and eover, and pivoted within the front eorners of said map-holder, for the purpose of enabling the maps to be eonveniently suspended for examination, substantially as shown and described.

4. The sliding part K upon the cover B, substantially as shown, and for the purpose set forth.

5. In combination with said sliding part K the seetions of the portable desk L L, substantially as and for the purpose shown.

6. The portable desk, consisting of the sections L L and base M, eonstrueted and arranged to operate substantially as herein deseribed and for the purpose set forth.

87,592.—REUBEN RICH, Dorehester, Mass.—*Tube-Well.*—Mareh 9, 1869.

Claim.—1. The peculiar construction of the cleaning implement, shown in Figs. 3 and 4 of the aecompanying drawings, when used in conneetion with tubular wells, for the purpose substantially as before set forth and explained.

2. The employment within the well-tube of the short metallic-bloek or rod *d*, constructed and operated substantially in the manner and for the purposes shown and described.

87,593.—BENJAMIN S. ROBERTS, United States Army.—*Cartridge-Making Machine* —Mareh 9, 1869.

Claim.—Conjointly, the hereinbefore-described maehine for and method of tapering metallie cartridge-shells throughout their entire length, after the same shall have heen eharged with the fulminate, in the manner shown.

87,594.—GAIN ROBINSON, Plymouth, Ohio.—*Plow and Subsoiler.*—Mareh 9, 1869.

Claim.—1. The plow E, beam F, links J, and spring K, as arranged and operated by the lever I, in eombination with the plow A, substantially as and for the purpose set forth.

2. Attaehing the false landside A′ to the plow by means of the hooks B′, substantially as specified.

87,595.—DANIEL H. ROGAN, Hudson, Wis., assignor to himself and CYRUS L. HALL, same place.—*Sewing-Machine.*—Mareh 9, 1869.

Claim.—1. The combination of meehanism for operating the feeder H baek and forth horizontally, such consisting of the forked lever T, its stud *r′*, the slotted radial arm or lever I, the stud *v′*, the slider K and its stud *t′*, and the operative cam-wheel L, arranged as deseribed.

2. In eombination with the stud *v′*, the slotted radial arm I, the slider K, and the forked lever T, applied to the feeder, and provided with meehanism for operating the said slider, in manner as deseribed, the slider M, or its equivalent, the same being for effeeting the reversal of the feed of the eloth or material to be sowed.

3. In eombination with the parts so eombined, and for moving the feeder horizontally, and reversing the feed, as described, the groove *w′*, (arranged in the slider M,) the adjustable stud *x′* and its operative meehanism applied to the lever *y′*, and a slot, e^2, in the plate f^2, as set forth, and for the purpose of effecting the variation of the length of the stitch or distanee of movement of the feeder, as explained.

4. The eombination for fastening the needle to its carrier, the same consisting of the wedge *v*, serew *w*, and nut *x*, arranged in the said earrier, as speeified.

5. The eombination and arrangement of the stationary cam or groove *m′*, (of the plate *n′*,) the stud k^1, and bent lever *i′*, applied to the needle-earrier and its supporting-arm, the whole being eonstructed and operated as and for the purposes shown and set forth.

6. The combination for effeeting the reciproeating rectilinear movements of the needle-carrier, the same consisting of the groove *y*, the roeker-shaft a^1, the erank-arm *z* c^1, the connecting-rod d^1, the slider e^1, the stud f^1, and the groove *g′* of the wheel *h′*, fixed on the driving shaft of the shuttle rotator.

97,596.—M. B. STAFFORD, New York, N. Y.—*Velocipede.*—March 9, 1869.

Claim.—1. The eombination with the frame of a veloeipede of an adjustable body-rest, substantially as and for the purpose set forth.

2. The eombined foot-rest and brake B, eonstructed and arranged to operate substantially as set forth.

3. The eombination of adjustable rest D and the adjustable seat C with the frame of a veloeipede, substantially as set forth.

87,597.—John K. Staman, Mansfield, Ohio.—*Farm-Fence.*—March 9, 1869.

Claim.—1. The binding-iron *d*, with arms *e* and *f*, when used in combination with the main post D of a fence, having a hole, *g*, cut partially through the same, and provided with a small hole, *i*, the batten C having the hole *h* cut through the same, and the retaining-pin *c*, the several parts being arranged substantially as and for the purpose specified.

2. The suspended truss-post herein described, consisting of the main post E, provided with notches *n n*, and the batten F, secured to it by means of the binding-irons *d d* and retaining-pins *c c*, as is herein shown, the braces G G and cross-bar H, the several parts being constructed, combined, and arranged substantially as and for the purpose specified.

87,598.—Anson P. Stephens, Brooklyn, N. Y., assignor to himself and Benjamin F. Stephens, same place.—*Paper-File.*—March 9, 1869.

Claim.—1. The rectangular wire-clamp, formed in substantially the manner set forth, so that the torsional spring-pressure shall act upon both the side portions or arms 1 1, substantially as specified.

2. The extension *c* and cross-piece *d*, applied to the portions 1 1, as set forth, in combination with the body or board *a* of the paper-clamp, for the purposes and as set forth.

87,599.—George B. Stone, Chicago, Ill.—*Manufacture of Spirits.*—March 9, 1869.

Claim.—1. The use of glycerine in the manufacture of spirits, substantially as and for the purposes specified.

2. The use of barley-sugar and glycerine in the manufacture of spirits, when prepared substantially as described.

87,600.—John G. Talbot, Sloansville, N. Y.—*Farm-Gate.*—March 9, 1869.

Claim.—1. Connecting the hinged bracket C to the stand D, on the post, by means of two pivots and corresponding eyes, substantially as described.

2. In combination with the swinging bracket C, having two pivots *i i*, the reversible stand D, with two eyes or sockets *h h*, to receive said pivots, substantially as and for the purpose set forth,

3. In combination with the pulley-bracket C, hinged or pivoted upon the stand D, as described, the friction-roller *e*, arranged in the bracket-plate, substantially as shown and described.

4. And in combination with said pulley-bracket C, hinged in the manner described, the arm *d*, with its loose pin *c*, substantially as and for the purpose set forth.

87,601.—Alexis Thibault, Brooklyn, N. Y., assignor to Holmes, Booth, and Haydens, Waterbury, Conn.—*Lamp-Burner.*—March 9, 1869.

Claim.—1. The removable portion of the lamp, formed of a chimney-holder, a deflector, or cone, and an air-distributer, in combination with a slide or support, surrounding the wick-tube, substantially as set forth.

2. A chimney-holder, cone, or deflector, and an air-distributer, removable from the fixed portion of the burner, in combination with a support around the ratchet-cap, upon which the removable portion rests, substantially as specified.

3. The chimney-holder, cone, or deflector, and perforated air-distributer, substantially as specified, forming a base for sustaining the chimney in an upright position when removed from the burner.

87,602.—Edward R. Thompson, Lansing, Mich.—*Straw-Cutter.*—March 9, 1869.

Claim.—The combination and arrangement of the V-shaped box A, straight lever and straight knife, extended top bar, and guide-standard, substantially as shown and described, and for the purpose set forth.

87,603.—George Humphrey Tichenor, Canton, Miss.—*Inhaler and Remedy for Throat-Disease.* March 9, 1869.

Claim.—1. The flexible tube I, in combination with the metallic funnel-shaped tube F and drawer C, when the whole is combined, constructed, arranged, and operated substantially in the manner shown and described, for the purpose set forth.

2. The medicated compound, composed of iodine, (*Iodinium*,) and mullein, (*Verbascum thapsus*,) and oxygen, combined in the proportions as herein set forth.

87,604.—William H. Trissler, Cleveland, Ohio.—*Soldering-Iron.*—March 9, 1869.

Claim.—The herein-described reversible soldering-iron, when constructed in the manner substantially as and for the purpose set forth, as a new article of manufacture.

87,605.—Philip W. Vaughan, Columbia, Ky.—*Medical Compound.*—March 9, 1869.

Claim.—A medicine for the cure of neuralgia.

87,606.—John Waite, Palmer, Mass.—*Harness-Saddle.*—March 9, 1869.

Claim.—1. The combination, with the saddle-tree of a harness, of an adjustable pad or pads, substantially as and for the purposes set forth.

2. The combination, with the saddle-tree B and terrets C, of the metallic pad-plate E, substantially as and for the purposes set forth.

3. The combination, with the terret C and saddle-tree B, of the fork *c*, substantially as and for the purposes set forth.

4. The combination, with the metallic pad-plate E and shank D of the terret C, of the layers of cloth G, substantially as and for the purposes set forth.

5. The combination, with the pad-plate E, of the layers of cloth G, for the purposes stated.

87,607.—Peter W. Weida, Philadelphia, Pa.—*Starch or Gloss for Use in Laundries.*—March 9, 1869.

Claim.—A composition composed of the above-named ingredients, for the purpose of giving gloss and smoothness to ordinary starch, as aforesaid and described.

87,608.—Joseph Wells, Brooklyn, N. Y., assignor to Orlando A. Wilcox, same place.—*Paper-Bag Machinery*,—March 9, 1869.

Claim.—1. Regulating the tension or strain on the paper, as it is drawn into the machine, in the process of making paper bags, by means of a self-adjusting "compresser"-bar and wheel applied thereto, substantially as described.

2. Drawing the paper tube forward to the cutting and pasting devices, by means of a shaft, V, fitted with collars, in combination with the feed-blocks, drawn back by elastic cords, substantially as described.

3. The combination of the bar C with the feed-blocks, for the purpose of keeping them in their respective places in the gauge-plate, substantially as described.

4. Laying the paste upon the edge of the paper to be pasted, by means of a revolving and vibrating pasting-roller, operated substantially in the manner described.

87,609.—John T. Wilson, Pittsburg, Pa., assignor to himself and Coleman, Rahm & Co., same place.—*Carriage-Axle.*—March 9, 1869.

Claim.—1. An oil-reservoir, *c*, constructed in the axle A, and furnished with an accessible opening, through which it may be supplied with a lubricating material, and openings for its transmission to and between the journal and box, or sleeve, substantially as described.

2. In combination with the cap *c*, the oil-chamber *r*, its inlet-supply opening, and channels in the axle A, for furnishing the lubricating compound to the box and journal, at or near the points thereof, substantially as described.

87,610.—Isaac T. Winchester, Boston, Mass.—*Hot-Air Furnace.*—March 9, 1869.

Claim.—1. A series of independent tubes, B, passing through and forming the sides of the fire-pot of a furnace, as and for the purpose set forth.

2. The adjustable smoke-pipe G, in combination with the top, E, of a furnace, to the lowest portion

of which it is fitted, and upon which it turns as a center, substantially as and for the purpose described.

3. The box or trunk H, in combination with two or more tubes, B, as and for the purpose set forth.

87,611.—O. D. Woodruff, Southington, Conn.—*Meat-Cutter.*—March 9, 1869.

Claim.—The drivers *a* and knives *c*, when combined and arranged alternately on the same shaft, substantially as shown and described, and for the purposes set forth.

87,612.—George W. N. Yost, Corry, Pa.—*Equalizer.*—March 9, 1869.

Claim.—The combination of the whiffle-tree E, provided with a stay, G, and a V-form strap, D, pivoted to a slide, C, with a tongue, A, provided with a socket, B, and a buffer, F, as described, for draught-teams.

87,613.—Edson A. Abbott, Baltimore, Md.—*Grain-Drier.*—March 9, 1869.

Claim.—1. The combination and arrangement of the steam-chest Q, flues T, conveyers U, and suction-fan P, substantially in the manner and for the purpose described.

2. The apparatus, substantially as described, whereby damp grain is subjected to the combined and simultaneous action of heat derived from steam, and of hot or cold currents of air, for the purpose at once of expelling and carrying off the superabundant moisture, in the manner set forth.

3. The perforated conveyer-flights U, constructed as and for the purpose specified.

87,614.—Robert Adams, Cincinnati, Ohio.—*Blacking-Brush.*—March 9, 1869; antedated February 26, 1869.

Claim.—The clamp-iron D, having arms *b b*, and lever-arm *d*, the thumb-screw F, and pivot-screw E, or their equivalent, in combination with the spreading-brush C, polishing-brush A, and blacking-box B, when the same are constructed, arranged, and operate as and for the purpose shown and described.

87,615.—John C. Andrew, Seventy-Six, Ky.—*Feeding-Shoe for Grinding-Mills.*—March 9, 1869.

Claim.—The sieve B and spout C, when the former composes the bottom of the shoe A, and the latter is rigidly attached to the under side of the same, both being arranged to conduct the grain and foreign matter in the manner described for the purpose specified.

87,616.—John Ashworth, North Andover, Mass., assignor to George L. Davis, John A. Wiley, and Joseph M. Stone, same place.—*Loom for Operating Shuttle-Boxes.*—March 9, 1869.

Claim.—1. The combination of a series of shuttle-boxes, a cam to place the same in position, and a duplex series of hook-rods to work said cam, operating under the control of a pattern-chain when the hook-rods are arranged substantially as described, and controlled by the pattern, so as to maintain a constant rotation between each longitudinal series of projections on the pattern and its corresponding shuttle-box, substantially as set forth.

2. The employment, in combination with the cam or cams for working the shuttle-boxes, of two hook-rods, or their equivalents, working in opposite directions, and the pawl or driver, so arranged that by their joint operations the cam will be brought to a definite and fixed position from any distance in either direction, substantially as described.

3. The employment, in combination with the cam or cams for working the shuttle-boxes, of a single hook-rod and a fixed stop attached to the cam, by the joint operation of which the cam is placed in its extreme positions, substantially as described.

4. Connecting the hook-rods with the cams by adjustable joints, substantially in the manner and for the purpose described.

87,617.—T. Bailey and Virgil W. Blanchard, Bridport, Vt.—*Washing-Machine.*—March 9, 1869.

Claim.—In a washing-machine, the tub A, diaphragm E, shaft F, support B, ratchet-wheel G, pawl *g*, bar g^1, arm or bar g^2, lever C, uprights *c* and *d*, arm *f*, and spring clothes-pounder D, all constructed, arranged, and operated substantially as and for the purpose described.

87,618.—A. L. Baker, Newark, N. J.—*Compound for Renewing Hair.*—March 9, 1869.

Claim.—The compound herein described, substantially as specified.

87,619.—Seth W. Baker, Providence, R. I.—*Pad and Lining for Horse-Collars.*—March 9, 1869; antedated March 4, 1869.

Claim.—The pad, of thick double woven cotton fabric, in combination with the collar A A, substantially as described.

87,620.—Edwin Barton, Patterson, N. J.—*Machine for Twisting Bullion-Fringe.*—March 9, 1869.

Claim.—1. The arrangement of the sliding hook-spindle *m*, having a feather, *x*, and working through the pinion *n*, in fixed frame *h*, and connected, by means of arms *w*, with the slide *s*, all operating substantially as herein described.

2. The rock-shaft N, having a lever, Q, and arm, P, whereby the fringe is disengaged from the hook, said shaft being operated by a tappet on the wheel R, striking lever Q, as herein described.

3. The lever K, which engages with the notch *u*, when operated by means of a tappet on the wheel R, substantially as and for the purpose herein described.

4. The combination and arrangement of the sliding hook-spindle *m*, connected with slide *s*, the shaft *b*, gearing *n d*, pinion *a*, wheels H J, the latter having a recess *u*, the shaft N, provided with lever Q and arm P, and the wheel R, carrying tappets *y z*, all operating together substantially as herein described.

87,621.—E. S. Belton, New Orleans, La.—*Toy.* March 9, 1869.

Claim.—1. The combination of the cup A, handle B, and piston C, substantially as and for the purpose specified.

2. A toy ball-ejector, substantially such as herein described, as a new article of manufacture.

87,622.—Benjamin Bevelander, Boston, Mass.—*Car-Coupling.*—March 9, 1869.

Claim.—The coupling, as made with arms having pointed and barbed heads, pivoted and provided with weights, arranged to operate substantially as described.

87,623.—Virgil W. Blanchard, Bridport, Vt.—*Pinion.*—March 9, 1869.

Claim.—1. A pinion, composed of the cylindrical block A, bar, or stem, *c*, movable teeth *a a*, annular plate *b*, nut *d*, and screw-bolt *e*, constructed substantially as and for the purpose set forth.

2. A pinion with movable teeth, so constructed, that by means of a nut, or its equivalent, its teeth may be secured in their places, or removed when necessary, substantially as and in the manner set forth.

87,624.—Douglas Bly, Macon, Ga.—*Artificial Leg.*—March 9, 1869.

Claim.—1. The combination, with the ankle-joint, of the wooden pin *a* and open metallic hook *b*, arranged as described, and operating in the manner and for the purpose specified.

2. The combination, with the leg B, of the inclosed flexible socket H, of less diameter than the wooden socket, and otherwise arranged, in the manner and for the purpose specified.

3. The combination of hooks *i*, with cord *p*, and eyes and catches *g h*, or their equivalents, substantially as herein set forth.

4. The combination of the connecting-strap *m* with the loose hooks *i* and catches *h*, in the manner and for the purpose specified.

5. The sockets *n n*, with the edges of the leather, when combined with the cord *p*, in the manner and for the purpose specified.

87,625.—JOHN W. BOOKWALTER, Springfield, Ohio.—*Exterior Casing for Turbine Water-Wheels.*—March 9, 1869.

Claim.—1. A portable metallic forebay, or external casing, for a turbine of the class mentioned, having a tubular bearing, D′, projecting into the chamber for the support of the wheel case, substantially as described.

2. Such a casing, combining in its construction the following elements, viz, two pieces, which, when bolted together by their flanges, form an oblate spheroid, an induction-pipe, B, in the side, and an eduction-pipe, D, in the bottom, and an upper bearing for the wheel-shaft, substantially as described.

3. Such a casing, in combination with a stuffing-box, F, and elevated box or bearing for the wheel-shaft G, attached to the top-plate A, substantially as set forth.

87,626.—FRANKLIN BOWLY, Winchester, Va.—*Glass-Board and Apparatus for Cutting Glass.*—March 9, 1869.

Claim.—1. A glass-board, A, having marginal pins on each side, and pegs *b b*, or rather equivalent rests, for the straight-edge or diamond-rule C, in combination with a movable rest, B, fitting on or between the pins in the board, to enable the panes of glass to be cut in a rapid and convenient manner, substantially as described.

2. The two parallel and oblique rows of the holes 1, 2, 3, 4, &c., in the ends of the movable rest B, substantially as described, for the purpose of adjusting the said rest B, of the glass-board A, to fractions of one inch, all as set forth.

3. The sliding-plate D, substantially as described, in combination with the rest B and glass-board A, all as and for the purpose set forth.

4. The glass-board A, having movable rest B and straight-edge C, and its pegs, or stops *b b*, when the plane of the said board is crossed by two systems of numbered lines at right angles to each other, and an inch apart, substantially as and for the purpose shown and described.

87,627.—HORACE C. BRIGGS, West Auburn, Me.—*Hoeing-Machine.*—March 9, 1869.

Claim.—1. The combination of the axle O and wheels E′ with the frame A B C D E F of the cultivator, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the arms and supports Q, levers R *r*,′ and chains S, with the axle O and runners D, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the foot-lever Z, pivoted toothed plate Y, toothed bar T, arms V, standards W, and plows, or hoes X, with each other, and with the forward cross-bar A of the cultivator-frame, substantially as herein shown and described, and for the purpose set forth.

4. Forming the standards W with two separate and distinct seats, for the plows, or hoes, srbstantially as herein shown and described, and for the purpose set forth.

5. The draught-bar N, constructed in three parts, and operating in connection with the tongue K and draught-irons H, substantially as herein shown and described, and for the purpose set forth.

6. The combination of the roller D′ and detachable arms A′ with the rear cross-bars B and runners D of the cultivator-frame, substantially as herein shown and described, and for the purpose set forth.

7. The combination of the adjustable wedge-block L with the forward cross-bar A and inclined rear end of the tongue, substantially as herein shown and described, and for the purpose set forth.

87,628.—ADDISON P. BROWN, Syracuse, N. Y.—*Wind-Wheel.*—March 9, 1869.

Claim.—1. The combination of the governing weights C and bars K, with the sections of a rosette windmill, substantially as and for the purposes set forth.

2. The sliding head D and axes *a*, constructed as described, for the purpose of producing an increased resistance, as the sections are turned, by the increased force of the wind, substantially as above specified.

3. The radial arms B, and radial slats, so beveled or scarfed off as to cause them to present the greatest and most perfect propelling-surface to the wind with the least retarding-force consistent with practical construction, as hereinabove set forth.

4. The general combination of the governors C K, sections A, beveled arms B, regulating connection, and sliding head, constructed and operating substantially as and for the purposes specified.

87,629.—GEORGE BUCHANAN, Washington, Pa. *Grate-Fender.*—March 9, 1869.

Claim.—The arrangement of a grate-shaped fender, with handle *a*, inside feet *b b*, outside foot *c*, (or the two feet outside and the one in, when preferred,) and offsets *d d d*, to rest on upper bar of grate, substantially as and for the purpose set forth.

87,630.—JABEZ BURNS, New York, N. Y.—*Velocipede.*—March 9, 1869.

Claim.—In a velocipede, which is operated by power on the front wheel, has the steering-wheel at the rear, and the reach straddling said front wheel, the combination of the T-shaped slotted head, slide *g*, foot-rest *j*, and adjustable plate *i*, substantially as and for the purpose described,

87,631.—JOSEPH CANTNER, Millheim, Pa.—*Fly-Net for Horses.*—March 9, 1869; antedated February 27, 1869.

Claim.—The method of connecting the cross-lashes, or cords, B B, with the straps A A, by means of the looping-cords C C, when the said looping-cords pass through holes in the straps, around the cross-lashes, and then back through the same holes, as herein specified.

87,632.—JAMES M. CARPENTER, Florence, Mass.—*Cutting Threads on Pipes, &c.*—March 9, 1869.

Claim.—1. As my improvement of screw-threading dies, conjointly, the attachment of said dies, by pivots, to the die-stock, a series of longitudinally-concave cutting-threads, of equal height throughout their entire length, and terminated at any angle to the curvature of said threads, in the plane of the straight, beveled surface of the die-block, substantially as represented by Fig. 4, and mechanism for adjusting said dies, to give clearance, and to retain them firmly in position when so adjusted, substantially as set forth.

2. In combination with the dies, made and pivoted to the head-stock, as described, the oscillating ring and the adjusting set-screws, or their equivalent, the wedges, substantially as described.

3. The notched arm *m*, in combination with the shell *q*, ring *i*, and head *j*, substantially as and for the purpose described.

87,633.—WILLIAM CARPENTER, Fairbury, Ill.—*Embroidering-Attachment for Sewing-Machines.*—March 9, 1869.

Claim.—1. The reciprocating cam *j*, the swinging bar F, and spring *h*, or its equivalent, in combination with the swinging plate C, which is moved by the bar F, as set forth.

2. The arrangement and combination with each other of the presser A B, swinging plate C, arm *c*, pivoted thread-guides D E, swinging bar F, spring *h*, and sliding cam *j*, all made and operating substantially as and for the purpose herein shown and described.

87,634.—GEORGE CLARK, Buffalo, N. Y.—*Grain-Storehouse.*—March 9, 1869.

Claim.—1. Supporting grain-bins upon one central column, in the manner substantially as and for the purpose described.

2. The hollow cast-iron column A, with the discharge-spout B and hopper-plate C, constructed in the manner and for the purpose substantially as herein set forth.

3. The hopper D, constructed substantially as described, in combination with one central supporting-column, for the purposes herein set forth.

87,635.—ROBERT J. CLAY, Greenpoint, N. Y.—*Cotton-Gin.*—March 9, 1869.

Claim.—1. The combination, with the saw-cylin-

der D, of the reciprocating corrugated stripper, or clearer, G, substantially as specified.

2. The combination, with the saw-cylinder D, of the revolving clearer and spreader H, formed or provided on its periphery with reversely-inclined stripping-ribs, or edges, *m*, essentially as specified.

3. The combination, with the saw-cylinder D, of the reciprocating corrugated stripper, or clearer, G, and the revolving clearer and spreader H, formed or provided on its periphery with reversely-inclined stripping-ribs, substantially as described.

87,636.—Francis Clymer, Galion, Ohio.—*Clothes-Line Fastener.*—March 9, 1869; antedated March 5, 1869.

Claim.—The cam B, toothed plate *b'*, and flange *b*, when cast in one piece, and made readily adjustable by means of the wrench-screw C and grooved pivot D, inserted in the hole of the post.

87,637.—John F. Coddington, Newark, N. J.—*Harvester.*—March 9, 1869,

Claim.—The arrangement of the adjustable pulley I and the socketed piece, slotted or provided with a series of holes, and attached to the reel-post D, with reference to each other and to the reel E, the looped driving-chain or band L, and the system of pulleys A J K G, substantially as and for the purpose specified.

87,638.—Charles L. Cole, Bushnell, Ill.—*Churn-Dasher.*—March 9, 1869.

Claim.—1. The cylinder C, provided with the dashers or arms D D', constructed and arranged substantially as set forth.

2. The cylinder C, dashers D D', spring-catch *e*, thumb-screw *f*, rectangular slot *a*, and projection *d*, all combined and arranged substantially as described.

87,639.—Ebenezer Coleman, Woburn, Mass.—*Churn.*—March 9, 1869.

Claim.—1. The combination and arrangement of the movable arch or bail B, separate from the supporting-frame C, with such frame C, the dasher D, and the vibratory reservoir A, provided with mechanism for oscillating it, as set forth.

2. The combination and arrangement of the working lever F, with the vibratory reservoir A, and the cranked shaft *r*, and connecting-rod *p*, applied to such reservoir and the supporting-frame C, as set forth.

3. The combination and arrangement of the catch-lever E and the mortised movable arch or bail, with the notched dasher and the vibratory reservoir, to operate together as set forth.

87,640.—Alonzo W. Cram, St. Louis, Mo.—*Mash-Tub and Vapor-Cooler.*—March 9, 1869.

Claim.—1. The construction of the revolving tubes S, F, N N, W W, T T, E, and B, as above described, and for the purposes set forth.

2. The construction of the two cylinders D D and C, in combination with each other, and in combination with the tubes M, R, and A, as above described, and for the purpose set forth.

3. The combination of the cylinders C and D D, together with the series of tubes F, N N, W W, S, T T, E, and B, as above described, and for the purposes set forth.

87,641.—Hiram Culver, Dansville, N. Y.—*Plow.*—March 9, 1869.

Claim.—The combination and arrangement of the bar *c*, pendant *s*, chain B, and handle E, with a single or gang-plow, as herein described, for the uses and purposes specified.

87,642.—Hiram Culver, Dansville, N. Y.—*Combined Harrow and Cultivator.*—March 9, 1869.

Claim.—A series of cylindrical rotary harrows, adjusted upon a shaft, as described, separated by the arms *c*, and adapted for the removal of any number thereof, at will, in the manner represented, and for the purposes herein specified, substantially as described.

87,643.—Jeptha Cummins, Perry, Mich.—*Horse Hay-Fork.*—March 9, 1869.

Claim.—The combination of the slotted or forked handle A, fork B, trigger C, spring D, loop E, notch *a*, and catch *b*, all constructed and arranged substantially as and for the purposes herein set forth.

87,644.—Leo Daft, New York, N. Y., assignor to himself and John Wood, same place.—*Seat and Back for Chairs and Bottom for Beds.*—March 9, 1869; antedated November 20, 1868.

Claim.—Elastic seats, backs, and bed-bottoms, made of India-rubber strips, interwoven and arranged substantially as herein shown and described.

87,645.—William E. Dante, Washington, D.C.—*Portable Key-Hole Guard.*—March 9, 1869.

Claim.—The portable key-hole guard, consisting of arms D D and jaws *b b*, pivoted together at *a*, and screw E, or its equivalent, all substantially as herein described.

87,646.—G. W. Darby, New Vienna, Ohio.—*Wind-Wheel Water-Elevator.*—March 9, 1869.

Claim.—The float *u*, in combination with rod *s*, lever *i*, shafts G and P, and pinions *h* and *v*, constructed and operating substantially as and for the purposes herein specified.

87,647.—William J. Decker, Nyack, N. Y.—*Blind and Shutter Fastening.*—March 9, 1869.

Claim.—1. The lever G, when connected with a blind-fastener, E, substantially as described.

2. The spring F, when arranged as described, to hold at once the spring-catch E and the lever G in the requisite positions, as specified.

3. The combination with each other of the plate D, catch E, lever G, spring F, lever H, and rod *k*, all arranged, combined, and operating substantially as herein shown and described.

87,648.—E. L. Demorest and W. G. Cook, New York, N. Y.—*Brace and Suspender Combined.*—March 9, 1869; antedated March 5, 1869.

Claim.—The mode, substantially as described, of forming each arm-loop of the shoulder-brace into a suspender with two lobes, in combination with the cross-ties specified as connected with the supplementary suspender E, all substantially as and for the purposes set forth.

87,649.—Loyal M. Doddridge, Portland, Ind., assignor to himself and James N. Templar, same place.—*Railway-Car Coupling.*—March 9, 1869.

Claim.—1. The locking-disk or lever, with its cam-like projections, constructed substantially as shown and described.

2. The combination of the disk or lever C, locking-lever B, and buffer A, substantially as and for the purpose described.

3. The arrangement of the guide or spring F, with reference to the buffer A and lever B, substantially as shown and described.

4. The arrangement of the spring G, with reference to the disk or lever C, substantially as shown and described.

87,650.—Charles du Lin, Mans, France.—*Manufacture of Artificial Fuel.*—March 9, 1869.

Claim.—1. The method of agglomerating small coals, the dust of coals, charcoal, coke, wood, and other substances, as specified, by the employment of vegetable resins, and especially those proceeding from sea-pine, mixed with said substances, substantially as and for the purposes specified.

2. As a new article of manufacture, the agglomerated coals or fuel, produced substantially in the manner and by the employment of the ingredients as herein specified.

3. The employment in the manufacture of illuminating gas of free-burning or uninflammable coals, mingled with more or less vegetable resin, substantially as and for the purposes herein set forth.

87,651.—James W. Eardly, Cascade, Mich.—*Corn-Planter.*—March 9, 1869.

Claim.—The combination of the bar A A and its adjustable marker *b*, with the box B, adjustable slide *a*, and handles and handled rods *f f*, when constructed and used as and for the purposes set forth.

87,652.—M. Ehrgott, Pittsburgh, Pa., assignor to himself and James Parker, same place.— *Thimble-Skein for Axles.*—March 9, 1869.

Claim.—As a new article of manufacture, a thimble-skein, B, for axles, constructed out of sheets or plates of steel or wrought-iron, in the manner substantially as herein described, so as to be of uniform thickness, except at the point where the laps are welded, and provided with grooves *b*, for receiving lubricating-oil, as set forth.

87,653.—Hermann Endemann, New York, N. Y.—*Artificial Bone-Black.*—March 9, 1869.

Claim.—1. A substitute for bone-black, composed of clay (silicate of alumina) and carbon, separated from a carbonizing-substance, substantially in the manner herein described.

2. A substitute for bone-black, composed of clay, hydrated sesquioxide of iron, and carbon, mixed together, about in the proportion and substantially in the manner specified.

3. A substitute for bone-black, composed of clay, hydrated sesquioxide of iron, carbon, and salt, substantially as described.

87,654.—M. E. Ezell, Hatchechubbee, assignor to Walter S. Gordon, Russell County, Ala.—*Fire-Kindler.*—March 9, 1869.

Claim.—1. The rod C, provided with a match-holding device at its end, in combination with the rod D, provided with a roughened end or surface, substantially as and for the purpose specified.

2. The combination of said two rods, C and D, with a spring, E, a spring-catch, F, and a cord or wire, H, substantially as and for the purpose described.

87,655.—Philander S. Foster, Richmond, Me.—*Boot and Shoe Lacing.*—March 9, 1869.

Claim.—1. The arrangement and combination of the flaps B, staples *a* and *c*, and cords *s*, substantially as and for the purposes specified.

2. The combination and arrangement of the several parts above mentioned with the elastic straps *d*, and hooks, buttons, or studs *f*, substantially as described.

87,656.—A. Frederick, Toledo, Ohio.—*Millstone-Balance.*—March 9, 1869.

Claim.—1. The combination of adjusting balancing-weight D and rod C, provided with a permanent hook, *c*, and an adjustable sliding-hook, *a*, substantially as described.

2. The notched hook *c* on rod C, in combination with a T-shaped slot, in the balancing-weight D, whereby this weight can be readily removed from the rod C, without detaching the latter from the bands on a millstone, substantially as described.

87,657.—A. S. Gallihier, Bristol, Tenn.—*Churn.*—March 9, 1869.

Claim.—The arrangement of the horizontal triple gearing D D, and G, with the top braces E E, stationary beaters J J, and double-acting beaters B B, when constructed and operating as herein described, and for the purposes set forth.

87,658.—Samuel Gibbons, Freedom, Pa., assignor to Excelsior Oil-Manufacturing Company of Pennsylvania.—*Process of Preparing Petroleum to be Used in Lubricating Wool.*—March 9, 1869.

Claim.—1. The within-described process for preparing petroleum, so as to be adapted as a wool-grease, substantially as set forth.

2. Preparing petroleum so that it can be used as a wool-grease, substantially as herein set forth.

3. An oil, or grease, made of petroleum, for the purpose of greasing wool, substantially as herein set forth.

4. The within described petroleum as a wool-grease, when prepared substantially as herein set forth.

87,659.—John Glattner, Suspension-Bridge' N. Y.—*Churn.*—March 9, 1869.

Claim.—The combination and arrangement of the rock-lever H, connecting-bar I, standards A, and pivoted churn C, operating substantially as set forth.

87,660.—Jacob L. Good, Elizabethtown, Pa.—*Churn.*—March 9, 1869.

Claim.—1. The gathering-board *s*, constructed and operating substantially as and for the purposes mentioned.

2. A churn, having dashers E, standard C, dash-board F, gatherer *s*, and sectional lid, with removable gearing, as described, constructed, arranged, and operating substantially as herein specified.

87,661.—Henry S. Goodspeed, New York, N. Y.—*Pen.*—March 9, 1869.

Claim.—1. The reservoir-attachment *b*, applied to the back of the pen, by a shank or stem rigidly connected therewith, so as to maintain its pointed extremity in juxtaposition with the nib, for the purposes of first rendering capillary service in supplying the ink; second, of supporting the nib under moderate pressure; third, of protruding through the slit, and thereby forming a triple point under extreme pressure, said attachment forming a component part of the pen with which it is combined, but capable of being removed and applied to another, when the first becomes unserviceable, substantially as herein set forth.

2. A capillary reservoir, when applied to the back of the pen, and provided with an auxiliary point, arranged and operating substantially as and for the purposes set forth.

87,662.—W. B. Gould, New York, N. Y.—*Stair-Rod.*—March 9, 1869.

Claim.—The construction of the two parts, *a* and *b*, the former carrying the ring *e*, hinged together, and attached to the riser, in the manner described, in combination with the stair-rod, as herein set forth, or the purpose specified.

87,663.—William Hainsworth, Sharpsville, Pa.—*Method of Constructing Molds for Metallic Castings.*—March 9, 1869.

Claim.—The packing of sand, for a mold, in a flask, by raising the same, together with the pattern, and letting them all drop upon a hard bed, substantially as shown and described.

87,664.—A. W. Hall, New York, N. Y.—*Water-Meter.*—March 9, 1869.

Claim.—1. The compound taper-plug E *e*, constructed and applied, relatively to the service-pipe B, to operate substantially as and for the purpose herein set forth.

2. The combination, with the bucket F, of the stops *c' d*, springs *f g m*, and locking-lever I, substantially as and for the purposes herein set forth.

87,665.—William Hamilton and William Hamilton, jr., Toronto, Canada.—*Rotary Motor and Meter.*—March 9, 1869.

Claim.—1. The rotary piston C, provided with chambers E E E E, in combination with the ports E' E'' E' E'', abutments F F, and valves C' C' C' C', substantially as herein set forth.

2. The construction of the sides A' with the ingress-passages O and egress-passages P, as herein set forth.

3. The arrangement of the body A'', the sides A', and the outer sides A, as described.

4. In combination with the rotary piston or cam C C', the sides A A' O P, body A'' D D' D'', the segmental pieces or abutments F F, the entry-ports E' E', and exhaust-ports E'' B'' all constructed and arranged substantially as set forth.

5. The arrangement, relatively to the piston C C' E K, of the passages D D' O O and D D'' P P, the induction-ports E' E' E' E', eduction-ports E'' E'' E'' E'', and abutments F E, substantially as set forth.

87,666.—Henry J. Hancock, New York, N.Y.—*Step and Extension Ladder.*—March 9, 1869.

Claim.—1. The combination of the ladders A B, the braces C C, and the hooks and studs *b b* and *f f*, to form a step-ladder, substantially as herein described.

2. The combination of the ladders A B, the braces C C, and the hooked lid, or cover *h*, to form an extension-ladder, substantially as herein described.

3. The combination of the ladders A B, the braces

C C, hooks and staples *a a* and *j j*, and the hinged frame or legs D, to form a scaffold, substantially as described.

4. The combination of the ladders A B, braces C C, and legs *b b*, to form a bedstead, substantially as herein described.

87,667.—Benjamin Harnish and Robert J. King, Lancaster, Pa.—*Portable Mill.*—March 9, 1869.

Claim.—The combination of the cracking-mill C and grinding-burrs, as shown, within their case A, the two mills connected by the compound chute and separator W V, and driven together by means of the belt F and pulleys B D, all arranged and operated as and for the purpose herein set forth.

87,668.—George Hayes, New York, N. Y.—*Sky-Light and Ventilator.*—March 9, 1869.

Claim.—1. The metallic frame A and the sash or hinged frame C, constructed and arranged substantially as shown and described, for the purposes set forth.

2. The bar F, or its equivalent, whereby two or more ventilators or sky-lights may be raised and lowered, by means of connecting rods *i*, substantially as described.

3. In combination with a skylight the method of securing the glass in the frame or sash C, substantially as shown and described.

87,669.—Abram Heartsill, Louisville, Tenn.—*Blacking-Staff for Facing Millstones.*—March 9, 1869.

Claim.—The combination of the staff C, frame D, thumbscrew E, nave G, and thumbscrews F F, all constructed and arranged substantially as and for the purposes set forth.

87,670.—Peter C. Heinz, Pioneer, Pa.—*Packing for Artesian Wells.*—March 9, 1869.

Claim.—In a packing for the tube or outer casing of an oil-well the sustaining ring *d*, with an annular concave seat, the outer periphery of which is provided with a cutting edge, in combination with the leatheru cup *c* and convex annular follower *e*, all substantially as and for the purposes set forth.

87,671.—Horace L. Hervey, Philadelphia, Pa.—*Reflector for Head-Lights.*—March 9, 1869.

Claim.—1. The bull's-eye or lens, in combination with the reflex reflector, when used for head-lights and other similar lights, substantially as described and for the purposes set forth.

2. The reflex reflector E, pivoted or stationary, when used in combination with reflector B in head-lights, in the manner herein described, and operating as and for the purposes set forth.

87,672.—August Hertzog and John G. Roth, New York, N. Y., assignors to American Ornamental Wood Manufacturing Company, of the same place.—*Material for the Manufacture of Cabinet and other Work in Wood.*—March 9, 1869.

Claim.—The withiu-described article of wood, the same formed by the union of a series of veneers parallel to each other, and of diverse colors, in the manner and for the purpose set forth.

87,673.—D. Holdiman and S. Goodwin, Waterloo, Iowa.—*Water-Wheel.*—March 9, 1869.

Claim.—1. The arrangement of the ring D, arms *i*. oseillating arms *k*, sliding plates *h*, studs *l*, curved slots *g*, square projections *f*, and gates *d*, operating as described, for the purpose specified.

2. The wheel, constructed as described, of the outer horizontal surface *s*, the angular portion *t*, vertical portion *v*, and the horizontal disk *w*, connected with the hub, the buckets being secured in place at the points *s*, *t*, *u*, and *v*, as herein described, for the purpose specified.

87,674.—E. Holmes and H. C. Roome, New York, N. Y.—*Billiard-Game Register.*—March 9, 1869.

Claim.—A register for games of billiards, consisting of an index capable of being actuated by an electro-magnet, with whose poles the "string" of the marking apparatus is connected, a circuit-breaker in the said string, and a button, or its equivalent, which, by its passage along the string and over the circuit-breaker, completes the circuit through the string and magnet, the whole operating substantially as herein specified.

87,675.—Charles H. Hudson, New York, N. Y.—*Spring-Seat.*—March 9, 1869.

Claim.—1. The combination with the bars B of the centrally-located seat A, substantially as and for the purpose set forth.

2. Forming the outer surfaces of the bearings *c c*, against which the bars B bear, of a curved form in the spring, constructed substantially as set forth, as hereinabove described.

87,676.—Henry Jackson, Elmira, Ill.—*Corn-Stalk Cutter.*—March 9, 1869.

Claim.—An improved corn-stalk cutter, having levers *c* and *d*, each *o*, and hook *s*, cylinder H, with knives *h*, all combined with frames A and G, and constructed, arranged, and operating substantially as herein specified.

87,677.—John R. Jackson, Pelahatchee Depot Miss.—*Sulky-Plow.*—March 9, 1869.

Claim.—1. The beams C C, levers D D, tooth-plated uprights *a a*, in combination with the adjustable and reversible plows E^2 E^2, when the whole is constructed and arranged substantially as described, as and for the purpose specified.

2. The detachable center plow E^3, E, and E^1, with lever D′ and upright *b*′, as constructed, when the same is so arranged as to be used in combination with the two side-plows E^2 E^2, substantially as described, as and for the purpose specified.

87,678.—James C. Jay, Bear Creek Township, Ind.—*Band-Tightener for Shocks of Corn.*—March 9, 1869.

Claim.—The combination and arrangement of the arm C, the shaft A, hook D, and cord or wire E, substantially as shown and described.

87,679.—George H. Johnson, Buffalo, N. Y., assignor to himself and George Milsom, same place.—*Fire-Proof Granary.*—March 9, 1869.

Claim.—A granary, inclosed by a row of outer cylinders, or cylindrical compartments, and divided interiorly by transverse intersecting rows of contiguous cylinders, so as to form intermediate polygonal compartments, substantially as herein described and illustrated.

87,680.—Joshua Kidd, New York, N. Y.—*Vapor-Burner.*—March 9, 1869.

Claim.—1. An apparatus for vaporizing and burning creosote or other heavy fixed oils or hydrocarbons for illuminating purposes, wherein the said creosote, oils, or hydrocarbons are admitted sparingly from a reservoir, A, into a vaporizing vessel, C, the temperature of which latter is maintained by the heat of the illuminating flame obtained by the combination of the gas so formed, substantially as herein shown and described.

2. The combination of the reservoir A, tube B, cock D, tube-joint J, rod *a*, cap *f*, vaporizer C, tubes E G, burners *d*, disks H, or the equivalent of any one or all of these said parts, when combined to form an illuminating apparatus, substantially as set forth.

87,681.—Joshua Kidd, New York, N. Y.—*Carburetting Gas, and Oil for the same.*—March 9, 1869.

Claim.—The general arrangement and method of heating the carburetting vessel, together with the mode of preparing the oil, as described, for carburetting gas.

87,682.—Joshua Kidd, New York, N. Y.—*Apparatus for Carburetting Gas.*—March 9, 1869.

Claim.—As new, the heat-conductor S, together with the arrangement of apparatus for carburetting gas, as described and set forth.

87,683.—Daniel P. Lacey, Orfordville, Wis., assignor to Robert R. Ball, West Meriden, Conn.—*Sash-Holder.*—March 9, 1869.

Claim.—The latches *d f*, in conjunction with the lower and upper sashes of a window, as constructed and arranged, as and for the purpose set forth.

87,684.—CHRISTOPHER L. LARDER, Brooklyn, N. Y.—*Brush-Handle.*—March 9, 1869.

Claim.—The plates B F, constructed, the one with internal and the other with external radial teeth, fitting one within the other, and clamped together in such manner as to exclude the paint or other pigment from said teeth, substantially as set forth.

87,685.—THOMAS R. LEIGHTON, Cameron, Mo.—*Railway-Car Door.*—March 9, 1869.

Claim.—1. The combination, with the door A, of the door B, substantially as and for the purpose shown and described.

2. The detachable hinged door A of a box-car, substantially as and for the purpose shown and described.

87,686.—JOSIAH LETCHWORTH, Buffalo, N. Y., assignor to PRATT & LETCHWORTH, same place.—*Hames-Ring,*—March 9, 1869.

Claim.—The hames-ring or loop A, constructed with a cross-bar, *b*, and loop *e*, as an article of manufacture, substantially as set forth.

87,687.—E. T. LIGON, Demopolis, Ala.—*Railway-Car Axle.*—March 9, 1869.

Claim.—An improved car-axle, formed of an outer iron or steel tube or shell, an inner wire cable, and an interposed filling of softer metal, substantially in the manner herein shown and described, and for the purpose set forth.

87,688.—E. C. LITTLE, L. E. CLOW, and D. H. NATION, St. Louis, Mo.—*Cooking-Stove.*—March 9, 1869.

Claim.—The arrangement of the reservoir F, in front of and adjoining the exit-flue C, resting upon its horizontal portion, and with reference to the fire-box B, as herein described, for the purposes specified.

87,689.—HENRY C. LOCKWOOD, Baltimore, Md.—*Paper-Bag Machine.*—March 9, 1869.

Claim.—1. The arrangement of the spindle B, roller C, trough D, paste-wheel *c*, presser-roller *d*, and roller *c''*, with pulley *e'*, on its end, whereby the connection is made upon the pulleys *c'* by a band for operating the paste-wheel *c*, substantially as described.

2. The revolving ball D', in combination with the roller *c''* and former F, substantially as and for the purpose described.

3. The combination of the knife, or cut-off blade I', with the stationary knife I'', the shaft *h*, and its rods *l l*, slides *i' i'*, operated upon by the pins *i i*, with the hub *n'*, lever *n''*, and springs *m m* and spring *u*, all constructed to operate substantially as and for the purpose described.

4. The combination of the adjustable beveled gear-wheel g^2, upon the main shaft G', with the removable bevel-wheel g^1 upon the shaft K', so as to enable the knife I' to cut the paper tube, to produce a longer or shorter bag, substantially in the manner described.

5. The combination of the endless webs *o o*, rods *t t*, connected by bent levers *s' s'*, moving on pivots *t'' t''*, in standards *s s*, and slots *s'' s''*, and tightening-screws *t' t'*, all substantially as and for the purpose described.

6. The arrangement of the paste-bar P', revolving in sliding boxes, movable in slots horizontally, with crank-pin *r''* moving in a cam-shaped groove *v*, and connecting-bars L L, and bell-crank L', substantially as and for the purpose described.

87,690.—WILLIAM LOOKER, Graham, Mo.—*Cultivator-Plow.*—March 9, 1869.

Claim.—The combination of the axles A, frame C, arms H J, vertical shafts I, plow-beams F, and E, chains N, arms or levers M, short shafts K, and levers L, with each other, as herein shown and described, and for the purpose set forth.

87,691.—JOSEPH L. MARSH, Centreville, Ind.—*Churn.*—March 9, 1869.

Claim.—The construction of the removable portions B B and C C, as and for the purpose set forth.

87,692.—JOHN MAYS and ELIPHALET W. BLISS, Brooklyn, N. Y., assignors to DEVOE AND PRATT MANUFACTURING COMPANY, New York City.—*Sheet-Metal-Seaming Machine.*—March 9, 1869.

Claim.—1. The pivoted jaws C C and platen B, combined and arranged for operating substantially as and for the purposes herein set forth.

2. The combination with the jaws C C of the punches *c* and recesses *d*, substantially as and for the purpose herein set forth.

87,693.—JOHN MCADAMS, Brooklyn, N. Y.—*Machine for Paging Books.*—March 9, 1869.

Claim.—1. The revolving leaf-turner G, in combination with the chain of types for operation in connection with the impression-levers, or their equivalents, essentially as and for the purposes herein set forth.

2. The intermittently-revolving flattened portion *f*, of the shaft *k*, carrying the type-chain, and operating, in combination with the levers *g g'*, to print the even and odd numbers simultaneously, as specified.

3. The table H, adjustable to or from the impression-devices, also made capable of being lowered in a regular or graduated manner, as described, and having its forward edge, *s*, arranged to occupy an inclined or diagonal position relatively to its horizontal adjustment or action, as and for the purpose herein set forth.

4. The skeleton cylinder P, mounted as described, or otherwise equivalently carried, and adjustable, or moved endwise by screw or its equivalent, for operation in connection with the chain of types; as herein set forth.

5. The combination, with the leaf-turner G, of the leaf-sustaining finger M and sheet or leaf-detainer N, for operation together, essentially as described.

87,694.—THOMAS M. C. LUTES, New Mount-Pleasant, Ind.—*Covering for Blind Ditches.*—March 9, 1869.

Claim.—The within-described sections of roofing, in combination with the trough A and A', substantially as shown and described.

87,695.—THEODORE H. MEAD, Boston, Mass., assignor to R. HOE & COMPANY, New York, N. Y.—*Printing-Press Fly-Frame.*—March 9, 1869.

Claim.—1. A printing-press fly, having each of its series of paper-supporting fingers provided or formed with a series of blunt or rounded projections for the sheet of paper to rest on and be discharged from while the fly may be in use.

2. The combination of the paper-supporting fingers and the fly-frame with devices substantially as described, by which the lateral adjustment of each of the fingers, and its fixation in position, may be accomplished, as set forth.

3. The combination and arrangement of the metallic strip C, or electrical conductor, with the fly-frame, and its series of sheet-supporting bars, substantially as described.

87,696.—JOHN A. MILLER, Shippensburg, Pa.—*Horse Hay-Fork.*—March 9, 1869; antedated February 27, 1868.

Claim.—1. The handles G G, provided at their lower ends with semi-eliptical prongs H H, and pivoted in the bar A, by means of a rivet or screw *a*, substantially as and for the purposes herein set forth.

2. The cross-bar C, provided with catches D D, and suspended by the spring E, in the bar A, substantially as and for the purposes herein set forth.

87,697.—JOHN S. MILLIKAN, Thorntown, Ind.—*Truck for Moving Buildings.*—March 9, 1869.

Claim.—1. A truck, for moving buildings, when constructed with only three wheels, two in front and one in rear, the latter being placed, so to say, within the body of the truck, substantially as herein shown and described.

2. The arrangement of the bar H, lever I, and rods or bars J J, on the bottom of a truck for moving

buildings, for the purpose of turning the front wheels in either direction, substantially as herein set forth.

87,698.—JOHN MINOR, Peoria, and MILTON, W. NESMITH and GEORGE W. NESMITH, Metamora, Ill.—*Registering Apparatus for Stills.*—March 9, 1869.

Claim.—In a liquid-registering apparatus, the combination and arrangement of the tripping pawl-lever F, for moving the counting-register wheels *f f f*, operated by the sliding handle E, having a slotted connection with the valve-rod D, so that the said counting-register shall be actuated before the delivery-valve is opened, substantially as and for the purposes specified.

87,699.—JOHN B. MORSE and LOREN L. CARTER, Lafayette, Ind.—*Harvester-Rake.*—March 9, 1869.

Claim.—1. The groove shaft C, constructed substantially as shown and described.

2. The rake-carrier, consisting of the sleeve N, ring D, with its clamping-flanges, cup I, spring L, and ball, or sphere K, all constructed and combined substantially as shown and described.

3. The combination and arrangement of the screw F and groove shaft C, substantially as shown and described.

4. The combination of the screw F, grooved shaft C, and rake-carrier, substantially as shown and described.

5. The combination of the rake-carrier and the rake E, substantially as shown.

87,700.—A. W. PAGETT, Springfield, Ohio.—*Sawing-Machine Guard.*—March 9, 1869.

Claim.—The combination, with the post A, arranged to be adjustably attached to a table of the adjustable slide C and dog F, substantially as and for the purpose described.

87,701.—C. H. G. PEASE, Danbury, Conn.—*Marble-Sawing Machine.*—March 9, 1869.

Claim.—1. The devices herein described, for sawing marble in cylindrical or conical forms, constructed, arranged, and operating substantially as and for the purpose set forth and shown.

2. The rod or wire saw, having a triangular cross-section, combined with the machine herein described, for sawing marble in curves, substantially as and for the purpose specified.

87,702.—JOSEPH J. PIERCE, Emmett, Mich.—*Tuyere.*—March 9, 1869.

Claim.—The arrangement of the box A, with beveled slot G, tubes H L, fulcrum C, knee-lever D, with bevel I, rod E, pipe K, hollow plug R, and valve M, all constructed substantially as set forth.

87,703.—JOHN PONS, Baltimore, Md., assignor to himself, JOHN S. RUSSELL, and HENRY VOGLER, same place.—*Miter-Box.*—March 9, 1869.

Claim.—The adjustable miter-box, herein described, consisting of the base-board A, recessed at *a* a^1 a^2, and slotted at *s s'*, the side-board B being cut away at *b*, and two arms C C, pivoted in the slots *s s'*, working in the recesses, and each provided with an adjusting rod, D, fixed standard *c*, and an adjustable standard, *c'*, all said parts being constructed and arranged to operate together in the manner and for the purpose herein set forth.

87,704.—CHARLES PRATT, New York, and CONRAD SEIMEL, Green Point, N.Y., assignor to CHARLES PRATT.—*Soldering-Machine.*—March 9, 1869.

Claim.—The float B, with or without the guides C, in combination with the soldering-pan A, substantially as described for the purpose specified.

87,705.—ABNER QUINN, Wilmington, N. C., assignor to himself and A. E. WRIGHT.—*Pea-Picker.*—March 9, 1869.

Claim.—The combination of the toothed cylinder B, brush C, sieve F, incline I, fan G, incline A, teeth *a a*, and the necessary gearing, or belting, when constructed to operate in the manner described, and for the purpose specified.

87,706.—B. F. RANDELL, Des Moines, Iowa.—*Fanning-Mill.*—March 9, 1869.

Claim.—Providing a fanning-mill with a movable, or sliding screen under the gang of riddles, whereby an optional cut-off is obtained, for the purpose of separating seed-wheat from merchantable wheat, substantially as herein set forth.

87,707.—GEORGE P. REED, Boston, Mass.—*Chronometer-Escapement.*—March 9, 1869.

Claim.—1. The combination and relative positions of the spring *a'* and stop or post *j*, with the detent-lever and axis *b*, whereby the force required to operate said lever is diminished, substantially in the manner described.

2. The screw *l* or its equivalent, applied to detent-lever *a*, as herein shown and set forth, for the purpose of preventing displacement of the locking-portion *a'* of the spring *d*, when removed from the watch.

87,708.—AMOS C. RODGERS, Philadelphia, Pa., assignor to himself and J. and G. H. GIBSON, same place.—*Sash-Holder.*—March 9, 1869.

Claim.—The toothed catch F, sliding between diagonal guides *d d*, operated by the devices herein described or their equivalents, and arranged in respect to the ratchet D, secured to a window-frame or sash, substantially as and for the purpose herein set forth.

87,709.—ABNER ROLLO, Friendship, Wis.—*Shingling-Bracket.*—March 9, 1869.

Claim.—A bracket, constructed in the form shown, and having curved point A, spur B, feet C, and hinge D, arranged and operating substantially as specified.

87,710.—EDWARD A. G. ROULSTONE, Boston, Mass.—*Ice-Cream Receptacle.*—March 9, 1869.

Claim.—A portable receptacle, A, provided with one or more chambers, C, an inner and outer casing, *b c*, and a removable top, E, in combination with the mould D, and with or without the individual molds G, in which the cream, &c., is frozen, and served without being turned out, substantially as and for the purposes set forth.

87,711.—WILLIAM W. RUMRILL, Roanoke, Ind.—*Road-Scraper.*—March 9, 1869.

Claim.—The combination of the catches *f h*, springs *i*, pivoted top board *k*, guide-iron L, and operating-rod *m*, with the boards B B', cross-piece C, and the revolving scraper, all arranged as herein described, for the purpose specified.

87,712.—JOHN D. SATER and TURNER BARNS, Greensburg, Ind.—*Grain-Drill and Corn-Dropper.*—March 9, 1869.

Claim.—1. In combination with the side-beams A A, wheel C, connecting-rods *c c*, bars E and G G, and tubes F and I I, the seed-box D, having an auger-agitator *e*, with a crank, *d*, at each end, and the feed regulated by a lever, *f*, in rear of the box, substantially as shown and described.

2. In combination with the side-beams A A, wheel C, connecting-rods *c c*, bar E, and tube F, the corn-plow L and box M, constructed as described, and for the purposes set forth.

87,713.—LEMUEL W. SERRELL, Brooklyn, N. Y., assignor to ROBERT FOULDS, Passaic, N. J.—*Velocipede.*—March 9,1869.

Claim.—1. A pair of wheels mounted on an axle and bolt, substantially as specified, so that the swinging of the axle and the inclination of the vehicle are simultaneous, substantially as set forth.

2. The forwardly-inclined bolt *d*, axle *c*, and wheels *b b*, in combination with the wheel *a*, to which the propelling-power is applied, substantially as set forth.

3. The perch or frame *f*, connected with the inclined bearings for the bolt *d*, and extending to the axle of the wheel *a*, in combination with the axle *c* and wheels *b b*, substantially as set forth.

4. A single driving-wheel, fitted with an axle that is eccentric, and to which the frame or perch is connected, in combination with cranks and levers, ap-

plied substantially as set forth, for communicating to said wheel a rotary motion as specified.

5. The contractile ring, of round rubber, introduced into the rounded groove in the periphery of a wheel for velocipedes, as and for the purposes set forth.

87,714.—Edmond E. Shepardson, Providence, R. I.—*Key-Hole Guard.*—March 9, 1869.

Claim.—The key-hole guard, consisting of the slotted wire *d*, arm *c*, tube A, and guide C, in combination with the convex pin-tumblers in *d*, and concave pin-tumblers in B, when constructed and operating as herein described.

87,715.—William H. Sible, Harrisburg, Pa.—*Bit-Stock.*—March 9, 1869.

Claim.—The hinged gripe E, in combination with the spring *e* and socket A, constructed, arranged, and operating substantially as and for the purposes herein specified.

87,716.—Francis H. Smith, Baltimore, Md.—*Clay-Pulverizer and Stone-Separator.*—March 9, 1869.

Claim.—The clay-pulverizer and stone-separator, consisting of the revolving screen V, upon friction-rollers *p p p p*, with its rotary cutters T, upon shaft S, said screen and shaft being moved at different speeds by means of the gearing, as shown, the grating X, conductor U V, and discharge-spout O, all arranged together, and operated substantially as and for the purpose herein set forth.

87,717.—J. B. Smith, Milwaukee, Wis., assignor to himself and George R. Chittenden, Chicago, Ill.—*Screw-Bolt and Lock-Nut.*—March 9, 1869.

Claim.—1. A bolt, with a corrugated or serrated head, in combination with a nut, serrated on the faced side, substantially as described.

2. A bolt, with a serrated or corrugated head, so that it will not turn when the nut is screwed on to it, substantially as described.

87,718.—Silvester Skinner, Clayton, N. Y.—*Pea-Rake.*—March 9, 1869.

Claim.—1. The ferrules *b b*, for the handle C, connected together, and to the rake-head, by means of the curved braces *a a*, as herein shown and described, for the purpose specified.

2. The toothed cutter *f*, held to the rake-head by the split teeth *g*, as herein described, for the purpose specified.

87,719.—John Stark, Thomasville, Ga.—*Extension Pruning-Hook*—March 9, 1869; antedated February 27, 1869.

Claim.—The shear-blade *h*, and the movable cutter E, constructed, arranged, and operating substantially as shown and described, for the purposes set forth.

87,720.—Lewis Stark, Chelsea, assignor to himself and Frank L. Penney, Boston, Mass.—*Branding-Iron.*—March 9, 1869.

Claim.—The base B, cast with a flange, *b*, and central post D, formed in one homogeneous piece, substantially as and for the purpose set forth.

87,721.—Abraham J. Stevens, El Dorado, Wis.—*Revolving-Cultivator.*—March 9, 1869.

Claim.—The revolving cylinder E, adjustable standards *a*, casters *c*, bent rods *s*, teeth *u*, wedges *v*, cross-bar D, and drums *y*, combined and operating with the grooved wheel-hubs, and the bands or belts herein mentioned, substantially as specified.

87,722.—Horace P. Stewart, Bath, Mich.—*Shank.*—March 9, 1869.

Claim.—The improved metallic shank, having the instep portion *a* shaped to suit the finished form of the boot or shoe, when terminating at the heel-end, with the notch *d*, as and for the purpose herein specified.

87,723.—David U. Stoner, Mount Joy, Pa.—*Tympan-Frame for Printing-Presses.*—March 9, 1869.

Claim.—The circular rubber frame E D, made adjustable, and attached to the chase, substantially as and for the purpose set forth.

87,724.—D. C. Stover, Lanark, Ill.—*Cultivator*—March 9, 1869.

Claim.—The combination of the pivoted adjustable yoke D with the bent rod C, bracket B, and carriage A, arranged and operating as described, for the purpose specified.

87,725.—Charles H. Swain, Brooklyn, N. Y.—*Furnace for Smelting Ores.*—March 9, 1869.

Claim.—1. Smelting ores of gold, silver, and copper, by means of the vapors of petroleum, or other hydro-carbons, applied substantially as herein described.

2. The use of an exhaust, A, and connecting-pipes B B, by means of which I obtain a partial vacuum, and create a draught downward and through the ores to be smelted.

3. The construction of the oil-receiver E E and gas-receiver G G, around the feed F, and for the purposes as substantially set forth.

4. The protecting cover C over the pipes B B.

5. The arrangement of the feed F F and cover J, with the damper or slide N, by which means the furnace is made self-feeding, all as substantially set forth, and forming a continuous process for smelting gold, silver, and other ores.

87,726.—Henry R. Swank, West Jersey, Ill.—*Seed-Sower.*—March 9, 1869.

Claim.—A broadcast seed-sower, having cogged wheels *c*, *g*, and *h*, pawl *a*, shafts E and H, drums C and *p*, sowers G, conductors *s*, and slides *u*, constructed and arranged substantially as herein specified.

87,727.—Jerome L. Tarbox and H. L. Tarbox, New York, N. Y.—*Stencil-Plate.*—March 9, 1869.

Claim.—1. Stencil-letters, arranged to be readily connected or disconnected, by springs on one section taking into notches, or behind projections on the other sections, substantially as specified.

2. The arrangement of the springs A′, hoods C, and catches D, substantially as specified.

3. The plates A, arranged for lapping the edges thereof, substantially as specified.

4. Stencil-plates, arranged to be united to form rows, by means of the loops G, and rods or equivalent devices, substantially as specified.

87,728.—Lewis Taws, Philadelphia, Pa.—*Valve for Blowing-Engines.*—March 9, 1869.

Claim.—1. The combination, with a blowing-cylinder, of a plurality of independent detachable valve-seats and valves, all substantially as and for the purpose described.

2. The cylinder E, with its side openings *a*, grated seat F, and rubber valve, the whole being constructed for ready adjustment in, and as ready withdrawal from, the chamber of a blowing-cylinder, substantially as and for the purpose herein set forth.

87,729.—Joseph B. Tedrow, Chillicothe, Ohio.—*Fence.*—March 9, 1869.

Claim.—1. Fence-posts, made in sections A and B, and hinged together, substantially as and for the purpose described.

2. The hinged section A, formed with the supporting-rods *d* and the openings *b*, substantially as and for the purpose described.

87,730.—Nathan Thompson, Brooklyn, (E.D.,) N. Y.—*Preserve-Jar.*—March 9, 1869.

Claim.—1. The ring B, having a swell *b*, furnisher with hooks, and cemented to a glass or earthen jar, in combination with the cap furnished with inclines, all substantially as and for the purpose set forth.

2. The cap C, having fitted or secured to it reversely-sliding bars D D, essentially as and for the purpose or purposes herein set forth.

87,731.—H. B. Tibbits, Vineland, N. J.—*Washing-Machine.*—March 9, 1869.

Claim.—The combination of the horizontal rubber-

C and crank-shaft E, when connected together by the rigid connecting-rod D, all arranged and operating substantially as herein shown and described.

87,732.—HIRAM UNGER, Logansport, Ind.—*Bottle-Corking Apparatus.*—March 9, 1869.

Claim.—1. The combination and arrangement of the rod A, adjustable bracket B, and set-screws C, plunger F, spring G, and adjustable guide H, substantially as and for the purpose set forth.

2. The combination and arrangement of the vertical rod A, the adjustable bracket B, and plunger F, with the adjustable platform I for supporting the bottles, substantially in the manner and for the purpose set forth.

87,733.—A. VAN CAMP, Washington, D. C.—*Composition for Recutting Files and Rasps.*—March 9, 1869.

Claim.—1. The combination of processes herein described for recutting files.

2. Combination of acids and sulphates, and other ingredients herein mentioned, for recutting files.

87,734.—A. VAN CAMP, Washington, D. C.—*Composition for Fire-Kindling.*—March 9, 1869.

Claim.—1. An artificial fuel or "kindler," when pulverized corn-cob, coal-dust, and tan-bark are used as a basis, and are united with suitable inflammable ingredients, substantially as described, as and for the purpose specified.

2. An artificial fuel or "kindler," when the same is composed of the ingredients herein stated, and the whole is so combined and arranged as to operate substantially as described, as and for the purpose specified.

87,735.—JUNIUS R. VAN VECHTEN, New York, N. Y.—*Cartridge.*—March 9, 1869.

Claim.—The paper, or other thin, flexible material, *e n*, interposed between the fulminate and the but or head of the shell and the anvil-cup of the cartridge, substantially as and for the purpose herein described.

87,736.—ALBERT WARD, New Michigan, Ill.—*Machine for Scraping and Loading Earth.*—March 9, 1839.

Claim.—1. The arrangement of the independent scrapers B B, each carrying an inclined trough, a^1, and connected by the bars *a* to the brackets *d*, one of which furnishes the forward bearing for the shaft operating the endless carrier C, all operating as described, for the purpose specified.

2. The arrangement of the rollers e^1 e^2 and chains *e*, with reference to the scrapers B B, whereby said scrapers are operated together, or independently of each other, as herein shown and described.

3. The arrangement upon the wagon of the rollers e^1 e^2, supporting the scrapers B by the chains *e*, the bars *a*, inclined troughs a^1, bracket *d*, endless carrier C, and the gearing by which the latter is operated, as herein set forth and shown.

87,737.—SETH WARD, Princeton, Ind.—*Backband Hook.*—March 9, 1869; antedated March 4, 1869.

Claim.—Countersinking the rivet-holes of a plate, A, on its under side, so that the leather B is forced into said countersinks, all substantially as and for the purpose specified.

87,738.—J. C. WELCH and M. A. AMMEDEN, Edgerton, Ohio.—*Wheel.*—March 9, 1869; antedated March 5, 1869.

Claim.—The arrangement of the tire A, blocks B B, and screw C, in combination with the fellies D D and cap E, all constructed as described, and operating as and for the purposes herein set forth.

87,739.—WILLIAM WELLS, Ashtabula, Ohio.—*Hinge-Pintle,*—March 9, 1869.

Claim.—The split spring-pintle B, for hinges, when its split end is provided with the enlargements or shoulders I, as herein described, for the purpose specified.

87,740.—F. AUGUST WERDMÜLLER, New York, N. Y.—*Fishing-Net.*—March 9, 1869.

Claim.—A fishing-net, consisting of the sheet B, frame A, and annular sheet C, all made and operating substantially as herein shown and described.

87,741.—T. B. WHITE, New Brighton, Pa.—*Iron Bridge.*—March 9, 1869; antedated February 27, 1869.

Claim.—1. The wrought-iron beam or brace, consisting of the segmental or curved plates *a* united, with their convex sides inward, with the cross-plate *b*, secured at their edges by rivets, substantially as shown and described.

2. The wrought-iron brace-block and tie-bar combined, when constructed substantially as herein described.

87,742.—H. K. WHITNER, Philadelphia, Pa.—*Bedstead.*—March 9, 1869,

Claim.—1. The combination with the side-rails B of a piece, F, so hung to the rail that the bed-clothing may be passed and secured between the two, as set forth.

2. So hanging the piece F to the side-rail that the said piece may be turned down and beneath the rail, substantially as described.

87,743.—MANUEL WITMER, Cedar Rapids, Iowa.—*Churn.*—March 9, 1869.

Claim.—The combination of the vessel A with its support B, arms C, links D, and framing E, all substantially as and for the purpose specified.

87,744.—F. WOLFRAM, New York, N. Y.—*Machine for Pressing Hats.*—March 9, 1869.

Claim.—The dog *j* and lever *l*, in combination with the gate D, which carries the follower of a press, substantially as and for the purpose set forth.

87,745.—HERMAN J. WOLTERS, Salem, Mass.—*Measuring-Funnel.*—March 9, 1869.

Claim.—As a combined funnel and measure, the semi-spherical bowl *a*, with the discharging-faucet *m*, and the pendulous measuring-rod *e*, applied and suspended within the bowl, as explained, the whole operating in manner and for the purpose as herein shown and described.

87,746.—JAMES A. WOODBURY, Boston, Mass.—*Car-Wheel and Axle.*—March 9, 1869.

Claim.—1. In combination with a wheel in two or more parts, the diagonal or oblique joint and interposed packing, substantially as and for the purpose described.

2. The combination of an elastic wheel with a sleeve, so made that when used with an axle and wheel it will turn independently of the latter, substantially as described.

3. In combination with an axle and sleeve, each carrying and turning with its own wheel an elastic bearing, for cushioning the endwise strain or jar, constructed substantially as described.

4. The combination of an elastic wheel and axle, and an elastic wheel and sleeve, with a packing interposed between them, to take up lateral jar, substantially as described.

5. In combination with an axle and a sleeve, each carrying one of a pair of wheels, a revolving oil-box, for containing a lubricating material and supplying it to the bearing surfaces between said sleeve and axle, substantially as described.

6. In combination with the bearings on the sleeve the slot or slots 9, for admitting oil from the journal-box through the sleeve to the bearing surfaces between the sleeve and axle, substantially as described.

7. The covering of the exposed joints between the sleeve and axle by an overlapping joint at each end, to prevent the admission of dust, grit, &c., substantially as described.

87,747.—JOHN M. WOODS, Washington, Mo.—*Device for Heading-Bolts.*—March 9, 1869.

Claim.—The improved device herein described, consisting essentially of the two jaws, with the shank for entering a hole in the anvil or bench, and with the openings *v x*, for the removal of cinders, &c., and the foot-lever C, all constructed and arranged substantially as described.

87,748.—Leonard Wray, Ramsgate, England. —*Triturating and Amalgamating Apparatus for Treating Ores of Gold or Silver.*—March 9, 1869.

Claim.—1. Triturating or reducing the ores to an impalpable powder by means of balls or rollers, either spherical or cylindrical, and either plain, grooved, or serrated, and placed in suitable cylinders or barrels, which are to be rolled along a railway by any convenient power, in the manner and for the purpose herein set forth.

2. Particularly, causing the balls or rollers inside the cylinders or barrels to act on and triturate the ore by rolling the cylinders or barrels on a railway, as herein shown and described, in contradistinction to mounting such cylinders or barrels on shafts or centers, on which they may be made to rotate by any suitable gearing.

87,749.—A. B. Zellner, Monticello, Ark.—*Stirrup-Strap Loop.*—March 9, 1869.

Claim.—The whalebone spring B, in combination with the horizontal arm a^2 of the stirrup-loop A, substantially as herein shown and described, and for the purpose set forth.

87,750.—John L. Agnew and Charles E. Wright, Negaunee, Mich.—*Chilled Plate for Ore-Crushers.*—March 16, 1869; antedated February 27, 1869.

Claim.—The plate for ore-crushers, constructed of wrought and chilled iron, in the manner described and for the purpose set forth.

87,751.—Cyrus G. Bachelder, Camden, Me. —*Chock for Vessels.*—March 16, 1869; antedated March 9, 1869.

Claim.—The lining and its receiving-recess, as formed with dovetails, and with convexities and concavities, arranged in manner as specified.

87,752.—Joseph J. Baxter, Grand Rapids, Mich.—*Bed-Bottom.*—March 16, 1869.

Claim.—The combination of the oblique spring-braces with the bars and the coiled springs, substantially as set forth.

87,753.—J. H. Bean, Marietta, Ohio. — *Heel-Cutter.*—March 16, 1869.

Claim.—1. The bent arm E, provided with the spring f', and having the projection f, in combination with the catch F and weighted lever e', arranged and operating substantially as and for the purpose described.

2. The die D, in combination with the beveled frame C^2, when arranged as described, and held by the stop, for the purpose set forth.

3. In a heel-cutter, of substantially the described construction, the tap-removing device E, f, F, and e', in combination with the cutting-device D D^1 D^2, d d^1 d^4, as described, for the purpose set forth.

87,754.—Erastus S. Bennett, New York, N. Y., assignor to himself and Justus Smith, same place. —*Implement.* — March 16, 1869; antedated February 27, 1869.

Claim.—The implement, consisting of the tack-hammer a, pincers B, holder c, wire-cutter D, screw-driver E, and tack drawer F, when constructed and arranged as described.

87,755.—J. W. Bishop, New Haven, Conn.—*Water-Hook Bolt for Harness.*—March 16, 1869.

Claim.—The bolt herein described, having its head covered and finished as set forth, as an article of manufacture.

87,756.—John M. Cain, Lafayette, Wis., assignor to George Cain, same place.—*Hat-Holder for Pews and Seats.*—March 16, 1869.

Claim.—The U-shaped wire bracket A, provided with a wire holder, B, and with a pivot-eye, a, in combination with and pivoted to the bottom, D, of a church or hall seat as herein specified.

87,757.—H. Nelson Chapman, Washington, D. C.—*Curtain-Fixture.*—March 16, 1869.

Claim.—The bracket A, having a circular stem a, clamp-plate, D, and pulley, E, when the same are so combined and arranged as to operate substantially as described, as and for the purpose specified.

87,758.—William Clough, Cincinnati, Ohio. —*Defecating Saccharine Fluids.*—March 16, 1869; antedated February 27, 1869.

Claim.—The improvement in the process of defecating saccharine fluids, herein described.

87,759.—William Clough, Cincinnati, Ohio. —*Refining and Decolorizing Saccharine and other Liquids.*—March 16, 1869; antedated February 27, 1869.

Claim.—Refining and decolorizing saccharine and other similar fluids by the agents herein specified.

87,760.—John A. Cook, Owego, N. Y.—*Barrel-Head.*—March 16, 1869.

Claim. — A barrel-head, constructed, arranged, and operating as herein described, consisting of the parts A and D, circular flanges E, locking-bar C, and cross-bar B, as shown.

87,761.—John R. Cribbs, Gardner, Ill.—*Nut-Lock.*—March 16, 1869.

Claim.—1. The combination of the screw-bolt A, having screw-threads a b, nuts C C′, with the washer c, keeper D, and screw e, all constructed to operate substantially as described.

2. The combination of the screw-bolt A, nuts C C′, with keeper D, ears d, depressions d' d', and with or without washer c, and screw e, substantially as described.

87,762.—Henry Gassett Davis, New York, N. Y. — *Treadle for Sewing-Machines.*—March 16, 1869.

Claim.—1. The combination and arrangement of the treadle and treadle-shaft with the table of the treadle-motion, so that the operator may operate the treadle with the legs extended, substantially as before set forth.

2. The combination of the treadle-shaft with the table, by means of slides, so that the position of the treadle may be varied, substantially as before set forth.

87,763.—Rudolph Eickemeyer, Yonkers, N. Y., assignor to John T. Waring, same place.—*Felting-Machine.*—March 16, 1869.

Claim.—The combination and arrangement of the felting-cylinder, endless hardening-cloth, and vibrating concave jiggering-apparatus, constructed and operating substantially in the manner hereinbefore described.

87,764.—Rudolph Eickemeyer, Yonkers, N. Y., assignor to John T. Waring, same place.— *Machine for Preparing and Felting Tufted Fabrics.*—March 16, 1869.

Claim.—1. The cylindrical tuft-holder, in combination with the concave jiggering-apparatus, substantially as described.

2. The combination of the cylindrical tuft-holder, the concave jiggering-apparatus, and the endless feeding-apron or hardening-cloth, substantially as described.

3. The combination of the cylindrical tuft-holder, concave jiggering-apparatus, and the rotating cam, and intermediate series of weighted levers, or their equivalents, whereby the concave jiggering-apparatus is, at proper intervals, moved toward and held against the tuft-holder, by a regulated yielding pressure, substantially as and for the purposes described.

4. The combination of the intermittently-moving cylindrical tuft-holder with a reciprocating gang of tufting-punches, substantially as and for the purposes described.

5. The combination of the intermittently-moving cylindrical tuft-holder with a gang of reciprocating tufting-punches and a presser-plate, substantially as and for the purposes described.

6. The combination of the cylindrical tuft-holder, the gang of tufting-punches, the presser-plate, the plaiter, and feed-table, substantially as and for the purposes described.

7. The combination of the cylindrical tuft-holder, the gang of tufting-punches, the presser-plate, the

plaiter, and feed-table, and the feed-apron, which delivers the bat for the tufts upon the feed-table, substantially as and for the purposes described.

8. The combination of the intermittently-moving cylindrical tuft-holder with the gang of reciprocating tufting-needles and a presser-plate, with or without an additional gang of perforating-instruments, substantially as and for the purposes described.

9. The combination of the cylindrical tuft-holder, presser-plate, and gang of tufting-needles, with the creel of spools, yarn-guides, and clamping-mechanism, substantially as and for the purposes described.

10. The combination of the gang of tufting-punches or tufting-needles with the tuft-holder, by means of a plate which has a lateral motion, alternately, in opposite directions, communicated to it by the machine, for the purpose of bringing the gang of tufting-punches or tufting-needles over the tuft-holes of each row, when arranged diagonally upon the tuft-holder, substantially as described.

11. In combination with the vibrating rubbing-plate of the jiggering-apparatus of a felting-machine, a steam-box, provided with suitable induction and eduction pipes, the vibrating rubbing-plate being perforated with fine holes, and the construction being such that steam is supplied to the fabric, while being felted, from the vibrating jiggering-apparatus, substantially as described.

87,765.—SAMUEL F. ESTELL, Richmond, Ind.—*Safety-Barrel for Watches.*—March 16, 1869.

Claim.—Connecting the main-wheel with the main-spring barrel, by means of the groove and pins, when the main-barrel is allowed to turn loosely on the main-wheel, in the manner and for the purpose as set forth.

87,766.—CHARLES EVOTTE, Paris, France.—*Gear-Cutter.*—March 16, 1869.

Claim.—1. The shaft S, and cutting-devices T and U, mounted in adjustable positions thereon, the shaft being carried in the frame-work, and receiving motion, substantially in the manner and for the purposes herein set forth.

2. The employment of the non-elastic rack, or belt *o*, moved at intervals to an adjustable extent, and adapted to move the wheel to be cut to mathematically-determined extents, as and for the purposes herein set forth.

87,767.—R. H. FISHER, Beaver Falls, Pa., assignor to BEAVER FALLS CUTLERY COMPANY, same place.—*Handle for Table-Cutlery.*—March 16, 1869.

Claim.—Making the metallic handles of articles of table-cutlery with the opposite faces or sides concave, or hollowed out, substantially as described.

87,768.—ROBERT FITTS, jr., Fitchburgh, Mass., assignor to the W. HEYWOOD CHAIR COMPANY, same place.—*Construction of Chairs.*—March 16, 1869.

Claim.—The combination of the metallic screw-sockets E, and bow D, with the bottom and legs, or the bottom and back of a chair, substantially as herein shown and described, and for the purpose set forth.

87,769.—FRANKLIN B. GARDNER and JOHN TRAGESER, New York, N. Y.—*Velocipede.*—March 16, 1869.

Claim.—1. The hand-levers *h h'* on the shaft *g*, fitted with pawls, to take the ratchet-wheels 1 and 3, in combination with the ratchet-wheel 2, pawl *l*, and wheel *k*, gearing to the pinion *m*, the parts being arranged and applied in the manner and for the purposes set forth.

2. In combination with the foregoing, the brake-lever *o*, having the shaft *g* for its fulcrum, and arranged to operate upon the wheel *s*, as set forth.

87,770.—C. B. GRONBERG, Aurora, Ill.—*Harvester.*—March 16, 1869.

Claim.—1. The sliding device N, when arranged in a harvester, so as to carry the grain for each bundle to the binders' tables.

2. The combination of the sliding device with the cords O and spool Q, when arranged and operating substantially as and for the purposes specified.

3. The combination of the creased roller D, ribs E, and endless aprons B and H, when constructed and operating substantially as and for the purposes specified.

4. The wire guides I, attached to the grain-receiver, or hopper, and arranged substantially as described.

87,771.—SAMUEL Z. HALL, Sing Sing, N. Y.—*Cotton-Gin.*—March 16, 1869; antedated March 3, 1869.

Claim.—1. Hollowing out or grooving the tops or fronts of the ribs of a cotton-gin, substantially as described for the purposes set forth.

2. Making or arranging the sides of the box so near the end saws that there will not be room for the seed to enter between the sides of the box and the end saws, substantially as described.

87,772.—JAMES G. HAMILTON, Chicago, Ill.—*Steam-Generator.*—March 16, 1869.

Claim.—1. The chamber G, substantially as set forth.

2. The deflectors *a b*, constructed substantially as specified.

87,773.—FREDERICK HENDERSON, Marietta, Ohio.—*Shank-Laster.*—March 16, 1869.

Claim.—The jaws A B and spring C, in combination with the projection F, consisting of the concave faces *f* and projections H and I, arranged and operated substantially as and for the purpose set forth.

87,774.—HENRY WHEATON HEWET, New York, N. Y.—*Wrench.*—March 16, 1869; antedated February 27, 1869.

Claim.—The revolving socket F H, having at its forward end a section of male-screw thread, gearing in a female screw in the socket-extension E of the movable head, substantially as shown and described, for the purpose set forth.

87,775.—L. L. HIMES, New Haven, Conn.—*Well-Tube.*—March 16, 1869.

Claim.—An inverted perforated conical filter, contracted near its larger end, so as to receive the packing E, and provided with the bail D, so as to operate substantially in the manner herein set forth.

87,776.—MARK W. HOUSE, Cleveland, Ohio, assignor to himself and J. F. FORSYTH, same place.—*Mucilage-Brush.*—March 16, 1869.

Claim.—The brush D, in combination with the spring-wire stem C, or its equivalent, for the purpose shown.

87,777.—MARK C. HUBBARD, Philadelphia, Pa., assignor to ISAAC P. WENDELL, same place, and said WENDELL assigns one-half his right to THOMAS SAYLES, Chicago, Ill.—*Car Axle-Box Lubricator.*—March 16, 1869.

Claim.—The curved plate D, having a tight chamber, F, for holding the oil for lubricating the journal, in combination with a pad of fibrous material, which has connection with the oil-reservoir by means of a wick or wicks, all constructed and arranged to operate substantially in the manner and for the purpose set forth.

87,778.—H. T. HUNT, Titusville, Pa.—*Pump-Rod Coupling.*—March 16, 1869.

Claim.—The expander *c*, of the peculiar tapering sectional form shown, in combination with the ferrule *b*, and rod *a*, substantially as and for the purposes set forth.

87,779.—WILLIAM C. JOY and JOHN CAMPBELL, Penn Yan, N. Y.—*Preparing and Bleaching Paper-Pulp.*—March 16, 1869.

Claim.—1. The construction and application of the generator D, when used as and for the purpose set forth.

2. Producing the ozone modification of oxygen, by applying a powerful current of air, in combination with chlorine, to an aqueous solution containing the material to be bleached, while the mass is being agitated.

3. The arrangement of the fan B and engine G

when applied and used as and for the purpose specified.

4. The use of a current of air, for the purpose of removing chlorine from fibrous materials after the process of bleaching, in the manner substantially as set forth.

5. Preventing the formation of hydrochloric acid in the mass or solution, by accomplishing the bleaching, and removing the chlorine, also preventing the destruction of the fine particles of fiber, or the hardening of any portion thereof, by the means and in the manner specified.

6. Disintegrating fibrous materials by the use of a powerful current of air forced into or among the same, while the material is being operated upon by any bleaching-agent in an open vessel, as herein described.

7. The use of a current of air to assist in giving rapid circulation to the material while being bleached.

8. The free discharge of the air, gas, and vapor from the bleaching-engine, substantially as and for the purpose set forth.

87,780.—Joseph Kaylor, Pittsburg, Pa.—*Bolt-Heading Die.*—March 16, 1869.

Claim.—The construction of dies *d d'* for bolt-heading machines, having recesses *c e*, made and used substantially as above set forth.

87,781.—Charles Kimball, Chelsea, Mass.—*Ticket-Holder.*—March 16, 1869.

Claim.—The new article of manufacture, or ticket-holder, made substantially as described and represented.

87,782.—Joseph La Croix, Chicopee, Mass., assignor to himself and Edmond Richards, same place.—*Horse-Rake.*—March 16, 1869.

Claim.—The vibrating head *e*, provided with arms *f* f^5 f^3, in combination with rod *k*, teeth *g g'*, and lever *p*, the whole arranged and operating substantially as described.

87,783.—Peter Lear, Boston, Mass.—*Deviee for Steam and other Enginery.*—March 16, 1869.

Claim.—1. As a pump for forcing and elevating fluids, the combination and arrangement of the cylinders G G, and pistons J J, with the steam-chest, and valve, and ports, the said cylinders G G being provided with the valves I I and conduits L L, as hereinbefore explained.

2. In combination with the pistons J J and cylinders G G, provided as explained, and the steam-chest and valve before mentioned, the tank B, containing water, the whole being arranged as herein shown and described.

3. The combination of the cylinders G G and the steam chest and valve, with the water-wheel, or motor, M, substantially upon the principle and in the manner as set forth and explained.

87,784.—Thomas Lyons, Hartford, assignor to Russell and Erwin Manufacturing Company, New Britain, Conn.—*Reversible Door-Latch.*—March 16, 1869.

Claim.—The combination of the hub, or follower, C, the divided horseshoe plate B and B' provided with the pins *c* and *e*, or their mechanical equivalents, and the reversible latch D, substantially as described, for the purposes specified.

87,785.—Emmons Manley, Marion, N. Y.—*Door-Holder.*—March 16, 1869.

Claim.—The transverse lever D, provided with arms F F, in combination with the plate B, spiral spring H, bolt I, cross-piece J, and stop K, all being constructed substantially as herein represented, for the purpose set forth.

87,786.—Samuel Mason, Beaver Falls, Pa., assignor to Beaver Falls Cutlery Company, same place.—*Table-Cutlery.*—March 16, 1869.

Claim.—Making articles of table-cutlery, in which a flat part, *a*, of the tang shall enter a slit, or mortise, in the end of the handle, to a depth such that the two may be fastened securely together by a rivet, *e*, and in which a smaller or "round" part, *e*, of the tang shall enter, but not pass entirely through the body of the handle, substantially as and for the purposes set forth.

87,787.—Samuel Mason and Edward Binns, Beaver Falls, Pa., assignor to Beaver Falls Cutlery Company, same place.—*Table-Cutlery.*—March 16, 1869.

Claim.—In attaching articles of cutlery to their handles, the combination of a flat and round tang, *a a'*, recessed, bored, and shouldered handle *d*, with lips *o*, and the bolster *e*, the several parts being made, arranged, and combined, substantially as above set forth.

87,788.—Amos W. Merritt, Scituate, Mass.—*Last.*—March 16, 1869.

Claim.—The spring-catch C, and the last-hook E, constructed and operated as herein described, for securing the block B to its last A.

87,789.—Thomas R. Morgan, Pittsburg, Pa.—*Steam-Engine Piston-Packing.*—March 16, 1869.

Claim.—The annular ring B, surrounding an ordinary piston-head, or spider, outside the follower-bolts and their bearings, and provided with inclined projections B^1, acting directly upon the springs, which press out the packing, the whole constructed and arranged substantially as set forth.

87,790.—James Old, Pittsburg, Pa.—*Grate.*—March 16, 1869.

Claim.—1. A tilting damper-plate *e*, with agitator *c'* on its upper face, which extend up and operate between the bars *b*, in combination with a lever, *m*, and head *s*, so connected by a wrist and slot with such damper-plate, as to lock it open or shut, or vibrate it at pleasure, substantially as and for the purposes above set forth.

2. A lifting-bar, *e*, pivoted between the rear part of a fire-grate and the back wall of the fire-space, for regulating the combustion in the rear part of the fire, constructed and operated substantially as and for the purposes hereinbefore set forth.

87,791.—John W. Post, Castile, N. Y.—*Skate.*—March 16, 1869; antedated February 27, 1869.

Claim.—The clamps C C' D', constructed as described, and secured in position, and adapted for permanent adjustment, by means of the screws *e* e^2, in combination with the heel-clamp D, pivoted spring-lever E, and rack F, all arranged and operating as set forth.

87,792.—E. Freeman Prentiss and Thomas D. Prentiss, Philadelphia, Pa.—*Apparatus for Rectifying and Distilling Spirits and other Volatile Liquids.*—March 16, 1869.

Claim.—1. The combination of vessels *b*, *c*, *d*, and *e*, constructed and arranged in the manner and for the purpose substantially as set forth.

2. The arrangement of worm *g*, in vessel *b*, for heating the liquids in said vessel, substantially as set forth.

3. In combination with one or more vapor-generators, the primary condenser *e* and the secondary condenser *d*, to effect the gradual reduction of temperature of the vapors, and the removal of the fusel-oil, substantially as set forth.

87,793.—Charles M. Rowley, Chicago, Ill.—*Preparation for Polishing Metallic Surfaces.*—March 16, 1869.

Claim.—The combination of the acids above described with the polishing-powder above described, with or without the borax and fullers' earth, also above described, the same being used for the purposes specified.

87,794.—Cyrus W. Saladee, Circleville, Ohio.—*Door-Bell.*—March 16, 1869.

Claim.—1. Securing the bell A to the shaft or handle B, as described, on the inside of the door, as a revolving door-bell, and the same, in combination with wheel C, constructed as described, and for the purposes set forth.

2. The plate *p*, with wires *f* and hammers *g* affixed and attached to the inside of the door, and in combi-

nation with revolving wheel C and bell A, constructed as described, and operating as set forth.

87,795.—J. C. SCHAFFER, Rochester, N. Y.—*Glass-Mold.*—March 16, 1869.

Claim.—A glass-mold, having the bottom attached thereto by means of a dovetail groove and tongue, substantially as herein shown and described, and for the purpose set forth.

87,796.—HENRY L. SHAILER, Deep River, (Saybrook,) Conn.—*Auger-Bit.*—March 16, 1869.

Claim.—The vertical lips A A, when formed back from where they have heretofore been placed in their relation to the spurs B B and cutting edges C C, as and for the purposes herein set forth.

87,797.—DANIEL SHERWOOD and GEORGE D. DUDLEY, Lowell, Mass.—*Fruit-Basket.*—March 16, 1869.

Claim.—A basket, constructed of twisted wire, consisting of the parts A, B, C, D, and *e*, substantially as described and specified.

87,798.—WILLIAM J. SLOAN, Smith's Ferry, Pa.—*Poultry-Coop.*—March 16, 1869,

Claim.—A coop, cage, or box, with removable top or cover, and one or more upper floors, *b*, and so made as to be packed in small compass by placing the removable floors on the bottom of the coop, and folding the hinged sides successively thereon, and bolting the cover thereto, substantially as above set forth.

87,799.—PHINEAS SMITH, New York, N. Y.—*Skate.*—March 16, 1869; antedated February 27, 1869.

Claim.—The within described tapering form of the button E, when combined and arranged to operate relatively to a skate and to the receiving part on the boot or shoe, substantially as and for the purposes herein set forth.

87,800.—JOHN STEPHENSON, New York, N. Y.—*Signal-Light for Street-Cars.*—March 16, 1869.

Claim.—The combination of the colorless Fresnel lens B, tinted glass plate C, and box or case A, when the lens and plate are secured in the box or case, and the latter construeted so as to admit of its ready insertion in a lamp-box of a street-car, substantially as herein shown and described.

87,801.—JONATHAN E. STONE, Erving, Mass.—*Fly-Trap.*—March 16, 1869.

Claim.—The fly-trap, made substantially as described, viz, of the box open at top and front, and provided with a slider or cover, a flexile lip, a set of wheels, and a pole-socket, the whole being arranged as specified.

87,802.—PAUL OSCAR ROBERT STROINSKI, Boston, Mass.—*Medical Compound.*—March 16, 1869.

Claim.—The within-described composition, formed of the above-named ingredients, in about the proportions and for the purposes herein set forth.

87,803.—CYRUS W. STROUT, Hallowell, Me.—*Machine for Varnishing Floor Oil-Cloths.*—March 16, 1869.

Claim.—The mode of applying varnish to oil-cloths or other fabrics, by means of reciproeating brushes, substantially as described and set forth.

87,804.—J. F. TAPLEY, Springfield, Mass.—*Photographic Album.*—Mareh 16, 1869.

Claim.—The combination of the two sides F and G of the leaf A with the flap C, to form a photograph-album leaf, substantially in the manner and for the purpose as herein described.

87,805.—ROBERT C. TOTTEN, Pittsburg, Pa.—*Casting Rolls.*—March 16, 1869.

Claim.—Making the coupling-neck of cast rolls by means of a single eore, *g*, inserted into a suitable cavity in the mold, substantially as hereinbefore described.

87,806.—JAMES H. WAITE, Orange, Mass., assignor to himself, RODNEY HUNT, and DAVID B. FLINT, same place.—*Fulling-Mill.*—March 16, 1869.

Claim.—1. The combination and arrangement of crimping-gears or rollers F G, instead of plain rollers, with the main rollers A B, packing-conduit N, and the case E and its passages, of the fulling-machine.

2. The combination and arrangement of the set of crimping-rollers or gears *g g* with the jaws *f f* and the packing-conduit N of the fulling-machine.

3. The arrangement of the single packing-conduit N, the jaws *f f* thereof, the crimping-rollers *g g*, the passages K K, the two sets of crimping-rollers F G, and the main squeeze-rollers A B, the whole being arranged in a case, E, and so as to operate as specified.

87,807.—CHAUNCEY E. WARNER, Syracuse, N. Y.—*Horse Hay-Fork.*—March 16, 1869; antedated March 12, 1869.

Claim.—The circular tines A A′, handles C C, and rack B, all constructed and operating as herein shown, and for the purpose set forth.

87,808.—JOHN J. WATSON and WILLIAM S. PUGH, Coatesville, Pa.—*Stove-Pipe Shelf.*—March 16, 1869.

Claim.—1. The stove-pipe collar, made in four segments, C, combined with an upper and lower flange, *c e*, provided with thickened side-pieces for the reception of a headed screw-bolt and nut, D, for adjustment to any desired size or shape of pipe, in the manner and for the purpose specified and shown.

2. In combination with the collar C *c e*, the arrangement of the shelf A with its open loops or socket *b b*, in combination with the extra segment D, and catch-points *b*, and sockets F, all arranged and operating in the manner and for the purpose set forth.

87,809.—WILLIAM WESTLAKE, Chicago, Ill.—*Coffee and Tea-Pot Handle.*—March 16, 1869.

Claim.—As a new article of manufacture, the tea-pot handle herein described, and made from wire and sheet-metal, substantially as specified.

87,810.—GEORGE WHEELOCK, Washington, D. C.—*Thread-Guard for Spools in Sewing-Machines.*—March 16, 1869.

Claim.—1. The conical cups *d b*, in combination with thimbles *d b′*, substantially as and for the purpose set forth.

2. Thimbles *d* and *b*, in combination with cups *a* and *b*, springs *g g′*, and thimble *e*, as described and set forth.

87,811.—W. H. WHITEROW and WILLIAM DETRICK, New Albany, Ind.—*Corn-Sheller.*—March 16, 1869; antedated March 2, 1869.

Claim.—The combination of the frame A, wheel C, cog-wheel K, shellers F F, as constructed, with fender E and rollers G G, with rings *a a* lying horizontally between the vertieal boxes I I, with blocks H H, springs *b b*, and pins *i i*, all constructed and operating as herein described,

87,812.—DANIEL WINGENROTH, Ephratah, Pa.—*Manure-Drag.*—Mareh 16, 1869.

Claim.—A manure-drag so combined and arranged that the two lugs *a*, on the hook A, and ferrule C, which forms the fulcrum of the lever L, are all held and operated on a single stout screw-bolt, *s*, in side bearings *b*, on the end of a beam, B, in the manner and for the purpose specified.

87,813.—THOMAS WOSSER, San Francisco, Cal.—*Steam-Engine Valve-Gear.*—March 16, 1869.

Claim.—The combination and arrangement of the arms *a*, the stand *b*, with the journal-pin *f*, the connecting-rod *c*, the screws *d*, with their rubber cushion *g*, and thumb-screw *e*, substantially as set forth.

87,814.—GEORGE T. ABBEY, Chicago, Ill.—*Breech-Loading Fire-Arm.*—Mareh 16, 1869.

Claim.—1. The vertical bolt I, located in the breech-piece A, and arranged to engage with the

projection L of the barrels, for the purpose of locking the parts together, substantially as described.

2. The combination of the locking-bolts I and D, with the thumb-piece E, for operating the same, all constructed and arranged to operate substantially as set forth.

87,815.—Levi Adams, Amherst, Mass.—*Attaching Carriage-Hubs to Axles.*—March 16, 1869.

Claim.—1. The axle-box D, provided with a flange, *d*, and secured on the axle B, in connection with the collar *e*, and packing-ring *h*, by means of the hollow nut E, substantially as and for the purpose described.

2. The combination, with the hub, of the box D, arranged as described, for securing the wheel to the axle, substantially as and for the purpose specified.

3. The combination, in the running-gear of vehicles, of a box, D, closed at one end, and extending beyond the hub, and provided with a collar, or flange, *d*, with the hollow nut E, axle B, and collar G, substantially as and for the purpose herein shown and described.

4. The combination, in the wheels of vehicles, of the threaded box D, and nuts or washers *a* and *b*, let into the hub C, substantially as and for the purpose herein shown and described.

5. The combination of the elastic packing-ring *h* and metal ring *e*, with the hollow nut E, box D, and axle B, substantially as and for the purpose herein shown and described.

87,816.—Albert S. Alden, Chicopee, Mass.—*Bit-Stock.*—March 16, 1869.

Claim.—The bit-brace chuck herein described, consisting of the sleeve A, center-piece C, and nut I, when all the parts are constructed and arranged to operate as set forth.

87,817.—Ezra Ames, Austin, Minn.—*Harvester-Rake.*—March 16, 1869.

Claim.—1. The combination, in a self-rake attachment for harvesters, of the pivoted guide-rail *a*, with the rake-head and rod *b*, substantially as and for the purpose herein set forth.

2. Arm *h i*, rods *g* and *j*, cam-yoke *k k*, cam *l*, and coupling-clutch *m n*, substantially as and for the purpose herein shown and described, when forming part of a self-rake attachment for harvesters, all as set forth.

87,818.—John Armstrong, New Orleans, La.—*Railway-Car Axle.*—March 16, 1869.

Claim.—The arrangement of a sleeve, or coupling-block, C, at the point of division of a sectional car-axle, to hold the two sections together by means of the keys H and the grooves B, when these parts are severally combined, constructed, and operate as herein described, and the said keys H are held in place by covering-caps E, and are kept in close contact with the bottom of said grooves B, as they wear away by use, by means of backing, as herein set forth.

87,819.—A. Hamilton Ballagh, Westport, Mo.—*Harrow.*—March 16, 1869.

Claim.—1. The combination, in a harrow, of the frame A A B, beam D, oscillating toothed beams C, crank-irons *f*, and lever G, substantially as and for the purpose herein shown and described.

2. The combination, with the above-claimed parts, of the catch-bolt *e*, operating substantially as and for the purpose shown and described.

3. The combination, with the parts A, A, B, C, D, *f* and G, of the catch-bolt *e*, rod *b*, and lever H, substantially as and for the purpose herein shown and described.

87,820.—D. A. Bingaman, Jersey Shore, Pa., administrator of the estate of Joseph Bingaman, deceased. —*Compound for Destroying Worms on Plants.*—March 16, 1869.

Claim.—The compound of matter for destroying insects on trees and shrubs, and promoting the healthy growth of the latter, substantially as herein described.

87,821.—M. S. Bringier, Ascension Parish, La.—*Food for Domestic Animals.*—March 16, 1869.

Claim.—Converting bagasse into food for domestic animals, when the same is done in the manner and by the means substantially as herein described.

87,822.—John F. Cameron, Brooklyn, N. Y.—*Skate-Sharpener.*—March 16, 1869.

Claim.—The skate-sharpener, consisting of the plate A *a*, and the swinging side-plate C, when the former is adapted to receive the reversible tool B, and gimlet D, all arranged as described for the purpose specified.

87,823.—Jabez Coney, South Boston, Mass.—*Carriage-Wheel.*—March 16, 1869.

Claim.—Forming the rim of a carriage, or other wheel, of a strip or strips of wood, wound in successive folds, or layers, around a block, or arbor, of the required size, substantially as herein described, said folds being united by glue, cement, or like means, as they are laid upon each other, as set forth.

87,824.—William F. Coulter, Gideon Coulter, and John A. Lanery, Hardinsburg, Ind.—*Wheel-Cultivator.*—March 16, 1869.

Claim.—The spring-bar *a*, attached to the rear end of the draught-bar, in combination with the notch *b* in the upper slide of the axle, as and for the purpose described.

87,825.—W. H. Cox, Virden, Ill.—*Corn-Planter.*—March 16, 1869.

Claim.—1. The cutters and seed-spouts L, constructed as described, to conduct the seed obliquely backward under the thread of the covering-wheels, the cutting-edges being also extended backward, substantially as described for the purpose specified.

2. The combination and arrangement of the tongue H and arm K with the supports I, standard J, and frame A, substantially as herein shown and described for the purpose specified.

87,826.—C. O. Crosby, New Haven, Conn.—*Machine for Polishing Needles.*—March 16, 1869.

Claim.—1. The combination of the inclined feeding-device, guides, transversely-moving pressure-plates, polishing-cylinders, and discharging-conductor, all arranged and operating together, as set forth.

2. The arrangement of the transversely-moving pressure-plate, polishing-cylinders, and carrying-device, as and for the purpose specified.

3. The construction and arrangement, with reference to each other and to the polishing-cylinders, of the conductor S S^1, and guides *s s t*, with a carrying-device, in the manner shown and described.

4. The arms *s*, constructed and arranged as described, in combination with the revolving cylinders and band, or carrying-device, so as to guide the needles, substantially as described.

5. The improved machine herein described, the constituent parts of whose mechanism are constructed and arranged as described.

6. In combination with the carrying-device, pressure-plates, and polishing-cylinders, the discharge-conductor T, substantially as and for the purpose specified.

87,827.—Mitchell R. Dand, Philadelphia, Pa.—*Volute Spring.*—March 16, 1869.

Claim.—The corrugated volute spring, constructed substantially as and for the purpose described.

87,828.—Levis H. Davis, Newark, Del.—*Pump.*—March 16, 1869.

Claim.—1. In a double-acting, or lift-and-force pump, a piston consisting of the hollow case E F, with its respective fittings, or packings, *e''* and *f'' f'''*, around its smaller and larger outside diameters; the valve I, with its seat *i'*; and the screw-bolt 5, with the supporting cross-bar 6; the said parts being constructed, arranged, and combined together substantially as set forth and described.

2. In combination with the piston, as claimed in the preceding clause, the body of the pump, the same consisting of the two hollow cylinders A B, of different diameters, corresponding with the two respective outside diameters of the said piston, as described, and the side passage-way H, opening

into the upper end of the larger cylinder B, substantially as set forth and described.

3. In combination with the piston and the body of a pump, as claimed in the preceding clause, the hollow base, C D, communicating with the side passageway H, as described, the valve K, the plate L, and the foot-valve J, or its equivalent, the said parts, or devices, being constructed and arranged to operate together, as set forth and described, for the purposes specified.

87,829.—JACOB DOURSON, Columbus, Ohio.—*Fall-Leaf Extension-Table.*—March 16, 1869.

Claim.—1. The cast-metal slide *i*, in combination with the parts *k l*, substantially as and for the purpose described.

2. The grooved supporters *e*, pivoted to the movable strips *g*, in combination with the hinged leaves B and fixed top A, and the pins *h* in the latter, all operating substantially as herein set forth.

3. The fall-leaf extension-table, constructed substantially as herein specified.

87,830.—THOMAS ELLIS and WILLIAM A. ELLIS, Philadelphia, Pa.—*Brick-Mold.*—March 16, 1869.

Claim.—The plunger, formed of or faced with porous wood, presenting its end grain to the material to be compressed, and either with or without a partial or entire perforated or imperforated back, or casing of metal, in combination with a mold, or box, wholly or partially formed of or faced with porous wood, presenting its end grain to the material to be compressed, whether such wood is or is not backed with a casing of metal, and whether such casing is or is not perforated or imperforated, substantially as set forth.

87,831.—WILLIAM FARMER, New York, N. Y.—*Hand Dumping-Cart.*—March 16, 1869.

Claim.—1. The combination of the hinged bows F F and wheel C, with the wheels A and body D, substantially as described, for the purpose specified.

2. A three-wheeled cart, having its body hinged in front of the axle, in such a manner as to adapt it for dumping its contents in front of the central wheel substantially as herein shown and described.

87,832.—WILLIAM FERGUSON and JAMES ANDERSON, New York, N. Y.—*Molding Sash-Weights.*—March 16, 1869.

Claim.—The improved method, herein described, of molding sash-weights, by means of the metal mold A, and plain patterns B, arranged and operating in he manner set forth, for the purpose specified.

87,833.—JOHN B. FINK, Freeport, Ill.—*Spindle-Wrench.*—March 16, 1869.

Claim.—The lever E, when pivoted in the ears J of the plate H, and operating in the notch D of the nut C, substantially as described, and arranged with the spring L, recess S in the hub A, and the spindle B, as described, and for the purpose set forth.

87,834.—E. F. FRENCH, New York, N. Y.—*Lock for Pianos, &c.*—March 16, 1869.

Claim.—The combination of the curved and pivoted hook-bolt or arm F, with the sliding bolt B, and the slots of unequal length in the flange of the plate A, as herein described, for the purpose specified.

87,835.—CHARLES J. B. GAUME, New York, N. Y.—*Electro-Magnetic Engine.*—March 16, 1869.

Claim.—The construction and arrangement of the stationary magnets, fixed upon the hub G, the revolving armatures secured to the balance-wheel D, parallel to the axis thereof, and the distributing-wheel H, loosely attached to the frame B, and made adjustable, for the purpose of regulating the speed and changing the direction of the revolving armatures, by means of wires connecting its insulated keys nd rings with the several sets of magnets, in the manner herein shown and described.

87,836.—JAMES R. GILLETT, Westfield, Mass.—*Whip-Mounting.*—March 16, 1869.

Claim.—The combination of the cap A, and sleeve B, when arranged together, substantially in the manner herein shown, upon the butt of a whip, for the purpose of forming the head-mounting thereof.

87,837.—OTHNIEL GILMORE, Raynham, Mass.—*Liquid-Meter.*—March 16, 1869.

Claim.—A water-meter, in which flexible pipes and pinching-rolls operating thereon, and operated by the current passing through the pipes, are employed as described, when the pipes are so arranged as to have upon them the pressure of the water, both inside and outside.

87,838.—JACOB K. GOOD, Pequa Township, Pa.—*Brick-Kiln.*—March 16, 1869.

Claim.—The arrangement herein described, viz., of setting the charges of brick, one on top of the other, within the cupola H, having side-furnaces F, on an elevated base, A and B, in combination with the removable base, and hoisting-apparatus for elevating the platform G, with car C, substantially as set forth.

87,839.—DAVID G. GOODALL, Beloit, Wis.—*Device for Operating Gates.*—March 16, 1869.

Claim.—1. Broadly, the oscillating levers A *a*, weight E, connecting brace-rod A, and cheek-wire F, when constructed and arranged as shown at Fig. 1, substantially as set forth and described, when employed for the purpose of operating at gate or gates.

2. In combination with the foregoing, the arrangement and employment of the draught-wire L, double crank-lever C, crank-levers D D, supports I I, pulls H H, pull-wires G G, pull-posts S S, post R, and sill P.

3. Broadly, the suspension of a weight on an oscillating or vibrating lever or levers, to effectually close hand-gates, by either pushing or pulling them to, after being opened.

87,840.—W. J. GORDON, Philadelphia, Pa.—*Air-Tight Can.*—March 16, 1869.

Claim.—In combination with a can, when the top is formed with an inclined surface *c*, the cover D, constructed and applied substantially as described and for the purposes set forth.

87,841.—SOLOMON S. GRAY, Boston, Mass., assignor to AMERICAN MOLDED-COLLAR COMPANY.—*Machine for Molding Paper-Collars.*—March 16, 1869.

Claim.—1. In a machine for molding collars, the sectional blocks C, when constructed and arranged to operate substantially as and for the purpose set forth.

2. In combination with the expanding-blocks C, the elastic band D, as and for the purpose specified.

3. The clamp H, attached to one of the sectional blocks C, for the purpose described.

4. The combination of an expanding-block E, or its equivalent, with the sectional blocks C, substantially as and for the purpose set forth.

87,842.—WILLIAM H. GRISCOM, Salem, N. J.—*Gate.*—March 16, 1869.

Claim.—1. The panel or gate F, when supported by and moved upon the simple slides, or rests H and E, substantially as set forth.

2. A gate which, upon sliding to one side, always rests upon slides, and when moved to the other side may be balanced and swung round, as shown in dotted lines in Fig. 2.

87,843.—SELIM E. GROUT, West Concord, Vt.—*Towel-Drier.*—March 16, 1869.

Claim.—The combination and arrangement of the two series of levers C C C, their supporting rails B B, the two series of hooks D D D, and the sectional clamp A, made in two parts, *a a*, so as to to be clamped or applied to a stove-funnel, as described.

87,844.—O. B. HALE, Malone, N. Y.—*Device for Pulling Hop-Poles.*—March 16, 1889.

Claim.—A device for pulling hop-poles, constructed and operated in the manner substantially as herein shown and described.

87,845.—George Heffner, Homer, Iowa.—*Harrow.*—March 16, 1869.

Claim.—1. An improved harrow, formed by the combination of the triangular frames A B, draught and connecting hooks D, and teeth C, with each other, said frames and hooks being constructed and arranged substantially as herein shown and described, and for the purposes set forth.

2. The draught and connecting hooks D, constructed as described, when used in connection with the triangular frames of the harrow, substantially as herein shown and described, and for the purpose set forth.

87,846.—Edward Himrod, Dunmore, Pa.—*Car-Heater and Ventilator.*—March 16, 1869.

Claim.—The arrangement, with relation to the metallic fire-proof chamber A, of the casing B, funnel-shaped apertures C, separated by the partition D, the pipe E, and lateral pipes F, as herein described, for the purpose specified.

87,847.—J. Hoke, Cordova, Ill.—*Wagon-Brake.*—March 16, 1869.

Claim.—The combination of the grooved plate A, eccentric dog D, and brake-lever C, when applied to a wagon-brake, substantially as specified.

87,848.—John Taylor Holden, Elmwood, R. I.—*Harness-Connection for Looms.*—March 16, 1869.

Claim.—The combination, with the harness-frame C and treadles H, of the rods B, jack A, metallic plates E E, screw-rod D, sleeve F, swivel-rod G, nuts *a a*, *d*, *c*, and the strap *e*, all constructed and arranged as described for the purpose specified.

87,849.—J. Burt Holmes, Philadelphia, Pa.—*Mosquito-Net.*—March 16, 1869.

Claim.—Constructing the frame of a mosquito-net in two parts, and connecting them in the center by means of a bolt and button, substantially as and for the purpose herein described.

87,850.—Eben Norton Horsford, Cambridge, Mass.—*Preparing Farinaceous Food.*—March 16, 1869.

Claim.—The use of salts of potassa, when employed with phosphoric acid, or acid phosphates, in the preparation of farinaceous food, substantially as above set forth.

87,851.—Ira Houghtling, Houghton, Mich.—*Milk-Cooling Apparatus.*—March 16, 1869.

Claim.—The combination of the distributing-vessel A, tube D, and blowing-apparatus, when constructed and arranged as specified.

87,852.—F. Jonas, Freeport, Ill.—*Hub-Boring Machine.*—March 16, 1869.

Claim.—1. The mandrel A and sleeve B, with the adjustable cutter C, constructed, arranged, and operating substantially as specified.

2. In combination with the mandrel A, sleeve B, and cutter C, the frame K, and the adjustable plates J and L, arranged as described, for the purpose specified.

87,853.—J. George Kappes, New York, N. Y.—*Mosaic Floor.*—March 16, 1869.

Claim.—The combination of the parallel bars *b b*, cross-bars *c c*, and the upper layer *a*, connected together in the manner described, the whole forming squares for mosaic floors, as herein set forth and shown.

87,854.—Martin R. Kenyon, Providence, R. I.—*Button.*—March 16, 1869.

Claim.—The combination of the button-head A, shank B, elbows C and D, and arms H and H′, the whole constructed and arranged substantially as described, for the purposes specified.

87,855.—Stephen S. Kimball, Laconia, N. H., assignor to himself and J. F. Prescott, same place.—*Planter and Seeding-Machine.*—March 16, 1869.

Claim.—1. The adjustable wheels A′ A′ and adjustable hoppers C C′, when combined and operating substantially as described.

2. The adjustable wheels A′ A′, adjustable hoppers C′ C′, and adjustable slides F, combined and operating substantially as described.

3. The slides F, attached to and made capable of adjustment upon the rod G, in the manner and for the purpose set forth.

4. The disks E′, having a circular series of holes, for the wedge-blocks L, in order to increase or decrease their number on said disk, for the purpose set forth.

5. The combination and arrangement of the disk L′, blocks L, clutch *m*, levers K and *m′*, arm J, and spring O, rod G, and seed-slides F, as described and represented.

6. The slotted rock-shaft P, having the shanks of the shovels, or furrow-openers, adjustably attached thereto, as and for the purpose set forth.

7. The springs *n n′*, in combination with the shovels or furrow-openers N, and rock-shaft P, as and for the object set forth.

87,856.—H. J. Kintz, Greece, N. Y.—*Husking-Thimble.*—March 16, 1869.

Claim.—The elastic strap, in combination with the husking-thimble, formed from a single piece of sheet-metal, provided with overlapping spring-edges, *a a*, and having combined therewith the sharp cutting-edge *b*, substantially as and for the purpose described.

87,857.—Thomas Langston, Brooklyn, N. Y.—*Lantern.*—March 16, 1869.

Claim.—Providing the base A, with a right-angular flange *a c*, for supporting the glass B, the flange *c* being provided with a screw-thread, adapted to fit into the screw-threaded flange *e*, attached to the wires *b*, all arranged as described, whereby the glass is supported upon the horizontal flange *a*, and held against lateral play by the horizontal flange of the part *e*, as herein set forth.

87,858.—Horatio S. Lewis, Chicago, Ill., assignor to himself and O. H. Tobey, New York City.—*Process of Extracting Saccharine Juices from Canes.*—March 16, 1869.

Claim.—1. The process of extracting saccharine juices from canes by steam, substantially as herein shown and described,

2. Extracting saccharine juices from canes by steam, whether under or without pressure, substantially as herein shown and described, and for the purposes set forth.

87,859.—Charles Lucas, Brooklyn, N. Y.—*Sail-Cringle.*—March 16, 1869.

Claim.—A sail-cringle, formed of two parts, or pieces, D, and F, of iron, or other suitable metal, and attached to the bolt-rope and sail, substantially as and for the purposes specified.

87,860.—William R. Manley, New York, N. Y., assignor to himself and William H. Webb, same place.—*Feathering Paddle-Wheel.*—March 16, 1869.

Claim.—The pillow-block stock, constructed with arms, substantially as before described.

87,861.—William R. Manley, New York, N. Y., assignor to himself and William H. Webb, same place.—*Feathering Paddle-Wheel.*—March 16, 1869.

Claim.—The relative arrangement and combination of the movable paddles of the feathering paddle-wheel, the rigid controlling-frame, the eccentric, constructed with an opening, in which the paddle-wheel shaft revolves, and the flexible connection between said eccentric and the side of the ship, the whole being constructed to operate substantially as hereinbefore set forth.

87,862.—John McCloskey, New York, N. Y.—*Machine for Making Seamless Tubing.*—March 16, 1869.

Claim.—1. The construction and arrangement, with reference to each other, of the cylinder A, mold B, cooling-device E, and gate G, as and for the purpose specified.

2. With the above, the arrangement of the valve-

plunger Q and removable eylinder N, as shown and deseribed.

3. The improved apparatus, herein deseribed, its constituent parts being eonstrueted and arranged together in the manner set forth.

87,863.—Joel Miller, Swedesborough, N. J.—*Rivet-Tool.*—Mareh 16, 1869.

Claim.—The improved tool, herein deseribed, eonsisting of the die A, handle C, and diseharger D, all eonstrueted and arranged as and for the purpose speeified.

87,864.—J. Hout Minnich, Tusearawas, Ohio.—*Bridle-Bit.*—Mareh 16, 1869.

Claim.—The applieation, to a bridle-bit and reins, of the slotted plates B, whieh are provided with the pins or rollers *a*, substantially as deseribed, so that the bit will be drawn up in the slotted plates, when the reins are pulled, as set forth.

87,865.—S. R. Mix and Milo D. Wilder, La Porte, Ind.—*Grapple for Tubes.*—Mareh 16, 1869.

Claim.—The improved tube-grappling aad withdrawing implement, eomposed of the tapered stoek A and die B, arranged substantially as and for the purpose deseribed.

87,866.—John G. Moore, Kingston, Ohio.—*Truck for Plows.*—Mareh 16, 1869.

Claim.—1. The eombination, with a truek, of the shoulder-strap M, substantially as and for the purpose deseribed.

2. The eombination with the shafts B and the yoke D, of the hooks F I, and stirrups, substantially as and for the purpose deseribed.

3. The arrangement of the yoke D, axle A, and the elips E, all substantially as and for the purpose deseribed.

87,867.—Edmund L. Morse, St. Louis, Mo.—*Door-Spring.*—Mareh 16, 1869.

Claim.—1. The rubber spring B, having the bearings b^1 b^2, when eombined with the soekets C D, all eonstrueted and arranged as deseribed, for the purpose set forth.

2. The spring B, soekets C and D, and ways E, when eombined and operated as deseribed, for the purpose set forth.

87,868.—C. E. Murray, Loek Haven, Pa.—*Watchmakers' Tool.*—Mareh 16, 1869; antedated Mareh 12, 1869.

Claim.—The arrangement, herein deseribed, of the several parts of a eompound tool for holding wateh-wheels while their faees are being trued, or their pivots trimmed or finished, all eonstrueted, eombined, and operated as deseribed.

87,869.—Emile Nougaret, Newark, N. J.—*Gaiter-Boot.*—Mareh 16, 1869.

Claim.—A gaiter-boot, provided with elasties, B B, in front, separated by a narrow strip, C, all extending to the top of the boot, as herein shown and deseribed, and for the purpose speeified.

87,870.—Charles H. Nye, Elizabethport, N. J.—*Attaching Tugs to Whiffle-Trees.*—Mareh 16, 1869.

Claim.—1. The soeket A B C, eonstrueted substantially as herein shown and deseribed, for attaehment to a harness-tug, as and for the purpose set forth.

2. The soeket-knob D, eonstrueted with a flattened neek, for attaehment to a whiffle-tree, substantially as herein shown and deseribed, and for the purpose set forth.

3. The tug-soeket A B C and the soeket-knob D, when used in eonneetion with eaeh other, for attaehing tugs to whiffle-trees, substantially as herein shown and deseribed, and for the purpose set forth.

87,871.—B. Oliver and M. L. Oliver, Brooklyn, N. Y.—*Stump-Extractor.*—Mareh 16, 1869.

Claim.—1. The shaft B, provided with the ehain-wheel C, ratehet-wheels D, and arranged upon the framing A, eombined with the pawl-levers F and levers I, all arranged as and for the purpose speeified.

2. The eombination with the ehain-wheel and operating-apparatus of the ehain, frietion shaft M, and eye-bolts, when arranged substantially as and for the purpose speeified.

87,872.—George W. Pense and Christian Emil Lykke, Franklin Grove, Ill.—*Harrow.*—Mareh 16, 1869.

Claim.—An iron harrow, eonsisting of four separate harrows, hinged and eoupled together, substantially as deseribed, and provided with hiteh-ing-hooks, so arranged that it may be drawn in opposite direetions, for the purpose set forth.

87,873.—Perry Prettyman, Paradise Spring Farm, Oregon.—*Railway-Rail Splice.*—Mareh 16, 1869.

Claim.—The rails A B, eonstrueted as deseribed, one, A, being provided with a reeess, and adapted to reeeive the redueed end of the other, B, both being seeured together by the vertieal bolts C passing through their upper portions, as herein deseribed, for the purpose speeified.

87,874.—George M. Rhoades, Hamilton, N Y., and George B. Hamlin, Willimantie, Conn.—*Thrashing-Machine.*—Mareh 16, 1869.

Claim.—1. The eombination of pivoted teeth with the drum of the thrashing-eylinder of a thrashing-maehine, substantially as herein shown and deseribed, and for the purpose set forth.

2. The eombination of pivoted and weighted teeth with the eoneave of a thrashing-maehine, substantially as herein shown and deseribed, and for the purpose set forth.

3. An improved driving-gearing, formed by the eombination of the frietion-pully J, attaehed to the shaft to be driven, the wheels K and L, and belt M, with eaeh other, substantially as herein shown and deseribed, and for the purpose set forth.

87,875.—Azel T. Robinson and James Shepard, Bristol, Conn.—*Fruit-Box.*—Mareh 16, 1869; antedated Mareh 12, 1869.

Claim.—In a box eomposed of the eompleted sides *a a*, eonstrueted as deseribed, and seeured at the eorners by flexible loops *d*, forming the box into a rhombus, or rhomboid-shape, for eonvenienee of paeking, by means of the bottom, A, resting upon ledges *e* on said sides, substantially as deseribed, and for the purpose herein set forth.

87,876.—Daniel R. Russell, Carrollton, Miss.—*Fire-Tongs.*—Mareh 16, 1869.

Claim.—So eonstrueting fire-tongs as to provide, at the point at whieh the legs are joined together, and articulate, three distinet bearings—the first between the perimeter *c* of one part and the rim A of the other; the seeond, by means of a tongue C, and a groove, B; and the third, around a eentral pivot-pin, *a*, or its equivalent, substantially as herein deseribed for the purpose set forth.

87,877.—Albert L. Sayles, Paseoag, R. I., assignor to Edwin C. Cleveland and Joseph M. Bassett, Woreester, Mass.—*Spinning-Machine.*—Mareh 16, 1869.

Claim.—1. The eombination of the ring rails A and oseillating arms B, with shaft E, arm D, ratehet G, gear-wheels K L I, pawls O P, and segment M, substantially as herein deseribed, and for the pnrpose speeified.

2. The eombination with the arm D and shaft E, of the ratchet-wheel G, gear-wheels K L I, pawls O P, and segment M, substantially as and for the purpose speeified.

87,878.—Robert Schmid, Chieago, Ill.—*Cellar for Preserving Beer.*—Mareh 16, 1869.

Claim.—1. The division of the refrigerating and preserving apartment G S, eomposed of wood and metal, supported and inelined, substantially as and for the purposes deseribed.

2. The wooden flooring-planks E, and intermediate metallic seetion *a*, inclined as deseribed, and overlapping eaeh other at their joints, substantially as and for the purposes deseribed.

3. In eombination with the intermediate double-

inclined metallic section *a*, and inclined wooden sections E, the inclined trough *g*, for receiving the water of the condensed vapor in apartment S, and the two discharge pipes *c h*, for carrying off the water from the ice, and that from the condensed vapor, substantially as described.

4. The combination of metal and wood, in about the relative proportions specified, and arranged substantially in the manner and for the purpose described.

87,879.—HENRY SELICK, Lewistown, Pa., assignor to GEORGE S. MEYERS, same place.—*Mortising-Machine.*—March 16, 1869.

Claim.—1. The combination of the cutter-shaft G swiveled frame H, block *o*, lever *e'*, pitman *i'*, and rod *f'*, adjustably connected with crank-wheel *c'*, when arranged upon a sliding frame F, all operated substantially as herein shown and described.

2. The detachable cutter, perforated longitudinally and transversely, and constructed substantially as described, in combination with the block *o*, swiveled frame H, crank-wheel *c'*, adjustable connection *f'*, lever *e'*, and pitman *i'*, all arranged upon the sliding frame F, and operating substantially as herein set forth.

3. The described arrangement upon the sliding frame F, of the worm-shaft *l' m*, pinion *j'*, wheel *c'*, having tappets *k'*, pinions *p'* on shaft *o'*, operating in connection with the rack *r' q''* pivoted to the main frame, substantially as and for the purposes herein set forth.

4. The described arrangement of the carriage D, provided with devices for holding the timber upon the ways C C, said carriage being operated by means of the rack *e*, the pinion *g*, and hand-wheel *h*, on fixed pin *f*, and the spring *i*, all arranged and operating substantially as herein described.

5. The shaft J, gearing *a b x*, adjustable shaft *z*, wheel *y*, and pinion *b'*, the crank-wheel *c'*, with tappets *k'*, the lever *e'*, and connections *f' i'*, the worm-shaft *l'*, pinion *j'*, and shaft *o'*, with a pinion *p'*, at each end, in combination with the cutter-shaft G, swiveled frame H, and block *o*, all arranged upon the frame F, and operating in connection with the rack *r' q''*, pivoted to the main frame, to produce the rotary, lateral, and progressive motions of the cutter, substantially as herein set forth.

87,880.—JACOB F. SHARP, Wilmington, Del.—*Oil-Box for Car-Axles.*—March 16, 1869.

Claim.—A removable car axle-box cover, having an opening therein, closed at pleasure by a vertically-sliding lid, with projecting handle at top, fastened, when closed, by a centrally-located spring, and having a stop to prevent its entire withdrawal from the cover, all constructed and arranged substantially as and for the purpose set forth.

87,881.—J. H. SHIMMONS, Lawrence, Kansas, assignor to himself and S. R. MAYBERRY, same place.—*Sheet-Metal Roofing.*—March 16, 1869.

Claim.—The improved method of forming double seams in the flat portion, and single seams in the vertical portions, of sheet-metal roofing, by means of the sheets formed as represented at D, substantially as and for the purpose specified.

87,882.—THOMAS B. SMITH and ACANTHUS HINCHMAN, Pleasant Hill, Mo.—*Car-Coupling.*—March 16, 1869.

Claim.—The combination of the bar C, spring D, band E, block F, and guide-rod G, with each other, the slotted draw-head A, and the coupling-link B, as herein described, for the purpose specified.

87,883.—WILLIAM H. SMITH, La Crosse, Wis.—*Thrashing-Machine.*—March 16, 1869.

Claim.—1. The application, in a thrashing-machine, of the slatted apron E, with a chute underneath, to receive the shelled grain, when mounted behind, and independent of the shoe, substantially as and for the purpose described.

2. The combination of the pickers A and A', and the carriers B and B', constructed and arranged to operate substantially as shown and described.

87,884.—ALVAH J. SPRAGUE, Springfield, Mo.—*Portable Fire-Place.*—March 16, 1869.

Claim.—1. The plates F F and G, constructed with air-chambers *c c* and H and opening *e*, substantially as and for the purpose described.

2. The portable fire-place, constructed of plates B, C C, and D, with opening E, in combination with the mantel K, and with the plates F F and G, all arranged substantially as described.

87,885.—W. C. SWITZER, Nelsonville, Texas.—*Combined Planter and Cultivator.*—March 16, 1869.

Claim.—1. The dropping-device W, constructed and operating substantially as herein shown and described, in combination with the axle B, plows I N P O, and plow Q S U T, as and for the purpose set forth.

2. The dropping-device Y Z A' B' *b'* C', constructed and operating substantially as herein shown and described, in combination with the axle B, plows I N P O, and plow Q S U T, as and for the purpose set forth.

3. The combination and arrangement of the plow-beams I, two or more plow-standards N, brace-bars P, supports E, racks F, adjustable sliding bar G, and longitudinal bars D, with each other and with the frame C, substantially as herein shown and described, and for the purpose set forth.

4. The combination and arrangement of the foot-lever or levers I *l'*, connecting-rods or chains M, levers J, and connecting-chains K, with each other and with the plow-beams I and frame C, substantially as herein shown and described, and for the purpose set forth.

87,886.—WILLIAM H. TOWERS, Boston, Mass.—*Steam-Heating Apparatus.*—March 16, 1869.

Claim.—1. The combination of a water-supply reservoir F, connecting-pipe *b*, a vaporizing-device, E, or its equivalent, and a steam-chamber, D, all substantially as specified.

2. In combination with the heat-radiating chamber, or cylinder, the employment of a vaporizing-conduit, essentially in manner and to operate as explained.

3. In connection with the vaporizing-conduit E, arranged as described, the water-reservoir F and the supply-pipe *b*, substantially in manner and for the purpose as explained.

4. In combination with the cylinders A and B, and the conduit E, arranged and operating as described, the reservoir F, with its pipes *e* and *b*, and when operating both as a condenser and as a means of supplying steam to an apartment, the whole being as before set forth and explained.

5. The general combination and arrangement of the cylinders A and B, the vaporizing-conduit E, (supplied with heat, as described,) and the reservoir F, the latter being connected with the heating-chamber D by the pipe *e*, and with the conduit E by the pipe *b*, and the whole being organized and operating as hereinbefore set forth and explained.

87,887.—EDWARD TRASK, Fitchburgh, and CHARLES T. FORD, Salem, Mass.—*Toy-Gun.*—March 16, 1869; antedated March 5, 1869.

Claim.—1. The combination, as well as the arrangement, of the hitching-cylinder, or block, C, the spring or springs *b*, the heel-piece *d*, its studs *c*, with the parts A and B of the gun-barrel, and a trigger applied thereto, so as to operate the heel-piece, as specified.

2. The ball, or projectile, as made with a chamber to receive and hold the torpedo; also, as combined with the gun by means of a flexile wire, or its equivalent.

3. The ball, or projectile, as constructed with a torpedo-receiving chamber, and the wire for holding the ball to the gun, as made with a loop, or its equivalent, for the purpose of drawing the torpedo into the chamber, as set forth.

4. The arrangement and combination of the ball *i* with the gun and the plunger, arranged and provided with mechanism for operating such plunger, substantially as specified.

87,888.—A. TREW, Union City, Ind.—*Steam-Engine Oscillating Valve.*—March 16, 1869.

Claim.—In combination with the conical oscillating valve A, the supply-pipe U and plate E, when

arranged and constructed substantially as herein set forth.

87,889.—JONATHAN G. TROTTER, Newark, N. J.—*Furnace for Making Iron and Steel.*—March 16, 1869.

Claim.—1. The arms or hangers E, in combination with the grate-bars D, substantially as described.

2. The combination of the grate-bars D, having hangers E attached thereto, with the rock-shafts and levers in connection therewith, operating for the purposes hereinbefore described, and substantially in the mode of construction as set forth.

87,890.—ANDREW VAN HORN, Brooklyn, N.Y.—*Apparatus for Evaporating Salt.*—March 16, 1869.

Claim.—Evaporating or concentrating saline waters for making salt, by means of the combination of an evaporating-tank, C, with a circulating coil of pipe, E, and furnace F, when made and operating in the manner and for the purposes hereinbefore set forth.

87,891.—JACOB WEIBLE and HENRY S. ROBINSON, Detroit, Mich.—*Circular Saw.*—March 16, 1869.

Claim.—The improved mode of constructing circular saws, as herein shown and described and for the purpose set forth.

87,892.—WASHINGTON WEST, Pecksburg, Ind.—*Ditching-Plow.*—March 16, 1869.

Claim.—The improved ditching-plow herein described, when the same is constructed, in its said several parts, and used in the way and for the purpose substantially as herein set forth.

87,893.—WILLIAM WICKERSHAM, Boston, Mass.—*Railroad-Chair.*—March 16, 1869.

Claim.—1. In the rail-chair for railroads, a spring, *c*, formed and arranged as described, in combination with the key *d* and the chair, constructed and arranged substantially in the manner and for the purpose set forth.

2. The key *d*, in combination with the aperture *f*, formed substantially as described and for the purpose set forth.

3. The cup *e*, in combination with the slide *g* and the spring *c* or *k*, substantially as described, and for the purpose set forth.

4. The strip *i*, formed of two thin metallic strips, combined with and inclosing a non-metallic strip between them, as described and for the purpose set forth.

5. The strip *i*, combined with the two wedges *h* and *h'*, arranged and operating conjointly, in the manner described, and for the purpose set forth.

87,894.—CHESTER WILLIAMS, Jr., Alba, Pa.—*Method of Preparing Coon-Skins.*—March 16, 1869.

Claim.—As a new article of manufacture, raccoon-skins, prepared substantially as herein described and for the purpose set forth.

87,895.—N. BANGS WILLIAMS, New York, N. Y.—*Backgammon-Board.*—March 16, 1869.

Claim.—1. The combination of an automatic dice-thrower with a backgammon-board.

2. The lever C, with the feather-spring H.

3. This, in combination with the other parts of the mechanism described, all made and operating substantially as described, or their mechanical equivalents.

87,896.—LEVI C. WILSON, Albany, N. Y.—*Harness-Rosette.*—March 16, 1869.

Claim.—As an article of manufacture, the ornamental pendulous body, composed of the body C, fringe B, pin D, and disk A, substantially as described.

87,897.—J. DANA WYMAN, Fitchburg, Mass.—*Soldering-Iron.*—March 16, 1869.

Claim.—In combination with a soldering-iron, the non-conducting packing I, as shown and described.

87,898.—JOSEPH BELL ALEXANDER, Washington, D. C.—*Lamp-Burner.*—March 16, 1869.

Claim.—1. The use of a helical spring to hold the chimney on a lamp-burner, when the said spring has its ends united, so as to form a ring, and is attached to the burner by its elasticity only, and when its inner circle rests against an unyielding back, causing the convolutions of said spring to assume an oblique direction under pressure, the chimney being put on by a twisting motion, substantially as described, and for the purpose set forth.

2. The cylindrical ring R, with its groove G, its slots M M M, and its tongues L L L, substantially as described, and for the purpose set forth.

3. The helical spring S, in combination with the groove G, substantially as described, and for the purpose set forth.

4. The attachment of a circular helical spring to a lamp-burner, by the contraction of the spring only, its inner circle resting against an unyielding base, and grasping the chimney at or near its lower rim, substantially as described, and for the purpose set forth.

5. The combination of the cylindrical ring R, and its groove G and spring S, with the deflector C and draught-plate B, together with the wick-tube T, cap E, base D, and any of the wick-adjusters in use, when arranged together, substantially as described, and for the purpose set forth.

87,899.—WILLIAM S. APPLEGET, Cranberry, N. J.—*Thill-Coupling.*—March 16, 1869.

Claim.—The sand-guard *r*, in combination with the shackles *a b* and journals *c d*, constructed, arranged, and operating as and for the purpose herein shown and described.

87,900.—PHINEHAS BALL, Worcester, Mass.—*Branch-Joint for Wrought-Iron Water-Pipes.*—March 16, 1869.

Claim.—1. A branch and offset, D, for facilitating the attachment of branch-pipes, when said offset is formed from a solid plate of metal, substantially as shown and described, and for the purposes stated.

2. The combination, with the pipes A and B, of a plate, or cap, C, provided with an offset, or projection, D, substantially as and for the purposes set forth.

3. A branch for wrought-iron cement-lined water-pipes, the parts of which are constructed in the manner and form substantially as shown and described.

87,901.—WILLIAM BEATTY, Pontiac, Mich.—*Potato-Digger.*—March 16, 1869.

Claim.—1. The rollers H and teeth *h*, in combination with the driving-wheels B', all arranged and operating substantially as and for the purpose set forth.

2. The tines I', as and for the purpose specified.

3. In combination with the rollers H, the tines *i* and bar G, as described, and for the purpose set forth.

4. In combination with the rollers H, arranged as specified, the plow N, as and for the purpose described.

5. Providing an adjustable tongue, L, in combination with the parts above claimed, as described.

6. The combination of all the parts above claimed.

87,902.—WILSON H. BERDAN, York, Mich.—*Horse Hay-Fork.*—March 16, 1869.

Claim.—In combination with the tines A A and bail B, the slotted bar D, with its pulley *a* and flange *d*, the pivoted pallet E, arm F, with its flange *e*, and the hooks I I, all constructed and arranged to operate substantially as and for the purposes herein set forth.

87,903.—ALFRED BERNEY, Jersey City, N. J.—*Vessel for Making Coffee.*—March 16, 1869.

Claim.—The conical vessel A, having a finely perforated bottom, B, and the bucket *c*, with perforated bottom, C, arranged therein, substantially as shown and described, as a new article of manufacture.

87,904.—ALONZO A. BINGHAM, Cooperstown, N. Y., assignor to himself and GEORGE MCNAMEE, same place.—*Milk-Strainer.*—March 16, 1869.

Claim.—The detachable plate, or frame B, when combined with the fixed plate C, secured upon the end of the spout of a milk-pail, and fastened to said fixed plate C, substantially as herein described, for the purpose of retaining a piece of wire straining-cloth, D, over the mouth of the spout, as herein set forth.

87,905.—Frank Brewster, Cleveland, Ohio.—*Alarm-Lock.*—March 16, 1869.

Claim.—1. The combination of the ratchet-wheel, or disk A, the pin-wheel, with its projections B B, and the loose pins, with the lever D, for releasing the alarm-mechanism, substantially as shown and described.

2. The arrangement of the disk, or ratchet-wheel A, pin-wheel B, the rod to which they are secured, and index-knob, upon the opposite end of such rod.

3. The construction of the lever D, with its inclined surfaces, substantially as and for the purpose described.

87,906.—Franklin H. Brown, Chicago, Ill.—*Ventilator for Railroad Water-Closets.*—March 16, 1869.

Claim.—The arrangement and combination of pipe A, hopper B, with its perforations, and wind-gatherer D, substantially as shown, and for the purpose specified.

87,907.—Louis Brumbach, Reading, Pa.—*Door and Gate Latch.*—March 16, 1869.

Claim.—1. A metal case, containing a bolt, A, which bears and slides diagonally on pins, or lugs, without changing its horizontal position, all substantially as and for the purpose described.

2. The bolt A, having rods or pins *a* and notches *e*, with inclined edges, in combination with the pins *d d* of the case, and the inclined slots *b* of the latter, all being constructed and arranged substantially as specified.

87,908.—John Casson, Parish of Sheffield, England.—*Sawing-Machine.*—March 16, 1869.

Claim.—1. The revolving conical feed-roller, for feeding and guiding wood to circular and other saws, mounted and adjusted in the manner herein described, between which roller and the fence the wood is guided to the saw, as and for the purposes shown and set forth.

2. The toothed quadrant, and gearing connected therewith, in combination with the feed-roller, under the arrangement substantially as described, whereby said roller may be brought to and fixed at any required distance from the fence, as hereinbefore shown and set forth.

87,909.—John R. Champlin, Laconia, N. H.—*Ice-Cream Freezer.*—March 16, 1869.

Claim.—The combination and arrangement of the freely fitting beater-shaft C, projecting up through its pinion F, to receive the driving-crank, the gear-frame D, freely removable with the cross-bar to which it is attached, and the pinion H, with its coupling-projection *r*, fitting the socket *s* of the cream-cylinder, so as to readily lift therefrom with the gear-frame, all substantially as herein specified, the whole constituting a driving apparatus for the freezer of great convenience in applying to and detaching from the freezing-cylinder, as herein specified.

87,910.—William Clemson, Middletown, N.Y—*Saw.*—March 16, 1869.

Claim.—A crosscut-saw having the teeth arranged in pairs, and divided from the next pair by a dust-space, and having the teeth A B set to one side of the blade, and the teeth C D set to the opposite side of the blade, and constructed substantially in the manner and for the purpose described.

87,911.—James W. Colburn, Rose, N.Y.—*Device for Protecting Young Plants against Worms.*—March 16, 1869.

Claim.—1. The plate A, having an opening or aperture through the center, and provided on its under side with a number of teeth, D D, substantially as and for the purposes herein set forth.

2. The combination of the plate A with its teeth D D and stirrup B, all constructed and arranged to operate substantially as and for the purposes herein set forth.

87,912.—George Cowing, Seneca Falls, N. Y., assignor to himself, John P. Cowing, Philo Cowing, and Marshall Cowing.—*Pump.*—March 16, 1869.

Claim.—A pump-standard, having cast in it a nut or thimble, C, to attach the induction-pipe to, as above described and set forth.

87,913.—Charles Cummings, Providence, R. I.—*Carriage-Wheel.*—March 16, 1869.

Claim.—1. The crotched rods D D, &c., when connected to the rim of a wheel and to the truss-rods B, or their equivalent, substantially as shown and for the purpose described.

2. The application of rubber upon the joint between the truss and crotched rods, substantially as and for the purpose specified.

87,914.—John M. Davidson, Pulaski, Pa.—*Potato and Corn Cultivator.*—March 16, 1869.

Claim.—Frame A, bars *b b'*, plates C C, rods C' C', adjustable legs B B, and drag-bar G, all constructed, combined, and arranged to operate as herein set forth.

87,915.—Frederick W. Devoe, New York, N. Y.—*Screw-Nozzle for Cans.*—March 16, 1869.

Claim.—A sheet-metal can nozzle and cap, spun or rolled to form a screw, *b*, with a contracted cylindrical part, *a*, on the nozzle, and a corresponding screw and annular contraction, *e*, in the cap, substantially as shown and described, as a new article of manufacture.

87,916.—Alfred B. Ely, Newton, Mass.—*Heel-Stiffening.*—March 16, 1869.

Claim.—A leather heel-stiffener, when prepared, shaped in molds, and fitted for use, as herein described.

87,917.—William Ennis, Philadelphia, Pa.—*Steam-Boiler Furnace.*—March 16, 1869.

Claim.—The combination of a secondary grate, H, to which atmospheric air, for the purpose of promoting combustion, is supplied, with or relatively to an upper grate, A, of a furnace, supplied with steam or water introduced above its grate, for passage amongst or through the fuel resting thereon, as induced by the draught arranged below the upper grate, and made common to both grates or fire-places, substantially as and for the purpose or purposes herein set forth.

87,918.—James W. Evans and George F. Godley, New York, N. Y.—*Garbage-Box.*—March 16, 1869.

Claim.—The chamber A, provided with a drain-pipe, B, and inner lid, P, having apertures, E, therein, in combination with the perforated removable vessels, C, the whole inclosed by hinged covers, D, substantially as shown and described.

87,919.—John Fellows and James W. Lyon, Brooklyn, N. Y.—*Rod of Connected Hook-Blanks for Gas-Fitters' Use.*—March 16, 1869.

Claim.—The rolled wrought-iron rod of hook-blanks, consisting of a series of connected hook-blanks, each of the contour and disposition of metal, substantially as described.

87,920.—Philo Ferrier, Ypsilanti, Mich.—*Corn-Sheller.*—March 16, 1869.

Claim.—1. The construction of the cross-head F, in combination with the shaft D and frame A of a corn-sheller, substantially as shown and described.

2. The curved bearing E, as and for the purpose set forth.

3. The construction of the bearings C, substantially as shown and described.

4. The combination of the bearings C with the shafts of the shelling cylinders, and the shaft to which the driving-gears are attached, substantially as shown and described.

87,921.—Joseph R. Finney, Youngstown, Ohio.—*Whip-Socket and Rein-Holder Combined.*—March 16, 1869.

Claim.—1. The combined whip-socket and rein-holder, composed of the parts A, B, C, and D, spring *s*, and hinge *d*, substantially as and for the purpose specified.

2. The combination of a tubular whip-holder with a rein-holder, the whole being constructed in one instrument.

87,922.—Conrad Franz, Cincinnati, Ohio.—*Gas-Burner.*—March 16, 1869.

Claim.—In the described combination, the pipe A, constructed with the perforated diaphragm B *b* and internal screw-thread G, and the burner D, constructed with the conical point C, perforations *d d*, and external screw-thread F, substantially as and for the purpose set forth.

87,923.—James C. French, Monmouth, Ill.—*Cultivator.*—March 16, 1869.

Claim.—1. The construction of the joint-piece *a*, as and for the purpose described.

2. In combination with said joint-piece, the plow-beam D and the upright standard C, substantially as shown and described.

3. The standard C, substantially as shown and described.

4. The combination and arrangement of the standard C, cross-beams G, and axles B B.

5. The arrangement of the plow-beams D D, with reference to the joint-piece *a*, by which said beams may be carried nearer to or further from the wheels of the machine.

87,924.—John C. Gould, Oxford, N. J.—*Machine for Cutting Nails.*—March 16, 1869.

Claim.—1. The arrangement of the feed-mechanism, by which the simultaneous action of the knives and the nose-piece causes the latter to slip back upon the nail-plate while it is held by the knives, substantially as described.

2. Jointing the segmental rack to the hub of the arm that carries the nose-piece, in the manner substantially as described.

3. The arrangement, herein described, of the shaft that operates the segmental rack, in an angular position, relatively to the center line of the machine, so that it may lie in a horizontal plane.

87,925.—James Greer and Rufus I. King, Dayton, Ohio.—*Cooking-Stove.*—March 16, 1869.

Claim.—1. The fender B B′, constructed substantially as herein described, so as to admit of its being opened for the purpose of getting at the fire, for broiling and other purposes.

2. The combination of the imperforate inner doors or fenders B B′, forming the front wall of the fire-chamber, and affording access thereto, for the removal of its contents, and the outer doors C C′, provided with the registers D, and forming, in connection with said inner doors, a space or passage for heating the draught-air and directing it to the bottom of the fire-space, and also to keep said outer doors cool, substantially as described.

87,926.—David Grim, Pittsburgh, Pa.—*Carriage-Wheel.*—March 16, 1869.

Claim.—A wooden hub, A, in combination with a metallic band, B, supporting a series of radial sockets, C, so arranged upon the band as that each alternate socket shall stand about half its depth in advance of the one with which it is alternated, and so constructed, with relation to each other and the hub, as that the spokes, when inserted, will be on a line at their outer ends, where they terminate in the rim of the wheel.

87,927.—J. H. Hadley, Boston, Mass.—*Carriage-Jack.*—March 16, 1869; antedated March 12, 1869.

Claim.—1. Combining with a hollow wrought-iron sliding tube, *a*, the graduated cast-iron head D, when cast upon the wrought-iron, substantially in the manner as and for the purposes specified.

2. The actuating device, as constructed, with the straps *c c* and *d d* attached to the fixed and sliding parts C and *a*, respectively, the pivoted sliding T-straps *b b* and lever E, all constructed and arranged to operate substantially in the manner as and for the purpose specified.

87,928.—S. H. Hamilton, Bushnell, Ill.—*Rotary Steam-Engine.*—March 16, 1869.

Claim.—1. The construction of the conduit G, substantially as shown and described.

2. The construction of the piston-wheel C, substantially as shown and described.

3. The combination of the piston-wheel and the steam-conduit, when the conduit is constructed substantially in the manner shown and described.

4. The arrangement of the piston-wheel C, pistons D, and cam-wheel or disk F, substantially as shown and described.

5. The arrangement of the rollers which control the movement of the piston upon one side of such pistons, substantially as shown and described.

87,929.—John T. Hawkins, Annapolis, Md., assignor to Holt, Hawkins & Co., same place.—*Lathe for Turning Spools.*—March 16, 1869.

Claim.—1. The centrifugal chuck or holder D, with its centrifugal arms or levers L L, and jaws J J J J, sliding upon its inclined interior, or its equivalent, for the purpose set forth.

2. The combination of the cutter-head C and its cutters, with the guide G″, as specified.

3. A blank, from which to manufacture spools or other articles, when pointed at one end and operated in the manner described, and used in connection with the herein-described machine, for the purpose of reducing friction, as specified.

4. Feeding the rounded revolving stick or blank, by the pressure of the non-rotating stick or blank upon it, in the manner described.

5. Soaking one end of each stick or blank in water or other liquid, in the manner and for the purpose set forth.

6. The arrangement of the rod Z, connecting-rods Z′ Z′, the pawl-wheels *m m*, and the ratchet-wheels *e e*, for the purpose specified.

7. The use of the cutter or cutters K, in combination with the sliding drill-stock F, operating as described, for the purpose set forth.

8. The combination of the slide or cutter-holder E, movable cutter K, centrifugal chuck D, hollow mandrel A, with the cutter-head C and its cutters, and the guides G′ G″, for the purpose described.

87,930.—William Hebdon, New York, N.Y.—*Machine for Damping, &c., Cloth.*—March 16, 1869.

Claim.—1. The crate *b* and saturating bars *d* and *e*, in combination with the squeezing-rollers *f* and winder *g*, substantially as and for the purposes set forth.

2. In combination with the foregoing, the press-board *c*, platen *h*, and screw *i*, applied within the vat *a*, and arranged, in relation to the winder *g* and rollers *f*, in the manner and for the purposes specified.

87,931.—Louis Hillebrand, Philadelphia, Pa.—*Trunk-Lock.*—March 16, 1869.

Claim.—A single spring, so set that one of its ends bears solidly against a point of the bolt, so as to throw the bolt backward and forward after being started by the key, substantially as and for the purpose set forth.

87,932.—Ernst F. Hoffman, New York, N.Y.—*Supporting-Bandage.*—March 16, 1869.

Claim.—As an article of manufacture, the supporting-bandage, formed by the arrangement of the elastic ring A, straps C, hinged frame D, penis-bag E, and the scrotum-bag F, substantially as herein represented and described.

87,933.—Carl Holtz, New York, N. Y., assignor to himself and Charles Magnus, same place.—*Chair for Babies.*—March 16, 1869.

Claim.—1. The hinged rockers *d*, in combination with the plate *f*, stool A, and chair B′, constructed in the manner set forth.

2. The stop *p*, spring *o*, rod *m*, slotted guide *l*, and platform *n*, in combination with the stool A and chair B′, substantially as described.

3. The duplex chair B′, made in two parts, to fit to the plate *f*, in combination with the hinged or removable rockers *d* and stool A, substantially as set forth.

4. The stool A and chair B′, combined together and constructed to be converted into a rocking-chair, a baby-jumper, a walking-chair, a cradle, and carriage, at pleasure, substantially as set forth.

87,934.—Chace B. Horton, Sand Bank, N. Y.—*Flour-Sacker.*—March 16, 1869.

Claim.—1. The tube or funnel I, mounted in the vertically-sliding gate L, and raised automatically by the weights Q, or their equivalent, when released, substantially as and for the purpose described.

2. The combination of the frame D, weigh-beam G, sliding funnel L I, elevating devices O P Q, and spring-catch N *n*, all arranged to operate substantially in the manner described, for the purpose specified.

3. The slot I′, when employed in the vertically-sliding tube or funnel I of a machine for sacking flour, as and for the purpose set forth.

87,935.—John Hoyt, Davenport, Iowa, assignor to Charles French, same place.—*Truck for Moving Pianos.*—March 16, 1869.

Claim.—1. The trucks B B, board *a*, and angle-iron *c c*, or its equivalent, combined, when used in moving pianos.

2. The angle-iron *c*, board or table *a*, pin *h*, side-boards *g g*, or their equivalents, when forming a box or crib arrangement, for keeping the piano on the trucks.

87,936.—N. W. Hubbard, New York, N. Y.—*Velocipede.*—March 16, 1869.

Claim.—The arrangement of the endless belt C, having the cross-slats E, the drums F G, of unequal diameter, pulley H, band I, pulley J, steering-wheel N, arched frame O, semicircular plate V, frame P, steering-cord *a*, windlass T, windlass-wheel *u*, and the double-seated frame A, all constructed and operating as described, for the purpose specified.

87,937.—E. P. Hudson, New York, N. Y.—*Manufacture of Vegetable Parchment.*—March 16, 1869.

Claim.—1. The application of glycerine to the paper, after it has been subjected to the acid process, and while still wet, substantially as herein specified.

2. As a new article of manufacture, the material produced substantially as herein specified.

87,938.—Daniel K. Humphrey, Buffalo, N. Y.—*Head-Pad for Horses.*—March 16, 1869.

Claim.—The protecting head-pad for horses, as a new article of manufacture, substantially as set forth.

87,939.—Henry C. Ingraham, Tecumseh, Mich.—*Hand-Truck.*—March 16, 1869.

Claim.—1. The bent axle C, connecting-rod E, and lever F, in combination with the frame A.

2. The spring I, in combination with the axle-tree C and frame A, as shown and described.

87,940.—W. A. Ives, New Haven, Conn.—*Brace for Bits.*—March 16, 1869.

Claim.—The two jaws B and C, pivoted and arranged in a socket, A, and combined with a right-and-left-hand threaded screw, supported in the bearing *d*, so as to operate substantially as and for the purpose set forth.

87,941.—Charles F. Johnson, Jr., Owego, N. Y.—*Mechanical Typographer.*—March 16, 1869.

Claim.—1. The movable type-punches *a a*, in combination with the keys C, substantially as shown, for the purpose set forth.

2. The combination of the slide *m*, the rock-shaft *n*, the ratchet *g*, and the keys C, constituting the feed-motion of the machine, substantially as set forth.

3. Producing the variable feed of the upper bed-plate, adapted to successive letters of different widths, by modifications of the keys C, substantially as shown.

4. In combination with each other, the escapement and cam-movements, substantially as and for the purpose set forth.

87,942.—Charles P. Johnson, Jamaica Plain, and Freeman K. Sibley, Auburndale, Mass.—*Inner Sole for Boots.*—March 16, 1869.

Claim.—An inner sole, composed of horse-hair, and stiffened by a strip of metal, sewed on with wire, as shown and described, as a new article of manufacture.

87,943.—C. P. Kimball, Portland, Me.—*Sleigh.*—March 16, 1869.

Claim.—The sleigh-brace *e*, having the projection *m*, in combination with the clip *f*, as herein described, and for the purposes set forth.

87,944.—Abraham L. King, Farmersville, Ohio.—*Flood-Gate.*—March 16, 1869.

Claim.—The swing-gate H and its fastening, consisting of the bar *p*, pin *k*, and float M, arranged to operate, in combination with each other, within the frame, consisting of the posts A B, plate F, and sill E, substantially as and for the purpose described.

87,945.—George W. Kintz, Rochester, N. Y.—*Animal-Trap.*—March 16, 1869.

Claim.—1. The arrangement, within the leader G, of the platform H and stop-spring I, in combination with the hinged flap K, on the outside thereof, substantially as and for the purpose described.

2. The combination of the guard *s*, with the door B, for preventing the accidental raising of the door, as set forth.

87,946.—Adolphe Marie Albin Laforgue, Caen, France.—*Surgical Instrument for Conveying Medicated Powders, and Depositing Them on Interior Cavities.*—March 16, 1869.

Claim.—The new instrument, as a whole, constructed and operating substantially as shown and described, or its equivalent, for conveying powdered and other medicinal substances into and upon diseased interior cavities.

87,947.—James L. Linderman, Rockford, Ill.—*Seed-Sower.*—March 16, 1869.

Claim.—1. The metal flap B, in combination with rod *b* and lever b^1, as and for the purpose set forth.

2. In combination with the above, the guide-plate C, lever b^1, and set-screw *e*, when arranged as described, for the purpose set forth.

87,948.—R. O. Lowrey, Salem, N.Y.—*Bed-Bottom.*—March 16, 1869.

Claim.—1. The slats A, having the holes *e*, with recesses for the points of the hooks to rest in, substantially as shown and described.

2. Connecting the adjoining springs of the series by means of the blocks E, constructed and applied as shown and described.

87,949.—Jacob Lutz, John A. Eberly, and Henry Becker, East Cocalico Township, Pa.—*Thrashing-Machine.*—March 16, 1869.

Claim.—The construction and arrangement of a thrashing-machine, when made with cylinders F G, the one with its pinion B, and the other with its spur-wheel A, in combination with the pulleys C D E, all arranged and operating in the manner and for the purpose specified.

87,950.—Auguste Hippolyte Marinoni, Paris, France, assignor to Richard M. Hoe.—*Lithographic Printing-Press.*—March 16, 1869.

Claim.—1. The combination, with the reciprocating carriage of a cylinder lithographic press, of an adjustable bed, for adjusting the stone, both vertically and laterally, substantially as described and specified.

2. The T-shaped lifter, and its mechanism for lifting the inking-rollers from the stone and inking-table, substantially as described and specified.

3. The combination of the sheet-flier with an impression-cylinder without tapes, and a receiving-cylinder, provided with both gripers and cords or tapes, substantially as described and specified.

87,951.—T. J. MARINUS, Independence, Iowa.—*Cultivator.*—March 16, 1869.

Claim.—The arrangement of the seed-box with a recess, into which the pinion attached to the agitator-bar enters when thrown out of gear, foot-lever *a*, frame *b*, lever *e*, cultivator-bars E, provided with teeth E′, and catch *f*, the whole constructed and operated as set forth.

87,952.—WILLIAM MCARTHUR, Philadelphia, Pa.—*Carpet-Cleaning Machine.*—March 16, 1869.

Claim.—1. A series of flexible or elastic bands, B, in combination with devices whereby they may be drawn from and brought against a strip of carpet, or other material arranged beneath them.

2. The combination of the flexible beaters and springs *b*, arranged and operating substantially as described.

3. The combination of the beaters B, rock-shaft D, and cords connecting the shaft to the beaters, substantially as and for the purpose specified.

4. The fan K, so arranged as to expel the dust laterally from the machine, for the purpose described.

5. The arrangement, on one shaft, of the brushes *g* and strikers *j*, substantially as and for the purpose specified.

6. The ribs *h*′, arranged on a shaft between parallel brushes *g*′, for the purpose set forth.

7. The combination of the two opposite series of beaters, their respective beds *c c*, fan K, and rollers, and sweepers placed between the two beds, when the whole are arranged as and for the purpose specified.

87,953.—HARVEY MCCOWN, Enon Valley, Pa.—*Device for Locking Nuts.*—March 16, 1869.

Claim.—1. The washer E, in combination with the lock-clamp D, substantially as and for the purpose shown.

2. The washer F, constructed in the form of a double cross, with each of its ends slitted, or divided, substantially as shown and for the purpose set forth.

87,954.—S. F. MCGOWN, New York, N. Y.—*Twine-Cutter.*—March 16, 1869.

Claim.—The thread and twine-cutter herein described, consisting of the ring A, plate B, knife C, slotted spring E, and guard D, the two latter being removable, the whole combined and arranged in the manner and for the purpose specified.

87,955.—JOHN MCKEE and THOMAS W. FLETCHER, New York, N. Y.—*Machine for Making Cigars.*—March 16, 1869.

Claim.—1. The combination, with the arm A, of a spring, C, adjusted to position by set-screws *b d*, substantially as and for the purpose specified.

2. The combination of the fixed hub D with the vibrating arm E and spring *e*, adjustable by set-screws *f* and *g*, substantially as and for the purpose set forth.

87,956.—JOHN MERRILL, Freeport, Me.—*Saw Set.*—March 16, 1869.

Claim.—1. The gauge-arm B, substantially as described.

2. A saw-set, made by the combination and arrangement of the gauge-arm B and the part A, substantially as described.

87,957.—CHARLES H. MILLER, Buffalo, N. Y.—*Lamp-Bracket.*—March 16, 1869; antedated November 25, 1868.

Claim.—The hole *i i*′, and recess *m*, formed in the standard I, in combination with the axial pin *n*, vane *o*, and spiral-spring *s*, of the reflector-arm J, constructed and arranged as herein set forth.

87,958.—CHARLES H. MILLER, Buffalo, N. Y.—*Door-Plate and Alarm.*—March 16, 1869; antedated March 2, 1869.

Claim.—1. The cover C, hinged to the plate B by means of the ears *d d*, *d*′ *d*′, as described and shown.

2. The hammer H, spring *k*, pivoted fulcrum-plate *i*, and bell G, operated by the projecting arm *f* of cover C, substantially in the manner and for the purposes set forth.

87,959.—JOHN MINOR, Peoria, Ill., MILTON W. NESMITH and GEORGE W. NESMITH, Metamora, Ill.—*Liquid-Meter.*—March 16, 1869.

Claim.—1. A meter for spirits, or other liquids, consisting of a closed tub, A, provided with a recess, *r*, at its bottom, and the recess *w* at its top, for the reception of the perforated guide B, and its contained float, C, arranged and operating substantially as described.

2. The combination and arrangement of the float C and vertical toothed bar *a*, working with the loose pinion *b*, on the horizontal axle *i i*, engaging, by a pawl, *t*, with the fast wheel or ratchet *c*, the ratchet-wheel *d* and pawl *t* on the float, the worm or helix *e*, giving motion to the index-wheels *f g h*, all working together, substantially as described, and for the purposes specified.

3. In combination with the above devices, the four-way cock E and connecting pipes *m n* and *o p*, arranged as described, so that the supply and discharge may be alternate, but not simultaneous.

87,960.—PAIGE MORRISON, Starksborough, Vt.—*Sap-Spile.*—March 16, 1869.

Claim.—A sap-spile, constructed substantially as herein described and shown, namely, with that portion thereof which enters the apertures formed in the wood, of oval or oblong form in its cross-section.

87,961.—GARDNER MOSMAN, Boston, Mass.—*Meat-Cutter.*—March 16, 1869; antedated March 4, 1869.

Claim.—A meat-cutting machine, consisting of the case A, having the concave D, provided with the knives *i* and the horizontal cutter *j*, and the cylinder C, provided with the knives *e*, all constructed and arranged to operate substantially as shown and described.

87,962.—DAVID NEFF, Henry County, Ind.—*Soda-Fountain.*—March 16, 1869.

Claim.—The combination and arrangement of cooler, or reservoir, B, pipe *a*, fountain, or vessel *e*, plunger E *e*, rod F, connecting-pipe *f*, link *l*, and lever L, constructed and operated in the manner as shown and described, and for the purpose set forth.

87,963.—AARON PALMER and CHARLES W. PALMER, Brockport, N. Y.—*Harvester-Rake.*—March 16, 1869.

Claim.—1. The employment, in connection with the turning float-arms *b*, of the boxes *c*, having a free action upon the reel-shaft, in the manner and for the purpose set forth.

2. The combination, with the turning float-arms *b*, of the segment gears 2, cog-wheel 1, and springs *g*, arranged as described, and operating in the manner and for the purpose specified.

3. Arresting the motion of the arms *b*, to give the floats their sweeping-motion to act as a rake, by means of the sliding rod *t*, which retreats when the arms are in the proper position to allow said floats to be restored in place again, the whole arranged substantially as described.

4. The combination of the adjustable heads *i* and teeth *h* with the floats *a*, arranged and operating as specified.

5. In combination with the floats *a*, the auxiliary head *l*, and the restoring-spring *p*, the whole so arranged that when the said floats act as a reel, the auxiliary head stands upright out of the way, but when discharging the grain from the platform, the auxiliary head is depressed, and made to bear upon the cut grain, and thereby hold it compactly while being swept off, as herein set forth.

6. The arrangement, with the floats *a* and auxiliary heads *l*, of the stem *n* and cam-arm *o*, operating to depress said head, in the manner and for the purpose specified.

87,964.—ISAAC E. PALMER, Hackensack, N. J.—*Machine for Making Cordage.*—March 16, 1869.

Claim.—The rollers C C, supported on adjustable swinging jaws E E, in combination with the top A and head B, all constructed and arranged substantially as shown and described.

87,965.—Peter Pearson, Leeds, Great Britain.—*Preparation of Cocoa.*—March 16, 1869.

Claim.—The preparation of cocoa in a fluid or semi-fluid state, by combining a concentrated liquid extract of cocoa-nuts or nibs with cocoa from which the fatty matter has been wholly or in part previously expressed or extracted, and with the addition of flavoring or other matters, if desired.

87,966.—Alois Peteler, New Brighton, N. Y.—*Dumping-Car.*—March 16, 1869.

Claim.—1. The combination of the braces *d* and catches *h*, with the rock-shafts *e*, swinging-doors *f*, and box A, hung on pivots *a*, substantially in the manner set forth.

2. The V-shaped slots *k* in the brackets *b*, which form the bearings for the pivots *a* of the box A, as shown and described.

87,967.—Charles C. Plaisted, Hartford, Conn.—*Pencil-Sharpener.*—March 16, 1869.

Claim.—Constructing a pencil-sharpener of one solid piece of metal, by turning and boring, in such a manner that the part *d* fits and clasps the pencil, in the manner described, and the part between *c* and *e* has its bore enlarged, to give a better hold to the cutting-edge, when set in at the proper angle, substantially as herein specified.

87,968.—J. B. Rand, Concord, N. H.—*Composition for Welding Iron and Steel.*—March 16, 1869.

Claim.—A welding-composition, made of the ingredients and in the manner substantially as described, as set forth in the specification.

87,969.—William F. Redding, Saratoga Springs, N. Y.—*Stove-Door Handle.*—March 16, 1869.

Claim.—A stove-door handle, consisting of an eye, A, fender B, and handle C, or their equivalents, constructed and united substantially as herein described.

87,970.—William Reid, Granton, Scotland.—*Device for Feeding Cattle During Transportation.*—March 16, 1869.

Claim.—The use of troughs, or vessels, for supplying food and water to animals when in railway-trucks or wagons, such troughs or vessels being arranged at convenient places separate and distinct from the trucks, either in a fixed position, or movable, to suit the different sizes of animals requiring to be fed or watered, substantially as described.

87,971.—George W. Robson, Cincinnati, Ohio, and Melvin T. Hughes, Paris, Ky.—*Still.*—March 16, 1869.

Claim.—1. The described arrangement of pipes F and G, tubes H, and jacket E, either with or without the chamber D, for the purpose set forth.

2. In combination with the elements D E F G H, the heater-worm L and tank M, as and for the purposes set forth.

87,972.—Herrmann Richter, New York, N. Y.—*Gas-Plier.*—March 16, 1869.

Claim.—The sliding block E, carrying the pivoted or hinged hook F, and its spring *d*, in combination with the rotating nut D and screw-thread C, on the handle A, all constructed, arranged, and operating as shown and described.

87,973.—James M. Roe, Worcester, Mass., assignor to himself and J. R. Torrey, same place.—*Saddle-Loop for Harness.*—March 16, 1869.

Claim.—1. A loop for harness-saddles, made substantially as first above described, and shown in Figs. 1, 2, and 3, of the accompanying drawings.

2. The combination, with the back and face pieces C E of a harness-saddle loop, of a central-grooved pad-piece, D, substantially as and for the purposes set forth.

3. A loop for a harness-saddle, the groove, or creases 1 of which are formed all at once, or simultaneously, as set forth.

4. The creasing-devices, shown in Figs. 4, 5, 6, and 7, for the purposes set forth.

87,974.—Joshua Rose, New York, N. Y.—*Recessing-Tool.*—March 16, 1869.

Claim.—The foot-piece B, provided with slotted ears *c*, and spreader, or expansion-piece *d*, in combination with the drill-rod A, and hinged bits C, acted upon by the spring *e*, all as shown and described.

87,975.—Thomas Rowe, New York, N. Y.—*Cleaning Cotton and other Seeds.*—March 16, 1869.

Claim.—1. The within-described process of removing fibers and other impurities from the seeds of cotton and other plants, by the combined action of an agitator, and of heat or flame, applied substantially in the manner shown and described.

2. The agitator C and sieve D, in the seed-compartment B, in combination with the furnace, or fireplace E, substantially in the manner set forth.

87,976.—A. H. Scott, Concord, N. C.—*Portable Fence.*—March 16, 1869.

Claim.—The combination of two fence-panels, when constructed as herein described, and joined together by means of a clamp, F, passing through elongated slots on the end-boards, so that a kind of stair-step will be formed between the panels, to adapt the fence to a hill-side, said panels having also pins passing through their upper and lower ends, and provided with the posts E E D, the latter having the holes *a a* and pin, whereby a vertical adjustment of the fence can be made, adapting it to hilly or irregular ground, substantially as herein set forth.

87,977.—J. H. Shireman, York, Pa.—*Horse-Rake.*—March 16, 1869.

Claim.—1. The foot-treadle, having its rear end in an ogee-form, in combination with the rounded arm on the rocking rake-head, all arranged and operating substantially as set forth, whereby the attendant is enabled, by operating the one lever, to hold the teeth down to their work, to hold them up, or to lower them easily and slowly to the ground after they have been elevated.

2. The arrangement of the foot-pressure lever and the treadle, for throwing the rake into gear upon one side of the driver's seat, and the hand-lever for operating the rake upon the other side of said seat, as described.

3. The arrangement of the foot-piece on the pressure-treadle P, forward of and in the described relation to the shifting-treadle, for the purpose set forth.

4. The arrangement of the connecting-rod, or link, which connects the treadle-lever with the slide *h*, between the rocking-head and axle, and in line, or nearly in line with the hinge of said head, substantially as described.

5. The pivoted lever H and reciprocating bar *h*, arranged upon opposite sides of the rotating rake-head, and connected together by the bent arm h^1, substantially as and for the purpose set forth.

6. The metallic spindles, or axles of the carrying-wheels, arranged above the center of the main axle, or axle-bed, in combination with a rocking-head, hinged to said main axle, in line, or nearly in line with the center of rotation of said carrying-wheels, substantially as described.

7. The bar *h*, provided with the upright arm h^1 and pendent arm h^2, substantially as described.

8. The elastic, or spring-washer, or its equivalent, in combination with the shipping-lever, for the purpose set forth.

9. The metallic axles, or spindles *a*, provided with the shank a^1, shoulder a^2, and flanged collar, or band a^3, all cast in one piece, and combined with the main axle, or bed-piece A, substantially as described.

10. The combination of the hand-lever H, the friction-roller *i*, and inclined standard K, all arranged and operating substantially as set forth.

11. Adjusting the height of the shifting-post, or standard K, for regulating the degree of elevation of the rake-teeth, substantially as shown and described.

87,978.—A. M. Shurtleff, Boston, Mass.—*Atomizing Apparatus.*—March 16, 1869.

Claim.—1. An atomizing apparatus, having a base formed in one piece, for support of the boiler-stand, lamp, and shield-stand, such base being provided

with a lamp-receiving socket, or flange, and having the shield-stand so applied that it may be slid in and out, and adjusted in position, substantially as described.

2. In a steam atomizing apparatus, a base, having combined with it a flange, or flanged holder, or socket, for receiving the drip-cup, substantially as described.

3. In a steam atomizing apparatus, a base, having provision for attachment, or retention of the boiler-stand, substantially as described.

4. In combination with a steam atomizing apparatus, a shield-stand and drip-cup holder combined in one piece.

5. In combination with a steam atomizing apparatus, a shield-stand and drip-cup holder, made adjustable in position, substantially as described.

6. A steam atomizing apparatus, in which the shield-standard serves as a handle to grasp and hold the apparatus, all the parts of the apparatus being relatively fixed, or secured from displacement, substantially as described.

7. In combination with the boiler, an inclined outlet-tube, extending nearly to the atomizing point, and connected with a short atomizing tube by a steam-tight coupling, substantially as shown and described.

87,979.—EMANUEL HUONCKER, Bethel, Pa.—*Horse Hay-Fork.*—March 16, 1869.

Claim.—The arrangement of the tines A, provided with ledges and stay-pins *i i*, the rods D, provided with shoulders *g f* and springs *h k*, the tine C, the swivel B, and pulley *b*, operating substantially as herein specified.

87,980.—THOMAS SIM and ELIAS S. HUTCHINSON, Baltimore, Md.—*Mode of Preparing Grain for Distillation.*—March 16, 1869.

Claim.—1. The removal from grain, or other material, of oils, by a chemical agent, as a preliminary to fermentation and distilling.

2. As an improved process of producing distilled spirits, removing, by a chemical agent, the oil from the unfermented grain, or other material, and subsequently mashing, fermenting, and distilling the same, substantially as described.

87,981.—A. G. SNYDER, Ashtabula, Ohio.—*Wood-Bending Machine.*—March 16, 1869.

Claim.—The abutment-shoe D, strap G, jam-plate and hook G′, yoke J, plate J′ and wedge H′, all constructed and arranged to operate in combination with the loop H and bed C, for the purpose specified.

87,982.—JAMES M. SPANGLER, Canton, Ohio.—*Combined Horse-Rake and Hay-Spreader.*—March 16, 1869.

Claim.—In combination with a revolving rake-shaft and rake, the disk-wheel K, with its recesses and planes, and the spring-shipper, for throwing said rake into and out of gear with the drive-wheel, substantially as described.

87,983.—NELSON STAFFORD, Brooklyn, N. Y.—*Stencil-Cutting Gauge.*—March 16, 1869.

Claim.—The clamps *a* and *b*, to grasp the sheet of metal or other material, in combination with the rod *d* and movable gauge *f*, the parts being constructed and arranged substantially in the manner and for the purposes set forth.

87,984.—GEORGE A. STARKWEATHER, Waymart, Pa.—*Apparatus for Leaching Bark and other Materials.*—March 16, 1869.

Claim.—The combination and arrangement of the devices herein shown and described, consisting of the conducting pipe C, the distributing tubes B, with their apertures *s* and the joint *c*, constructed and operating substantially as and for the purposes specified.

87,985.—ANSON P. STEPHENS, Brooklyn, N. Y., assignor to himself, NATHAN STEPHENS, and MELVIN STEPHENS, same place.—*Rotary Metal-Cutter.*—March 16, 1869.

Claim.—The notched wheel *b*, formed with the ledges 2, for sustaining the cutter-plates *c*, and with openings for the introduction of a wedge or pin for removing the cutters, substantially as set forth.

87,986.—BENJAMIN F. STEPHENS, Brooklyn, N. Y.—*Putting up Codfish for Use.*—March 16, 1869.

Claim.—The mode of preparing fish and animal substances, by the use of glycerine, after the watery portions have been removed, substantially as set forth.

87,987.—THOMAS B. STOUT, Keyport, N. J.—*Head-Rest.*—March 16, 1869.

Claim.—The combination of the frame A A B, constructed substantially as described, for attachment to the person, and the head-rest C, adjustable in height upon said frame, for the purpose herein specified.

87,988.—ALVIN TAPLIN, Somerville, Mass.—*Lamp-Burner.*—March 16, 1869.

Claim.—The arrangement of the series of inclined top areal bearers *f*, and the stop projections *a g*, with the elevated foraminous deflector C, and the series of springs *e*, arranged and combined with the chimney-rest, as described.

87,989.—CHARLES W. TIERNEY, Altoona, Pa.—*Snow-Plow.*—March 16, 1869.

Claim.—The combination of the screw C and fan D, when arranged to operate together in case B, substantially in the manner and for the purpose described.

87,990.—GEORGE H. TODD, Montgomery, Ala.—*Cartridge-Shell.*—March 16, 1869.

Claim.—1. The sliding bar D, constructed, arranged, and operated substantially as described.

2. The combination of the slide-bar D, cylindrical tube *a*, and cap *b*, all constructed, arranged, and operated as and for the purpose described.

87,991.—TROILUS H. TYNDALE, Springfield, Ill.—*Carpet-Fastener.*—March 16, 1869.

Claim.—1. The socket A, its mortise a^1 and slot a^2, in combination with the fastener-bar B and screw a^3, substantially as and for the purpose set forth.

2. The bar B, arranged with recesses, and combined with the springs C, substantially as and for the purpose set forth.

87,992.—JAMES WATERS, Minneapolis, Minn.—*Steam-Generator Gauge-Cock.*—March 16, 1869.

Claim.—A gauge-cock, consisting of stock A, valve-case K, valve E, valve seat L, inlet C, and lever D, arranged substantially as described.

87,993.—C. H. WESTON, Lowell, Mass.—*Hose and Pipe Coupling.*—March 16, 1869; antedated November 18, 1868.

Claim.—The combination of the open wedge-shaped metal ring E, with an inner circumferential shoulder and flange, *a*, as shown, with the rings A B, tube C, and flexible hose D, all substantially as set forth.

87,994.—C. H. WESTON, Lowell, Mass.—*Steam Device for Cloth-Pressing.*—March 16, 1869; antedated February 2, 1869.

Claim.—1. The construction and arrangement of the steam-pipes of the steam-press with the hollow plates, whereby the least possible number of joints is required, and much expense of construction avoided, substantially as herein set forth.

2. The hollow plate A, provided with bars *e e*, so arranged that the steam or water admitted into said plate may pass around the outer edge first, and then around said bars toward the center, substantially as herein set forth.

87,995.—A. S. WHITTEMORE, Willimantic, Conn.—*Grain-Thrasher.*—March 16, 1869.

Claim.—1. The balance-wheels D, with flails *f*, arranged within the frame A, substantially as described, and for the purpose herein set forth.

2. The curved sieve G, with top *g*, in combination with a grain-thrasher, substantially as herein specified.

3. The thrashing-machine, constructed as described, and consisting of balance-wheels D, flails *f*, rest E, and curved sieve G, all arranged within a suitable frame, substantially as herein set forth.

87,996.—James W. Wilder and Asa B. Stow, Middletown, Conn.—*Process of Preparing Articles of Gold, Silver, Glass, &c., to enable the same to be Photographed.*—March 16, 1869.

Claim.—The method or process of preparing gold, silver, glass, and earthen and other wares, and burnished and polished surfaces, so as to obtain clear and sharp photographs of the same, substantially as herein specified.

87,997.—David Williamson, New York, N.Y., assignor to James Williamson, same place; and said James Williamson assigns his right to himself and David Williamson.—*Breech-Loading Arm.*—March 16, 1869.

Claim.—1. The breech-block *d*, provided with the ribs and grooves 3, and fitted to slide back when raised out of the recess *c*, in combination with the lever *g*, slot 5, and pin *o*, substantially as specified, so that the lever *g* communicates to the breech the motions specified.

2. The sliding retractor *i*, within an undercut groove at the bottom of the recess *c*, in combination with the breech-block *d*, for holding down the forward end of said breech-block, as well as withdrawing the cartridge-case, as specified.

87,998.—Swain Winkley, New York, N. Y.—*Spike.*—March 16, 1869.

Claim.—The projecting shoulders or rings on the sides of the body of the spike, in combination with the inclined or wedge-shaped head *a* and *b*, constructed substantially as described.

87,999.—Calvin Witty, Brooklyn, N. Y.—*Velocipede.*—March 16, 1869.

Claim.—A two-wheeled velocipede, formed by combining with the rear wheel-cranks *k*, connecting-rods *g* and links *h*, pivoted to the perch *e*, to be operated by the feet, for propelling the same, substantially as set forth.

88,000.—Alfred T. Perrine, Louisville, Ky.—*Boot-Heel.*—March 16, 1869.

Claim.—1. The base-plate A, with its raised and beveled rim and its boss *a*, raised from its center, when constructed substantially as and for the purpose described.

2. In combination with the above, the heel-shell B, in one piece, with its beveled and flared lower edge, and with its horizontal partition dividing it into two compartments, when constructed as and for the purpose described.

3. In combination with the base-plate A and heel-shell B the cap or top E, the soft-rubber pads D, C, and C′, the screw-bolt F, and the shank G, when constructed substantially as and for the purposes described.

88,001.—J. B. Park, Omaha, Nebraska.—*Water-Wheel.*—March 16, 1869.

Claim.—The arrangement eccentrically within the scroll D of the buckets B, and cycloidal-shaped top and bottom plates of the core A, whereby the buckets are opened by the direct action only of the water through the throat E, and commence to close by the side of the scroll at the near end of the bottom discharge H, and continue closing to the point *f*, from which point to the point *d* they remain closed, all as herein described, for the purpose specified.

88,002.—George Atkins, Sharon, Pa., assignor to George W. Westerman, Robert Fox, and Robert May, same place.—*Manufacture of Sheet-Iron.*—March 23, 1869.

Claim.—1. The process of forming what is known as Russia sheet-iron, or that which strongly resembles it, and possesses most, if not all of its properties, substantially in the manner hereinbefore described and set forth.

2. In the process of forming sheet-iron, the use of marble-dust and charcoal, for carbonizing the iron preparatory to its receiving the desired surface, substantially in the manner above shown.

3. In the process of forming sheet-iron, the mode of rolling the sheets singly, and afterward in "packs," in the manner above described, that is to say, by first heating the sheets, and then continuing the rolling till they become of a black heat and even afterward, substantially in the manner above described.

88,003.—Walter Baker, Ilion. N. Y.—*Manufacture of Breech-Plates for Guns.*—March 23, 1869.

Claim.—Combining with the rolls *b b* the series of dies specified, for forming breech-plates, all constructed and operating successively upon the blank, in the manner described.

88,004.—Edward Beanes, Cordwalles, (near Maidenhead,) Great Britain.—*Brewing.*—March 23, 1869.

Claim.—In the process of brewing, the treating the brewing-materials with sulphurous acid, or the salts of sulphurous acid, hereinbefore mentioned, before their entrance into the mash-tun, during the process of mashing or during the process of boiling the wort with the hops, and consequently before the fermentation of the liquor has taken place, and the production thereby of an improved quality of beer.

88,005.—Julius Boden, Columbia. Pa.—*Automatic Boiler-Feeder.*—March 23, 1869.

Claim.—The arrangement, in reference to the boiler, of the pipe D and branch U, the tube F, and the other devices for operating the valve in the cylinder L, with the pipes M and O, and safety-valve and lever Q, all as herein described.

88,006.—W. Leigh Burton, Richmond, Va.—*Electro-Heating Apparatus.*—March 23, 1869; antedated March 12, 1869.

Claim.—Evolving and accumulating heat from electricity, by means of a chain, or coil, made up of an alternate succession of reservoirs and obstructions, assembled and arranged in a compact space within a suitable casing, substantially as set forth.

88,007.—E. G. Cameron, Tiffin, Ohio.—*Fifth-Wheel for Vehicles.*—March 23, 1869.

Claim.—The grooved circle C, in combination with the under circle B, and lubricating-cups D D, substantially as and for the purposes herein set forth.

88,008.—Luther S. Chase, and Zebina H. Chase, New Bedford, Mass.; said L. S. Chase, assigns his right to Z. H. Chase.—*Valve for Bottoms of Vessels.*—March 23, 1869.

Claim.—The valve D, operating in recess R, in the side of a vessel, in combination with shaft F, indicator *i*, and pipe, or ventilator E, the whole constructed and arranged substantially as and for the purposes set forth and described.

88,009.—Robert Chesnut, Richmond, Ind. assignor to himself and George Kelly, same place—*Hay Raker and Loader.*—March 23, 1869.

Claim.—1. The series of convergent belts I I′, &c., in combination with the pulleys C, when the latter have unequal diameters, substantially as set forth.

2. In combination with the rake R, the toothed cylinder A, rods *d d′*, &c., pulleys C, and convergent belts I I′, &c., the whole operating substantially as and for the purpose set forth.

88,010.—Stephen Chester, New York, N. Y. and Charles T. Chester, Englewood, N. J.—*Tripping Mechanical Detents.*—March 23, 1869; antedated March 4, 1869.

Claim.—1. The adjustable spring-catches arresting the detent, by means of which the delicacy of the trip is adjusted, and the wear of the parts compensated for.

2. The combination of the lever Q, with its adjustable spring-hook, or hooks, the barbed detent, the lever J, the roller K, the crank-arm G, the cam L, which acting together, allow a small force to liberate machinery, and which restore themselves to their relative positions in rest, substantially as described and for the purposes set forth.

88,011.—Orson E. Clark, Waterford, Mich.—*Cooking-Stove.*—March 23, 1869.

Claim.—1. The stove, with base A, legs B, fire-box C, chamber F, and auxiliary fire-boxes O, when constructed, arranged and operating substantially as herein described, in connection with the water-tank M and its connecting-pipes L.

2. The rectangular box, or oven X″, in connection with said stove and water-tank, when arranged and operating substantially as set forth.

88,012.—William A. Cobb, Orange, Mass.—*Projectile.*—March 23, 1869.

Claim.—The rifled internal shot B, having a central longitudinal passage, the screw-rod I, nut *g*, can C of coarse powder, can F, of fine powder, and the cartridge, or cap H, in combination with the rifled external shell, or shot A, as herein described, for the purpose specified.

88,013.—Henry W. Connor, Troy, N. Y.—*Oar.*—March 23, 1869.

Claim.—The arm E, combined with the hinge F and the pin I, substantially as and for the purposes herein set forth.

88,014.—James Coyle, Boston, Mass.—*Flour-Sifter.*—March 23, 1869.

Claim.—The rectangular frame A, seive C, and rollers E, suspended therein, when combined substantially as specified.

88,015.—James Dampman, Lebanon, Pa.—*Lifting-Jack.*—March 23, 1869.

Claim.—The combination of the grooved and perforated standard A, yoke C, connecting-link D, lever E, fulcrum block F, and pins G H, with the lifting-block B and stud I, substantially as described, for the purpose specified.

88,016.—Frederick P. Deuel, Tecumseh, Mich.—*Apparatus for Butter-Making.*—March 23, 1869.

Claim.—The arrangement and combination of the bevel-geared wheel A, pinions F H, crank E, and frame C, with the shaft G, hollow shaft I, cylinder K, propeller-screws J M, arms L, air-tube N, and churn O, when constructed and operating substantially as herein described, set forth, and shown.

88,017.—L. R. Dexter, Whitefield, N. H.—*Wrench.*—March 23, 1869.

Claim.—The combination of the taper-socket A, handle B, and the spring-clamp D, all constructed and arranged substantially in the manner as and for the purpose set forth.

88,018.—E. L. Dorsey, Winslow, Ind.—*Road-Scraper.*—March 23, 1869.

Claim.—1. The arrangement of the sliding-frame C, scraper E, strap, or belt T, lever K, ring, or bail J, and lever G, all constructed and operating substantially as and for the purposes herein set forth.

2. In combination with the sliding frame C and scraper E, the sliding bar N, spring O, hook P, and lever R, for the purpose of steadying the scraper, preventing it from dumping, and assisting in loading, substantially as herein set forth.

3. The arrangement of the lever V, belt, or strap U, and pivoted scraper E, for the purpose of dumping the latter, substantially as herein set forth.

4. The arrangement on the sliding frame C of the spring X and step W, substantially as and for the purposes herein set forth.

88,019.—William G. Douglas, Warrenton, Va.—*Roller for Extracting Cockle from Wheat.*—March 23, 1869.

Claim.—In a grain-cleaning machine, cork rolls, to be arranged in pairs, or in juxtaposition with other suitable ones, as described and for the purpose set forth.

88,020.—Jacob Edson, Boston, Mass.—*Mold for Casting Pipe.*—March 23, 1869.

Claim.—1. The combination of the core-head K, the core-spindle L, and the flask A B, as specified.

2. The tapering-threaded cores F F F F, in combination with core-head K, as specified.

88,021.—Alfred B. Ely, Newton, Mass.—*Bridle-Bit.*—March 23, 1869.

Claim.—A bridle-bit, constructed as described.

88,022.—Freeman Emmons, Danvers, Mass.—*Book-Holder.*—March 23, 1869.

Claim.—A book-clasp, as constructed and arranged, substantially in the manner and for the purpose herein described.

88,023.—Samuel F. Estell, Richmond, Ind.—*Straw-Cutter.*—March 23, 1869.

Claim.—1. The cam-wheel N, pivoted bar G, and pawls I J, when combined and operated substantially in the manner and for the purpose set forth.

2. In combination with the cam-wheel N, and pivoted bar G, the set-screw R, for regulating the feed, substantially as set forth.

3. The crank Y, knife B, and swinging arm Q, when combined and operated substantially as described.

88,024.—Myron J. Ferren, Stoneham, Mass.—*Welt-Knife.*—March 23, 1869.

Claim.—The combination, with the jaw A, of the clamping-jaw B and cutter G, substantially as specified.

88,025.—Simeon B. Forbes, Steubenville, Ohio,—*Cultivator-Plow.*—March 23, 1869.

Claim.—1. In a cultivator-plow, a half shovel, *a*, with one or more side-cutters *s*, attached to a beam, or standard, *b*, along the line of its inner or vertical edge, substantially as hereinbefore set forth.

2. A cultivating apparatus, having two or more half shovels *a*, connected with adjustable beams and handles, and with one or more cultivator-teeth *e*, constructed substantially as above set forth.

88,026.—Charles S. H. Foster, Deer Isle, Me.—*Mackerel-Latch.*—March 23, 1869.

Claim.—A latch, as constructed, with stock D, the catches *a a*, and channels for the lines *c c*, substantially as and for the purposes specified.

88,027.—William Franz and William Pope, Crestline, Ohio.—*Knitting-Machine.*—March 23, 1869.

Claim.—The ring B, having the annular groove A in combination with the cam-cylinder C, provided with the vertical groove D, substantially as described, for the purpose specified.

88,028.—Lambert Freeman, New York, N. Y.—*Extension-Table.*—March 23, 1869.

Claim.—The extension-table, having the two long sides of its body A provided with the double grooves, for the passage of the long bars F, which are attached to the leaves D, the space between said double-grooved sides being filled with the deep box G, one of whose ends is closed by the vertically-sliding board a^2, all arranged and operating as described, for the purpose specified.

88,029.—Roscoe R. Frohock, Boston, Mass.—*Last-Machine*, March 23, 1869.

Claim.—1. The arrangement of the guide swinging-frame M and the cutter-wheel swinging-frame L, when operating in combination with each other, as described, and for the purpose set forth.

2. The grading-device, consisting of the arc L^5, attached to the swinging-frame L, in combination with the slide P, link P^4, and frame M, arranged to operate substantially as described and shown, and for the purpose set forth.

3. The combination of the sliding bars L^4 M^4, the links N N′, the slide N″, and the bar N‴, when constructed and arranged to operate substantially as described, and for the purpose set forth.

88,030.—Benjamin Geyler and Frederick Geyler, Cincinnati, Ohio.—*Bung-Cutter.*—March 23, 1869.

Claim.—The arrangement of the slotted head and shank A C, the sleeve L, keys I, slotted adjustable

cutters E, and slotted yielding center-pin N, all constructed to operate as herein shown and described.

88,031.—William H. Goodale, Colton, N. Y.—*Making Cone Springs.*—March 23, 1869.

Claim.—The improved apparatus for forming upholstering cone springs, consisting of a die, or holder C, frame A, vertical-sliding frame E, tube P, spirally-grooved cone F, cutters H and I, lever J, spring K, level L, connecting-rod M, treadle, or foot-lever N, and ratchet and pawl, all constructed and arranged upon the frame, substantially as herein shown and described, and for the purposes set forth.

88,032.—Daniel W. Green, Port Chester, N. Y., assignor to William Brundage, same place.—*Faucet.*—March 23, 1869.

Claim.—The faucet, constructed as described, of the chambered sleeve B, adapted to screw upon the end of the tube A, and carrying the slotted extension-tube C, whose top forms a valve, *a*, adapted to open or close the faucet, as the sleeve B is operated, as herein shown and described.

88,033.—Thomas Griffin, Roxbury, Mass.—*Cigar and Cigarette.*—March 23, 1869.

Claim.—A cigar or cigarette, having a permanently attached flexible month-piece upon one end, which is composed of ingredients mixed in the proportions substantially as described.

88,034.—Anthony Grohmann, South Saginaw, Mich.—*Cultivator.*—March 23, 1869.

Claim.—The implement described, having the sickle-back cutters J, in combination with the adjustable beams C and F, and center-beam A, as described, for the purpose set forth.

88,035.—Stuart Gwynn, New York, N. Y.—*Machine for Constructing Vegetable Membrane.*—March 23, 1869.

Claim.—1. Machinery and apparatus combined, containing the various members of an organization equivalent to that herein described, by the use of which like results can be obtained in the manufacture of "vegetable membrane," and any other analogous composition of matter.

2. The separate members of the organization of machinery and apparatus, if used for the purpose described, or when combined with any other machinery, if the combination is used for an equivalent manufacture.

88,036.—Stuart Gwynn, New York, N. Y.—*Vegetable Membrane, or Parchment.*—March 23, 1869.

Claim.—The new composition of matter, named "vegetable membrane," produced substantially as described, and its use in the arts for the purposes herein indicated, and for such others as it may be found desirable to employ it in, either alone or in combination with other substances.

88,037.—L. M. Ham, Boston, Mass.—*Slate Punching and Cutting Machine.*—March 23, 1869.

Claim.—1. In a slate-cutting machine, the revolving table K, in combination with the cutter-wheel H, arranged and working substantially as described and for the purpose set forth.

2. The punch-carrying lever L, arranged and working in combination with the table K, substantially as described and for the purpose set forth.

3. Combining with the table K, the semicircular adjusting-pieces O O′, &c., substantially as described and for the purpose set forth.

88,038.—James H. Harris, Vermont, Ill.—*Trace-Carrier.*—March 23, 1869.

Claim.—1. In combination with a wagon or carriage harness, the ring A, plate B, and hooks *c*, arranged and operating substantially as and for the purposes described.

2. The plate B′ and hook *c*, in combination with a harness, substantially as and for the purposes described.

88,039.—M. C. Hawkins, Edinborough, Pa., assignor to himself and A. Z. Waters, same place.—*Sewing-Machine.*—March 23, 1869.

Claim.—1. The combination of the feed-cams, and the disks M *m*, with the wrist-pin *n* and yoke K, all constructed substantially as shown and described.

2. The shuttle L, when provided with the rebate *k′*, for the reception of the looping-hook N, for the purpose of retaining the thread below the shuttle while the latter is passing through the loop, as herein set forth and shown.

3. Operating the looping-hook N and feed-bar P, through the media of the cams *a′ b′ c′*, lever *h′*, and the fixed arm *i′*, provided with a buffer, *j′*, all combined and arranged substantially as and for the purpose specified.

88,040.—Henry R. Huling, Boston, Mass., assignor to himself and John M. Marston, same place.—*Mechanical Movement.*—March 23, 1869; antedated March 10, 1869.

Claim.—The combination of the elliptical wheels A and B with other mechanism, substantially as and for the purpose specified.

88,041.—Edwin Hutchings, Hartford, Conn.—*Printers' Galley.*—March 23, 1869.

Claim.—Printers' galley, provided with rests C, to bear upon the tops of the tables when receiving the type, substantially as specified.

88,042.—S. Jennings, Patterson, N. Y.—*Thill-Shifter.*—March 23, 1869.

Claim.—The combination and arrangement of the draught-irons E, two bolts F, catch G, spring H, stationary catch I, and connecting-eyes, with each other, with the cross-bars *d′* and C, and forward beam, or knees of the sleigh, substantially as herein shown and described, and for the purpose set forth.

88,043.—J. R. Jones, Clarksville, Iowa.—*Harvester-Reel.*—March 23, 1869.

Claim.—1. The beaters A, supported on arms hinged to the hub, and combined with a movable guide-ring, capable of guiding them laterally in either direction, substantially as specified.

2. The beaters A, supported on arms hinged to the hub, and combined with a movable guide-ring and a mechanism for oscillating the said arms, substantially as specified.

3. The combination, with the inner set of arms B, connected to the outer set by rods D, and having the hooked fingers G, of the jointed guiding-ring *c*, substantially as specified.

88,044.—John H. Kiplinger and Joseph Kiplinger, North Manchester, Ind.—*Fly-Trap.*—March 23, 1869.

Claim.—1. The box A, constructed as described, with a slotted partition, D, dividing it into two chambers, said partition having an opening, *f*, and slide, or drop, *g*, which latter is operated, that is, raised and lowered, by the rapid transferring of the sliding cover G from one chamber to the other, substantially as herein set forth.

2. The box F, constructed as described, with a perforated bottom, *n*, glass or other transparent cover, *i*, opening *k*, and door *m*, at one end, corresponding with similar opening and door at the end of the box A, and at the other end with opening and slide *p*, all substantially as and for the purposes herein set forth.

3. The combination of the box A, divided into two chambers, B and C, elongated bottom, E, sliding box F, and sliding cover G, all constructed and operating substantially as and for the purposes herein set forth.

4. A fly-trap, constructed of a series of boxes, or chambers, having suitable passages and openings, to allow the flies to pass from one to the other, substantially as herein set forth.

88,045.—Henry Landes, Bath, Pa.—*Cultivator.*—March 23, 1869.

Claim.—1. The arrangement of the beam A, bars D D, standard G, bar H, handles F F, wheel C, bar E, levers *d*, plate *b*, and hoes I I, all constructed substantially as set forth.

2. The hoes I I, when constructed as described, and arranged, two on each side-beam, and one on the center-beam, substantially as set forth.

88,046.—CHARLES LANE and JESSE M. HEALY, Jamestown, N. Y.—*Harrow.*—March 23, 1869.

Claim.—A flexible harrow, consisting of the bars A A, that are connected by jointed bolts, as set forth

88,047.—BENJAMIN M. LAWRENCE, Galesburgh, Ill.—*Hygieometer.*—March 23, 1869.

Claim.—1. The lever D″, handles U, straps *s*, rods F and H, cord *p*, pulley *q*, index *n*, cord or chain *r*, and belt *t*″, all constructed, and arranged, and combined as described, and for the purpose set forth.

2. The frame A, with pulleys P, O, and R, cross-bar *z*, cords 8, 6, and 3, pulley V, handles U, foot-holds *s*″ *s*″, and lever D″, combined and arranged as described, and for the purpose set forth.

3. The hand-holes *x l k*, constructed as described, and when used in combination with the handles U, for the purpose described.

4. The hand-hold *d*‴, combined, as described, with the cord R″, for the purpose set forth.

5. The sack *a b c*, combined with the frame A, and constructed substantially as described, and for the purpose set forth.

88,048.—DANIEL P. LEACH, Franklin, Ind.—*Corn-Planter.*—March 23, 1869.

Claim.—The combination of the slide E *e*′, connecting-bar F, swinging lever G, adjustable connecting-bar I, arm J, rack-shaft K, bar L, adjustable standard M, and wheel N, with each other, and with the seed-box D *d*′, and body or frame A, substantially as herein shown and described, and for the purpose set forth.

88,049.—A. W. LIVINGSTONE, Bluffton, Ind.—*Sash Fastener and Hoisting Device.*—March 23, 1869.

Claim.—The T-shaped guide *c*, secured to the window-casing A, and the ratch-bars *b b*, on the sash B B, arranged in combination with the lever *i*, bolt *h*, arm *m*, movable collar *f*, and pinion *g*, all substantially as herein set forth.

88,050.—JOHN H. LIVINGSTON, Providence, R. I.—*Boot.*—March 23, 1869.

Claim.—The improvement in the manufacture of boots, which consists in making, independent of the leg, the counter and vamp of one piece of material, when constructed as herein described, for the purpose specified.

88,051.—JAMES F. LOWE, Louisville, Ky.—*Hoe.*—March 23, 1869.

Claim.—The bifurcated hoe F, when connected with the handle A by means of three prongs, B B B, rivcted to the blade, as described.

88,052.—WILLIAM R. MANLEY, New York, N. Y., assignor to himself and WILLIAM H. WEBB, same place.—*Paddle-Wheel.*—March 23, 1869.

Claim.—The arrangement and combination of the eccentric of the controlling-frame of the paddles of a feathering paddle-wheel with the paddle-shaft, and with the ship, in such manner that said eccentric is both supported upon the paddle-shaft and connected with the ship by means of a flexible connection, substantially as before set forth.

88,053.—BENJAMIN F. MATTOX and SIDNEY CORSON, West Ridge, Ill.—*Chamfering-Machine.*—March 23, 1869.

Claim.—The combination and arrangement herein described of the upright, B, adjustable right-angular arm C D, adjustable part E, the crank-head G, revolving adjustable arm I, plate J, and adjustable chamfering-tool K, all operating as described, for the purpose specified.

88,054.—ROBERT MCCULLEY, Philadelphia, Pa.—*Portable Bath-Tub.*—March 23, 1869.

Claim.—The combination, as herein described, of a single flexible water-proof inner lining, with an outer box or frame composed of detachable side and end-pieces, the whole constituting a portable bath-tub, specially adapted for invalids, as herein set forth as an article of manufacture.

88,055.—F. MCMANUS, Ellenburgh Centre, N. Y.—*Railroad-Car Heater.*—March 23, 1869.

Claim.—The chamber B, side-chambers A A, registers C C, and smoke-flue E, provided with partition I, all being constructed, combined, and arranged in the manner and for the purpose set forth.

88,056.—CHARLES MESSENGER, Cleveland, Ohio.—*Churn.*—March 23, 1869; antedated March 9, 1869.

Claim.—1. The spindle C, in combination with the thimble D, for the purpose specified.

2. The agitators E, as arranged, in combination with the churn B, for the purpose and in the manner set forth.

3. The churn B, lug I, and spring J, as arranged, and operated in the manner as and for the purpose described.

88,057.—WILLIAM A. MIDDLETON, Harrisburgh, Pa.—*Combined Coat-Hook and Line-Holder.*—March 23, 1869; antedated March 12, 1869.

Claim.—The coat-hook C, in combination with the lever D, constructed as described, or its equivalent, and acting as a line-holder, substantially as and for the purposes herein set forth.

88,058.—PETER MILLER, Jr., Fredonia, N.Y.—*Bee-Feeder.*—March 23, 1869.

Claim.—The box A, provided with the partitions *a* a^1, the chambers *b c*, the passages *d* a^2 a^3, and the float *h*, substantially as described.

88,059.—CHARLES W. MILLERD, Montieello, Ark.—*Cotton-Press.*—March 23, 1869.

Claim.—The combination of the grooved beam C, screw D, shoe *b*, toggle-beam E, and follow-block F, all constructed and operating together, substantially as and for the purpose herein shown and described.

88,060.—JAMES L. MOORE, Bridgeport, Conn.—*Pencil-Holder.*—March 23, 1869.

Claim.—A pencil-holder, constructed out of a single piece of wire, bent in the manner substantially as herein shown and described.

88,061.—SAMUEL RODMAN MORGAN, Philadelphia, Pa.—*Apparatus for Transmitting Rotary Motion.*—March 23, 1869; antedated March 8, 1869.

Claim.—Communicating rotary motion by means of spiral surfaces, arranged and operating together substantially in the manner set forth.

88,062.—JOHN NAUGLE, Mooresville, Ind.—*Automatic Fan.*—March 23, 1869.

Claim.—1. The sliding clutch F, in connection with the pinions *d d*′, clutches E^1 E^2, check G, stop-wheels c^4 c^5, rib e^2, lever I, pins i^2 i^3, and shaft D, constructed and operated in the manner and for the purpose set forth.

2. The connection of the adjustable socket l^2 with rod l^1, head L, and set-screw L′, supported and moved by shaft D, as and for the purpose described.

88,063.—ISAAC H. NEWTON, Grand Rapids Mich.—*Device for Turning Logs in Mills.*—March 23, 1869; antedated March 10, 1869.

Claim.—1. The reciprocating rod F, provided with shoulder G, operated by the hook-lever E, and actuating the canting-lever H, in combination with the cant I, when constructed and operating as described.

2. The combination of the cants I, canting levers H, shaft B, connecting-rods F, with shoulders G, shaft J, lever K, trippers L, and pins M, all arranged substantially as and for the purposes set forth.

88,064.—JOSEPH NICKERSON, Booth Bay, Me.—*Process of Preparing Fish for Food.*—March 23, 1869.

Claim.—The method above described of preparing fish.

88,065.—FRANCIS M. NIXON, Lena, Ill., assignor to himself, WILLIAM LEET, WILLIAM DIXON, and JACOB S. BEST, same place.—*Hand Spinning-Machine.*—March 23, 1869.

Claim.—1. The combination, with the frame A, of the internally-geared driving-wheel D, mounted on the adjustable arm *c*, and the counter-shaft *e*, carry-

ing the spur-pinion E and band-wheel F, mounted on the stem, all constructed and arranged as set forth, whereby the speed of the spindle may be varied, as described.

2. The combination, as set forth for joint operation, of the frame A, the adjustable driving-wheel D, the counter-shaft *e*, and the band-wheel F, with the adjustable arm I, carrying the spindle, all constructed and arranged as and for the purposes specified.

88,066.—Samuel Oakman, Boston, Mass.—*Glass-Furnace.*—March 23, 1869.

Claim.—Combining, with a glass-furnace, a vacuum-chamber, V, arranged with openings and flues, substantially as described, when the same is provided with mechanical exhaust-device, working substantially as described and for the purpose set forth.

88,067.—Oscar Paddock, Watertown, N. Y.—*Horse Hay-Fork.*—March 23, 1869.

Claim.—So combining the two tines of a horse hay-fork, that one shall serve as the handle of the other when the two are spread apart, by means of a shoulder upon one, and a correspondent face upon the other, without the use of any auxiliary device, substantially as described.

2. The combination of the lifting-attachment *e* with the locking-bar *c*, as and for the purpose set forth.

3. The arrangement of the locking-bar *e* with the tine B, in the manner and for the purpose set forth.

4. The arrangement of the tines A B with the locking-levers *c d*, in the manner and for the purpose set forth.

88,068.—Carlos L. Page, Cambridge, Mass.—*Money-Drawer.*—March 23, 1869.

Claim.—The combination and arrangement of the drawer D, cover E, plugs F O and F′ O′, or their mechanical equivalents, arranged and operating substantially as described and for the purpose set forth.

88,069.—C. D. Palmiter, Oswego, N. Y., assignor to himself and Lavinia P. Webb, same place.—*Water-Elevator.*—March 23, 1869.

Claim.—The combination of the friction-pieces *a* and *b*, the stud *j*, spiral recess or slot *k*, and spring *e*, arranged substantially as shown and described.

88,070.—Byron Partello, Detroit, Mich.—*Spring-Bed Bottom.*—March 23, 1869.

Claim.—The combination and arrangement of the frame A, transverse slats B, springs C, metallic frame D, transverse metallic strips *d*, studs E, posts F, and wires G, when constructed, arranged, and operating substantially as described, and for the purposes specified.

88,071.—Hiram Perry, Manlius, N. Y.—*Fruit-Gatherer.*—March 23, 1869.

Claim.—1. The table A, when arranged to slide vertically upon the standard B, substantially as and for the purpose herein set forth.

2. The table A *a* C, hinged arms D *d*, standard and winch B *b*, constructed and operated as herein shown, and for the purpose described.

88,072.—Edward R. Playle, Great Bend, Pa.—*Crucible for Melting Metals.*—March 23, 1869.

Claim.—A crucible, whose outer surface is corrugated as herein described.

88,073.—George Sanford Randall, Providence, R. I.—*Case for Melodeons, &c.*—March 23, 1869; antedated September 23, 1868.

Claim.—The case for musical instruments, constructed with closets on the sides of the bellows pedals, substantially as and for the purposes as described.

88,074.—Alvin Rathbun, Smith's Mills, N. Y.—*Grape-Trellis.*—March 23, 1869.

Claim.—The combination of the post A and the band B with the oblique bars C.

88,075.—Abraham Reed, Louisville, Ky.—*Composition for Kindling Fires.*—March 23, 1869.

Claim.—The linseed-oil, the coal-oil, the pulverized charcoal, the pulverized cannel-coal, the common tallow, the resin, and the sawdust, when compounded or prepared and used for the purpose and in the manner set forth.

88,076.—C. H. Reynolds and George Z. Clark, Croton Falls, N. Y.—*Teapot.*—March 23, 1869.

Claim.—In combination with a teapot, the scraper C, or its equivalent, arranged and operated substantially as and for the purposes herein shown and described.

88,077.—L. H. Rogers, Boston, Mass., assignor to himself and George A. Rogers, same place.—*Toilet-Mirror.*—March 23, 1869.

Claim.—The combination of the hinged bar C, sliding rod D, hinged plate E, and swivel-pin *b*, for connecting a reflecting mirror, F, with the main mirror A, all arranged and operating substantially as herein shown and described.

88,078.—William M. Rumrill, Roanoke, Ind.—*Churn.*—March 23, 1869.

Claim.—The arms B, arranged at right angles to each other, at different heights upon the dasher A, when provided with the butter-gatherers D and the floats C C, slotted at right angles to said arms, as herein described for the purpose specified.

88,079.—Silas C. Salisbury, New York, N. Y.—*Apparatus for Generating Gas and Heating Dwellings and other Buildings.*—March 23, 1869.

Claim.—1. In combination with apparatus or retorts for the manufacture of gas, the application and use of a heating-furnace, consisting of an inner fire-chamber and an outer combustion-chamber, constructed and combined substantially as described, with air-tubes and spaces between the walls of the fire-chamber to supply air, or air and steam, to both such chambers, and the inner chamber being covered with or separated from the combustion-chamber by a perforated arch or top, substantially as and for the purposes set forth.

2. The combination of a heating-furnace, constructed as described in the last claim, with the evaporating vessel G and retorts 1, 2, 3, constructed and operating substantially as and for the purposes set forth.

3. The form and arrangement of the closed or evaporating vessel G, substantially as described, for converting the oil and water into gases, for the purposes set forth.

4. The combination with the evaporating vessel G of the retorts 1, 2, 3, so arranged that the gas is compelled to travel through the entire circuit of each retort, for the purposes set forth.

5. Placing the evaporating vessel G and retorts 1, 2, 3, in the combustion-chamber, or away from immediate or close contact with the burning coal, for the purposes set forth.

6. The combination of the evaporating vessel G and retorts 1, 2, 3, constructed as described, with the gas-washer F and gas-holder I.

7. The method of cleaning the retorts 1, 2, 3, by passing steam through them, substantially as and for the purposes set forth.

8. In combination with the apparatus, substantially as described, for the manufacture of gas, the construction and arrangement of the inclosing hot-air chamber, for heating air or water, for the purposes set forth.

88,080.—Silas C. Salisbury, New York, N. Y.—*Furnace for Upright Steam-Generators.*—March 23, 1869.

Claim.—1. The construction of the sides of the fire or preparing chamber with double or outer and inner walls, and with tubes and air-passages between them for the supply and heating of the air, substantially as set forth.

2. The construction and arrangement of the perforated air-tubes *d*, for supplying air to the fire or preparing chamber, and in combination therewith the perforated inside lining or wall of such chamber, whereby the air is delivered to the fuel in numerous or divided jets on every side of such chamber, and on

the top of and at different points in the burning mass, substantially as set forth.

3. The construction of the fire or preparing chamber, with a continuous arch or top, perforated with numerous holes or openings, substantially as set forth.

4. The combination with the fire-chamber C constructed as described, of the outer combustion-chamber E, such outer chamber being also separately supplied with heated air and steam, substantially as herein set forth.

5. The construction and arrangement of the double walls of the preparing chamber, and the arrangement of the air-tubes and passages between such walls, whereby air or air and steam can be supplied at the same time to the fuel-chamber and to the outer or combustion-chamber, substantially as herein described.

6. The arrangement of the tubes or passages for supplying air to the fire and combustion chambers, with the perforated steam-pipe, for supplying commingled steam and air to such chambers, as herein set forth.

7. The construction and arrangement of the air and steam supplying tubes and pipes and the movable plate for governing and regulating the supply of air and steam, as set forth.

8. The combination with the vertical boiler of the fire or preparing chamber and combustion chamber, constructed and arranged substantially as described.

88,081.—Silas C. Salisbury, New York, N. Y.—*Furnace for Horizontal Steam-Generators.*—March 23, 1869.

Claim.—1. In combination with a horizontal boiler, or a steam-boiler having horizontal flues, the heating-furnace, consisting of an inner fire, or preparing chamber B, and the outer or combustion-chamber F, constructed and arranged substantially as described, whereby atmospheric air, or air and steam combined, can be furnished to both such chambers, and heated in passing thereto, such inner chamber B being also covered with or separated from the outer one by a perforated arch or top, D.

2. The arrangement of the additional combustion-chamber F′, at the rear end of the fire, or preparing-chamber B, or extension of the combustion-chamber F, behind the fire-chamber B, substantially as set forth.

88,082.—Silas C. Salisbury,, New York, N. Y.—*Reverberatory Furnace.*—March 23, 1869.

Claim.—1. In combination with reverberatory furnaces, the application and use of a heating-apparatus, or furnace, having an inner fire or preparing chamber, and an outer or combustion chamber, constructed and arranged substantially as described, and fitted with air-tubes and spaces between the wall of the fire-chamber, to supply heated air or air and steam to both such chambers, and having the inner separated from the outer chamber by means of a perforated arch or top, substantially as and for the purposes set forth.

2. In combination with a reverberatory furnace, having a fire or heating apparatus constructed and operating substantially as described, the arrangement of the steam-pipe *e*, substantially as and for the purposes set forth.

88,083.—Silas C. Salisbury, New York, N. Y.—*Blast, Smelting, and Cupola Furnaces.*—March 23, 1869.

Claim.—1. Constructing the lower part of the furnace of perforated or hollow brick, or brick having air passages, or pipes 1, 2, 3, extending through them, substantially as and for the purposes set forth.

2. In combination with the perforated brick, as described in the foregoing claim, the arrangement of the air-chamber D, substantially as and for the purposes set forth.

3. The combination, with the perforated brick, as and for the purposes described, of the steam-pipe *d*, substantially as and for the purposes set forth.

4. Supplying the hot-air blast by means of the passages 1, 2, 3, or any equivalent means, in numerous small currents or blasts, on every side of and at different points in the lower section of the furnace, for the purposes set forth.

5. A blast, or similar furnace, constructed and arranged substantially as and for the purposes set forth.

88,084.—Silas C. Salisbury, New York, N. Y.—*Furnace for Heating and Annealing Steel-Ingots, &c.*—March 23, 1869.

Claim.—1. A furnace for heating or annealing steel, glass, &c., having its heat-generator constructed in two chambers, substantially as described, and so arranged that heated currents of air, or air and steam, will be supplied to both such chambers, and the inner chamber being separated from the outer by a perforated arch or top, the entire furnace being constructed and operating substantially as and for the purposes set forth.

2. The arrangement of the several separate annealing-chambers, substantially as and for the purposes set forth.

88,085.—John E. Selden, Albany, N. Y.—*Telegraph-Apparatus.*—March 23, 1869.

Claim.—The connections *g* and *i*, or their equivalents, adapted to maintain the connection through one end of the lever C, and thus transmit the weak current to work the type-wheel, until the connection at the other end is established, so as to transmit the strong current to make the impression, all substantially as and for the purposes herein set forth.

88,086.—William F. Semple and R. W. Stephens, Mount Vernon, Ohio.—*Mode of Polishing Hard-Rubber and other Articles.*—March 23, 1869.

Claim.—The combination of the wheel and belt, so as to operate substantially as described.

88,087.—G. B. Shafer, Delta, Ohio.—*Grain-Binder.*—March 23, 1869.

Claim.—1. The winding-head B^3, constructed and arranged substantially as and for the purpose specified.

2. The combination with the same of the cutter *e*, arranged and operated substantially as and for the purpose specified.

3. The winding-head C, provided with the roller C^1, and otherwise arranged, substantially as and for the purpose specified.

4. The combination of the winding-heads B^3 and C, when arranged to operate together, substantially as and for the purpose specified.

5. The combination with the winding-head C of the cutter F, arranged and operated substantially as and for the purpose specified.

6. The loopers E adapted to receive the yarn upon their hooked ends, to form a loop, through which the pin E^4, upon the rod E^3, draws the yarn, as said rod is reeded by the spring E^5, all constructed and arranged as described, for the purpose specified.

7. The combination, with the loopers E, of the rod E^3, arranged as described, and provided with the hook E^4, substantially as and for the purpose specified.

8. The combination, with the loopers E and the hooked rod E^4, of the winding-head C, substantially as and for the purpose specified.

9. The combination of the winding-heads B^3 and C and the loopers E, and hooked shaft, substantially as and for the purpose specified.

10. The receiver A, constructed of two parts, and hinged together, as described, and provided with the balance-weight A^6 and plunger I, substantially as and for the purpose described.

11. The combination, with the winding-heads B^3 C and the looping-apparatus of the receiver, substantially as and for the purpose described.

12. The arrangement of the stop-levers G^1, disks G^2, and clutches G, and hand-cranks A^2 and A^3, substantially as and for the purpose specified.

88,088.—Isaiah Shaw, Four Corners, Md.—*Potato-Digger.*—March 23, 1869.

Claim.—1. A plow-beam *a a′ a″*, constructed substantially as described.

2. The combination of the plow-beam *a a′ a″*, constructed as described, with the shoe *b*.

3. The combination of the beam *a a′ a″*, brace *c*, pillars *d*, and shoe *b*.

4. The adjustable-wings *f f*, in combination with share S, substantially as described.

5. The projecting pieces *l l*, loosely attached to the shoe *b*, as and for the purpose set forth.

6. The combination of the share S, adjustable-wings *f f*, and projecting-pieces *l l*, substantially as described.

7. The combination of the beam *a a' a''*, shoe *b*, share S, adjustable-wings *f f*, and projecting-pieces *l l*, substantially as described.

88,089.—JOHN P. SIMMONS, Schoolcraft, Mich.—*Washing-Machine.*—March 23, 1869; antedated March 18, 1869.

Claim.—1. The movable frame E, wedge I, cams O, standards H, reciprocating-rod M, lever L, guide J, and pin K, substantially as herein described and for the purposes specified.

2. The combination and arrangement of the above-named parts with the frame A, tank B, perforated plates F, rollers G, and rub-board N, when constructed, arranged, and operating substantially as herein described and for the purposes specified.

88,090.—ALONZO SKINNER, Warren, assignor to LUCIUS A. SKINNER, West Novi, Mich.—*Suspended Portable Fence.*—March 23, 1869.

Claim.—The gallows-frame, composed of the parts D and E, in combination with board fence A, when constructed and arranged substantially as herein described.

88,091.—HENRY A. SOLIDAY, Doylestown, Ohio.—*Knife-Head for Harvesters.*—March 23, 1869.

Claim.—The above-described knife-head, made in two sections, with filling between them, and having a hole to fit a cylindrical end of the connecting-rod, one section of the head being adjustable, substantially as set forth.

88,092.—GEORGE B. STACY, Richmond, Va.—*Machine for Hackling Corn-Husks.*—March 23, 1869.

Claim.—1. The arrangement of two or more drums, or cylinders, so as to produce the results by their successive action set forth, substantially as herein described.

2. The arrangement of the series of cylinders in an inclined plane, or any other relation that will admit the tangential effect of the stroke of the cylinder-teeth upon the buts of the shucks, as they pass through the machine, substantially as and for the purposes explained.

3. The slats G and their arrangement relatively to the cylinders and concaves, substantially as herein described.

4. The relative size and arrangement of the teeth in both cylinders and concaves, substantially as herein represented and described.

88,093.—LORONZO J. STANNARD and MARTIN L. PERRY, Newark, N. Y.—*Apparatus for Turning Logs.*—March 23, 1869.

Claim.—The arrangement of the shafts A, C, and G, with their friction-wheels and pulleys, in combination with the levers K, L, and brake O, the whole constructed and operating substantially in the manner herein set forth.

88,094.—D. H. STEPHENS, Riverton, Conn.—*Rule-Clamp.*—March 23, 1869.

Claim.—As a new article of manufacture, the rule-clamp herein described, consisting of the forked piece B, having the stop C and beveled jaws *a*, the clamp-frame D, screw *b*, and nut *e*, all constructed, arranged, and operating as herein described, for the purpose specified.

88,095.—J. H. STEPHENS, Orange Court-House, Va.—*Churn.*—March 23, 1869.

Claim.—The arrangement of the stationary frame C D and rotating frames K L K L, when the latter are placed at right angles from each other, and one above the other, upon the shaft E, within the stationary frame C, and within the polygonal churn-box A, all constructed, arranged, and operating as herein shown and described.

88,096.—J. C. THAYER, Dunton, Ill.—*Milk-Cooler.*—March 23, 1869.

Claim.—1. The combination of the milk-tank C, spring G, valve S, discharge-pipe J, water-tank D, and cooler A B, as and for the purpose set forth.

2. The cooler A B, removable end-pieces K, rods L, eyes *m m*, standards H, spring G, discharge-pipe J, arm I, valve S, plate R, and tanks C D, as shown and specified.

88,097.—CHARLES N. TYLER, New York, N. Y.—*Clothes-Pin.*—March 23, 1869.

Claim.—So bending the wire spring of a clothes-pin as to produce the main tension at or near the middle of the clamping-rollers, and an equal or nearly equal pressure at the opposite ends of the rollers, substantially in the manner set forth.

88,098.—JUDSON VAN DUZER, Otisville, N. Y.—*Double Cooler.*—March 23, 1869.

Claim.—A cooler, in which at once two kinds of liquids can be cooled, as set forth, it consisting of the vessels E, D, and A, arranged, one within the other, in combination with the pipe F, substantially as described, all operating as specified.

88,099.—WILLIAM W. WADE, Medford, Mass.—*Button.*—March 23, 1869; antedated March 5, 1869.

Claim.—A back, A, and eye, or shank, *e*, made in one and the same piece of metal, by cutting and swaging up into proper form, substantially as described.

88,100.—WILLIAM B. WADSWORTH, Cleveland; Ohio.—*Manufacture of Chains.*—March 23, 1869 antedated March 8, 1869.

Claim.—1. The combination of the form A, die *d*, and hooked lever *l f*, constructed and arranged substantially as described.

2. The combination of the turning-iron, Fig. 4, with the form A and die *d*, substantially as described.

3. The combination, substantially as herein described, of the form A, die *d*, and levers H H and *l f*.

4. In combination with the devices set forth in the first clause of claim, the seat S, arranged substantially as described.

88,101.—Canceled.

88,102.—ZENAS CRANE WARREN, Brooklyn, N. Y., assignor to HENRY C. HULBERT, same place.—*Manufacture of Paper.*—March 23, 1869.

Claim.—1. The composite sizing for paper, hereinbefore described, containing starch-material and nitric acid, as constituent ingredients.

2. The combination of the said composite sizing (containing starch-material and nitric acid as constituent ingredients,) and paper, as described, the whole constituting a new article of sized paper.

88,103.—JOSEPH E. WATTS, Lawrence, Mass.—*Steam-Trap.*—March 23, 1869.

Claim.—The arrangement, with the outer case A, its inlet and outlet ports and valve-seat, of the valve-rod and valve within said case, and the gange and spring for actuating and controlling said valve-rod, substantially as shown and set forth.

88,104.—GEORGE WELLS, Bethel, Conn.—*Conduit for Invalid-Chairs.*—March 23, 1869; antedated March 11, 1869.

Claim.—The conduit A', in combination with the frame or seat A, constructed and operated substantially as described.

88,105.—HENRY WHITNEY, East Cambridge, Mass.—*Show-Bottle.*—March 23, 1869.

Claim.—As a new article of manufacture, an apothecary's show-bottle, made as hereinbefore described, with the body of a glass of one color, and the neck of uncolored or transparent glass, and their junction covered and strengthened as set forth.

88,106.—CHARLES WILEY, Hannibal Centre, N. Y.—*Alarm-Bell.*—March 23, 1869.

Claim.—The burglar-alarm, composed of the bell A, case B, hammers C C, spring E, shaft *d f*, and detents K *k g*, as herein shown and for the purpose described.

88,107.—DAVID WILCOX, Boston, Mass., assignor to himself, W. H. SLOCUM, and W. A. BROWN, same place.—*Hat.*—March 23, 1869.

Claim.—A hat, whose brim is formed of twice the required size, and folded upon itself, the parts being united by the stiffening material, or cement, applied to the inner surface of the folded parts, substantially as herein described, and for the purpose specified.

88,108.—E. J. WOLFGANG and J. M. KENREIGH, Salem, Ohio.—*Gate.*—March 23, 1869.

Claim.—The combination of the spring J, latch D, spring E, or equivalent spring, cords F, arms G, arms I, and the supporting-posts to which said arms I are attached, with each other, and with the gate A and post B, substantially as herein shown and described, and for the purposes set forth.

88,109.—JOHN WOODVILLE, Cincinnati, Ohio. *Plane-Guide.*—March 23, 1869.

Claim.—1. The combination of the clamping bolts E and the sliding bolts I, with the supporting-strip A and grooved strip C, whereby said strips are held together, for dressing a board with either parallel or tapering sides, substantially as herein shown and described.

2. The combination, with the strips A and C, of the adjustable buttons K and pivoted wedges M, substantially as and for the purpose set forth.

88,110.—JOHN YOUNG, Amsterdam, N. Y.—*Clothes-Wringer.*—March 23, 1869.

Claim.—Connecting the clamping-bar E to the wringer-post, by a metallic spring-fastening, in such a way that the spring throws the clamping-bar off from the post, when released from pressure.

88,111.—WILLIAM ZEIGER, Elmore, Ohio.—*Potato-Masher.*—March 23, 1869.

Claim.—1. A potato-masher, consisting of the cutting-apparatus B F G, and of the grinding-mill A E, all arranged and operating substantially as herein shown and described.

2. Attaching the fixed cutters G to a plate, H, which is fastened to the hopper B, so that the cutters are fitted through slots in the side of the same, substantially as herein shown and described.

88,112.—J. J. ANDERSON, Rochester, Pa.—*Cooking-Stove.*—March 23, 1869.

Claim.—1. The combination and arrangement of the elliptic oven B, double-arched diving and return-flues, and doubly-curved turn-plate C, substantially as and for the purposes herein specified.

2. The arched plate J, over the central return-flue, in combination with the concave depression under said flue, substantially as herein specified.

3. The removable doubly-curved turn-plate C, substantially as and for the purpose set forth.

4. The construction of the fire-back G, with smooth front, and ribs *a a*, on the concave side, crossing the same transversely, for the purpose set forth.

88,113.—WILLIAM H. ANDREWS, New Haven, Conn., assignor to BURTON MALLORY, same place.—*Door-Key.*—March 23, 1869.

Claim.—A door-key, consisting of the bit A, and spindle B, hinged thereto, the said spindle being grooved, so as to receive the extension C, the whole constructed so as to operate substantially as set forth.

88,114.—ISAIAH B. ARTHUR, Sidonsburg, Pa.—*Gig-Saw.*—March 23, 1869.

Claim.—The arrangement of the adjustable strap R, the saw S, attached to the levers by flexible straps *s s*, the levers L L′, having segment-heads *l l*, the working-beam M, provided with a counter-balance, *w*, arranged upon its end, the shaft D, the crank *j*, the pitman J, the weighted wheel G, the pitman C, the arm E, having an adjustable connection with pitman C, and rigidly affixed to lever L at its fulcrum, the belt I, the adjustable pitman K, the wheel K′, and the frame F, table T, post P, arm A, and brace B, all constructed, connected, arranged, and adapted to each other, to operate together in the manner and for the purposes set forth.

88,115.—IRA BARROWS, Hermon, N. Y.—*Milking-Stool.*—March 23, 1869.

Claim.—The combination and arrangement of the seat A, leg *c*, arm *b*, and disk *d*, substantially as shown and described.

88,116.—JOHN P. BEATTY, Norwalk, Conn.—*Hat.*—March 23, 1869; antedated February 2, 1869.

Claim.—As a new article of manufacture, a hat, having its sweat secured in place by a single wire, arranged and attached in a zigzag form, between its lower edge and the body of the hat, and so as to leave its upper edge loose, substantially as herein shown and described.

88,117.—E. U. BENEDICT, Chicago, Ill.—*Spring.*—March 23, 1869.

Claim.—The combination of the follower or spring-bar A, carrying a concave-curved plate *a*, and open guide D, the compound elliptic spring, formed of leaves, and the sill, or bolster B, with end-guides and supports, *g g*, substantially as described.

88,118.—SAMUEL S. BENT, Port Chester, N. Y.—*Coop for Poultry.*—March 23, 1869; antedated March 22, 1869.

Claim.—The feeding trough and stopper, combined with the open-work metallic plate, for closing the opening or openings in the lower part of said plate, for the purposes and substantially as set forth.

88,119.—DANIEL S. BIGLER and WILLIAM N. MCCRACKEN, Monaghan Township, Pa.—*Machine for Cleaning Stables.*—March 23, 1869.

Claim.—1. The combination of frames A and B, when constructed as and for the purpose specified.

2. The frame A, in combination with rake-head *m*, rods *n* and *k*, the whole constructed and operating in the manner substantially as described.

3. The shafts P P, when combined with cross-bar C, and operated in the manner described.

4. The guards *b b*, in combination with frame B and axle E, in the manner and for the purpose substantially as set forth.

5. The whiffletree F, when linked to the bar *h*, in the manner and for the purpose substantially as described.

88,120.—JOHN B. BLAIR, Philadelphia, Pa.—*Velocipede.*—March 23, 1869.

Claim.—1. In combination with the friction-bar *d* and disk H, the jam-nut which clamps the foot-pieces and disk, by means of which the friction-bar is converted into a rotating crank, substantially as and for the purpose described.

2. The springs attached to the collar, in combination with the spindle and head, substantially as and for the purpose described.

88,121.—JAMES BLAKE, Scranton, Pa., assignor to BLAKE AND COMPANY, same place.—*Auxiliary Table.*—March 23, 1869.

Claim.—1. The auxiliary table, or platform, united with the sewing-machine stand by a horizontal hinge-joint, in the manner herein described, so that, when raised, it will form a prolongation or continuation of the base-plate of the sewing-machine, and when lowered, it will be below the top and by the side of the stand, as and for the purposes set forth.

2. Forming the auxiliary table, when united with the stand, or other fixture or part to which it is applied, as herein set forth, of two sections hinged together in the manner and for the purposes described.

3. The combination, with the stand, or other fixture to which they are applied, of the arms or brackets for supporting the table or other auxiliary attachment, the same being slotted and jawed, and hinged to the said stand, or other fixture, in the manner described, whereby the table or other attachment carried by said brackets may, when raised, be clamped and held securely in position, as set forth.

4. Hinging the supporting-brackets or arms of the auxiliary table to the under side of the stand, or other fixture to which they are applied, substantially as and for the purposes shown and specified.

88,122.—Etienne Boileau and Charles Mesnier, St. Louis, Mo.—*Butt-Hinge.*—March 23, 1869.

Claim.—The ferrule or ring D, having the notches E E′, combined and arranged with the wings B and C of the hinge, the latter having the lugs G G′, whereby the hinge may be used either right or left, and the shutter fastened both open and closed, all as described and shown.

88,123.—Richard H. Boughner, East Germantown, Ind.—*Clothes-Drier.*—March 23, 1869.

Claim.—A clothes-drier, combining in its construction the following parts, viz, the crossed end-pieces, the pieces C C, and rounds B, B^1, B^2, B^3, and C′, the horizontal pieces D, with rounds D^2 and pins D^3, said parts being arranged, in relation to one another, substantially as described.

88,124.—James H. Brookmire, St. Louis, Mo.—*Elevating and Weighing Apparatus.*—March 23, 1869.

Claim.—The platform B^1 B^2 and side frame C, cross-bar D, and lifting-rope E, when combined with the scale-works, and lift-bar I, and scale-beam K, substantially as set forth.

88,125.—George W. Brown, Providence, R. I., assignor to himself and A. T. Gifford, same place.—*Blacksmiths' Swage.*—March 23, 1869.

Claim.—1. A revolving swage for blacksmiths' use, with an assortment of both curved and angular, or dissimilar grooves cut upon its surface, in the direction of its axis, substantially as described.

2. A revolving swage, for blacksmiths' use, as herein described, when furnished with a tapering trunnion, substantially as specified.

88,126.—Charles N. Brumm, Minersville, Pa.—*Meat-Chopper.*—March 23, 1869.

Claim.—1. The combination of the toothed cam R and sleeve S with the lever M, pivoted, as specified, for producing an oscillating as well as a revolving motion, by means of the worm-gearing, substantially as specified.

2. The combination of the slotted shaft D, oscillating beam M, with its knives O O, and guide P, with the cam R and sleeve S, all constructed and operating substantially as and for the purposes herein set forth.

3. The arrangement of the shaft J, miter-wheels V and T, with the three-pronged star I, notched wheel G, and worm F, for the purpose of producing the requisite oscillating and rotary motion of the beam M, substantially as herein set forth.

88,127.—Robert I. Burbank, Boston, Mass.—*Hay-Rake.*—March 23, 1869.

Claim.—The belt or band H, and pulleys C and G, the latter provided with handles *a* and *b*, in combination with the slotted tongue E and the axle A, whereby all the power or force employed in operating the rake may be exerted in a forward direction, and at the same time as a motive-power, or force, in moving forward the rake itself, for the purpose substantially as described.

88,128.—Richard Cadle, Shawneetown, Ill.—*Blacking-Box.*—March 23, 1869.

Claim.—1. A blacking-box, constructed with spurs *c* on its bottom, substantially as and for the purposes specified.

2. The combination and arrangement of the block E, with its spurs, as described, with the block D and standards C, when the same are constructed as specified, and operated by suitable power, for the purpose of forming the spurs *c*, on the bottom of the box.

88,129.—Lewis O. Cameron, Allegheny City, Pa.—*Sash Lock and Bolt.*—March 23, 1869.

Claim.—In the sash-bolt, as shown, the combination and arrangement of the part C with the lever D and bolt, or catch *f*, as constructed, arranged, and operating in the manner and for the purpose set forth.

88,130.—Richard Campion and James W. Thomson, jr., Camden, N. J.—*Car-Coupling.*—March 23, 1869.

Claim.—1. The combination, with the pawl and draw-head, of the oval-shaped ring, as and for the purpose described.

2. The combination, with the draw-head and coupling-link, of the pawl, constructed as described, and slotted eccentrically, as set forth, to prevent strain on its pivot.

3. Forming the two recesses in the draw-head by a pin, or stud-piece, of steel, or other suitable metal secured in the draw-head, as described.

88,131.—Moses F. Chandler, Boston, Mass.—*Boot.*—March 23, 1869.

Claim.—A boot, made of canvas, the entire foot of which is covered and combined with leather, in the manner and for the purpose set forth.

88,132.—Giacomo Chelini, Washington, D. C.—*Extension-Table.*—March 23, 1869.

Claim.—The movable frames I and I, and detents K K, resting in recesses cut in the sliding bars of an extension-table, substantially as and for the purpose set forth.

88,133.—A. B. Clemons, Ansonia, Conn.—*Knob-Latch.*—March 23, 1869.

Claim.—A knob-latch, consisting of the slotted cylinder A, face-plate B, and shoulders *d*, formed in one and the same piece, combined with the latch-bolt D, spindle E, yoke F, spiral spring, and the hub C, bearing in the concave end of the cylinder, all constructed and arranged as shown and described.

88,134.—William A. Cleveland, Waterville, N. Y.—*Medicine for Cure of Ring-Bone, Spavin, &c.*—March 23, 1869.

Claim.—The medical compounds above described, to be compounded and prepared substantially as above described, and for the purposes described.

88,135.—Jefferson L. Coburn, Mineral Point, Wis.—*Plastering-Machine.*—March 23, 1869.

Claim.—1. The combination of the carriage, or frame A, the hopper B, the vibratory bucket, or discharger *b*, the frame F, the endless carrier, or elevator C, and its series of trowels, the whole being arranged and provided with mechanism to enable them to operate, substantially as and for the purpose described.

2. In combination therewith, the chute and its gauge-tongue, provided with mechanism for operating them, substantially as described.

3. The combination of the smoother, the endless elevator C, and its series of trowels, the frame F, the hopper, the vibratory discharger *b*, and the carriage A, the whole being to operate as set forth.

4. The combination of the gauges S S with the frame F, the endless carrier C, and its series of trowels.

5. The combination of the springs P P with the frames F and N, the endless carrier C, its series of trowels, the carriage A, the hopper B, and the discharger *b* thereof, such springs being for the purpose specified.

88,136.—Alexander Connelly, Milan, Ind.—*Cultivator.*—March 23, 1869.

Claim.—The curved teeth G H I J K, secured to the rearwardly-curved head, or cross-bar F, the said teeth having an outwardly-diminishing length, as represented and described.

88,137.—Jacob Cornwell, Kalamazoo, Mich., assignor to himself, David B. Merrill, and William H. McCourtie, same place.—*Bolt-Feeder.*—March 23, 1869.

Claim.—1. The combination of the rake C, hoop F, cylinder H, with its bottom, L, revolving disk N, spout S, and bolt T, all arranged as and for the purposes set forth.

2. The combination of the hoop F, shaft M, revolving platform N, and the movable cross-bar P, supporting said shaft, arranged to operate in the manner shown and described.

3. In combination with the shaft M and revolving disk N, the adjustable supporting-bar P and lever R, arranged to operate in the manner and for the purposes specified.

88,138.—William Craine, South Brookfield, N. Y.—*Scoop.*—March 23, 1869.

Claim.—Providing the handle A with mortise-shoulders, B C, and so constructing the scoop that it may be attachable to and detachable from the handle, substantially as and for the purpose set forth.

88,139.—John P. Cranford, Brooklyn, N. Y.—*Composition-Pavement.*—March 23, 1869.

Claim.—The composition pavement, formed of layers, applied to and combined with a stone pavement, in substantially the manner specified.

88,140.—George C. Cranston, South Bend, Ind.—*Lamp for Destroying Insects.*—March 23, 1869.

Claim.—The vessel A, constructed with deep sides, and provided with grooves *b b*, in combination with the adjustable lamp B and bail D, all arranged as and for the purpose described.

88,141.—Samuel B. Cushing, Providence, R. I.—*Piles.*—March 23, 1869.

Claim.—The arrangement, application, and adaptation of timber, iron, or other casing, and concrete, or material, substantially as described, for the purpose mentioned.

88,142.—Joseph H. Deniger, Bridgeport, Conn.—*Tempering Steel Springs.*—March 23, 1869.

Claim.—The mode, method, or process herein described, of tempering steel springs for railroad-cars, carriages, &c.

88,143.—Dewitt C. Devall, New York, assignor to John B. Schenck, Matteawan, N. Y.—*Cutter for Tonguing and Grooving.*—March 23, 1869.

Claim.—The tonguing and grooving cutters when constructed and operating as herein shown and described, when adapted to vary the depth of the tongue and groove to be cut, in the manner specified.

88,144.—Paul Dismukes, Gallatin, Tenn.—*Clover-Harvester.*—March 23, 1869.

Claim.—1. The combination of the reel E, cutter D, and comb C, all secured to the adjustable frame F, and connected to the body of the machine, substantially as shown and described.

2. The combiuation of the comb C and the reciprocating sickle O, arranged to operate substantially as described.

88,145.—William Foster Dodge, Newark, N. J.—*Blind-Wiring Machine.*—March 23, 1869.

Claim.—The yielding guide F, supported by the spring *b*, on a central bearing, *c*, so as to have a rocking, or vibrating motion, in combination with the fixed rack C, substantially as shown and described, as an improvement on the patent of T. R. Crosby, dated December 13, 1859.

88,146.—Jacob Dourson, Columbus, Ohio.—*Sofa-Bedstead.*—March 23, 1869.

Claim.—1. The hinge of the mattress-frame, made in sections *h i j k*, jointed together, substantially as herein described, for the purposes set forth.

2. The combination of the mattress-frame, having jointed end-pieces, and the folding head and foot sections, constructed substantially as and for the purposes herein set forth.

88,147.—Zachariah Dowden and Charles T. Anderson, Clarksburgh, Md.—*Flood-Fence.*—March 23, 1869.

Claim.—1. In combination with the hinged flood-panel B^1, and the clips C^2, c^2, c^3, or their equivalent, the hinged float D, arms d^1 d^1, and sliding lock bolts d^2 d^2, arranged and adapted to operate substantially as represented and described, for the purpose specified.

2. The clips or connections C^1 C^3, constructed with the perforated ends c^1, as represented and described, in combination with one or more flood-panels B^1, substantially as and for the purposes set forth.

88,148.—Samuel D. Edgar, Dayton, Ohio.—*Churn.*—March 23, 1869.

Claim.—The arrangement of the perforated partition B, when extending above the box A, so as to form a fulcrum for the horizontal lever C, in combination with the dasher-shafts E E, and the slotted sliding lids G G, all substantially as herein specified

88,149.—H. F. Edwards, Worcester, Mass., assignor to himself and B. I. Peabody, same place.—*Adjustable Pole-Attachment for Carriages.*—March 23, 1869.

Claim.—1. The combination, with the rear cross-piece of a carriage-pole, of the horizontally-sliding eye-pieces E E, having their axis or line of motion at right angles to the pole, substantially as shown and described.

2. The combination, with the cross-piece B and ends *j j*, of the eye-pieces J J, substantially as and for the purposes set forth.

3. The combination, with the ends of the cross-piece B, and the ends G, of the braces F, of the clips H H and guide-pieces C, substantially as and for the purposes set forth.

4. The combination, with the slide-pieces E E, brace-ends G G, clips H H, and eye-pieces J J, of the thumb-screws *m* and *n*, substantially as shown and described.

88,150.—John Fahrney, Boonsborough, Md.—*Mop-Head.*—March 23, 1869.

Claim.—The mop-head above described, consisting of the hook *a*, shoulder *b*, handle *c*, and a spring-catch arrangement, *n d*, constructed to operate together, substantially as described, and for the purpose set forth.

88,151.—Henry J. Ferguson, Whiting, N. J.—*Velocipede.*—March 23, 1869.

Claim.—1. The saddled or seated lever, in the manner and for the purposes named.

2. The combination of the saddled, or seated lever, with the handled levers, in the manner and for the purposes named.

3. The combination of stirrup and strap, roller, shaft, and bevel-segments, in the manner and for the purposes named.

88,152.—William C. Fisher, Charlestown, Mass.—*Shutter-Fastening.*—March 23, 1869.

Claim.—The within-described fastening, consisting essentially of a bolt, D, provided with two or more notches and a weighted pawl, H, substantially as set forth.

88,153.—Mark Flanigan, Detroit, Mich.—*Spring-Bed Bottom.*—March 23, 1869.

Claim.—The rivet, or bolt C, passing through slot B, and covered by an elastic sleeve, D, in combination with the springs F, with hooks G, and round bars E, when arranged, constructed, and operating as herein shown and described.

88,154.—Addison C. Fletcher, New York, N. Y.—*Railway-Car Wheel.*—March 23, 1869.

Claim.—An elastic car-wheel, formed of an independent rim-portion, A, side, or body-plates B B, arranged to freely clamp an interior flange, *b*, of the rim, and carrying in between them independent springs C C, constructed to carry and divide the strain consequent on deflection of the rim in various directions, relatively to the ground, or rail-surfaces on which the wheel travels, substantially as specified.

88,155.—Addison C. Fletcher, New York, N. Y.—*Car-Spring.*—March 23, 1869.

Claim.—1. The combination, with the divided, hoop-like spring B, of the outside rubber strips, or springs *d d*, for action together, as specified.

2. In combination with the spring B, and outside rubber strips *d d*, the corrugatious *c e*, arranged in opposite sides of the recess in which the spring B lies, substantially as described.

3. The combination of the rubber filling, *f*, with the divided, hoop-like spring B, essentially as specified.

88,156.—James S. Fowler, Davenport, Iowa.—*Harvester-Rake.*—March 23, 1869.

Claim.—The devices herein described for operating the rake by hand and foot, consisting mainly of

the treadle *w*, levers *s* and *i*, shaft *m*, rods *u*, *v*, and *n*, arms *o* and *t*, jointed levers F, car E, with its track and arm, connected with the rake as described, when constructed, combined, and operating substantially as and for the purposes specified.

88,157.—J. J. FREY and A. J. FREY, Hook's Point, Iowa.—*Bee-Hive.*—March 23, 1869.

Claim.—1. The moth-chamber A, having the tubes a^4 and passages a^6, as and for the purpose described.

2. The bee-pipe a^1, with slide a^5, when combined with the case a^2, in the manner described, for the purpose set forth.

3. The honey frames B^1, constructed as described, when used in connection with the rods b^2 b^3, in the manner described, for the purpose set forth.

4. The sliding boxes B^4, covering ventilators B^3, when constructed and arranged substantially as described, for the purpose set forth.

5. The hive A B C, provided with the ventilators A^1, B^3, B^3, and D, when constructed and arranged substantially as described, for the purpose set forth.

88,158.—M. B. GOODELL, Worcester, Mass.—*Folding Bedstead.*—March 23, 1869.

Claim.—The combination and arrangement, with a stationary case and its movable front, of a sliding and unfolding bed-frame, the two parts of which are pivoted to and connected with said case and movable front, respectively, substantially in the manner and for the purposes set forth.

88,159.—D. A. GORHAM, Norway, Me.—*Hold-back.*—March 23, 1869.

Claim.—A self-releasing breeching-hook, formed by the combination and arrangement of the hook B with the cup A, substantially as herein described.

88,160.—CHAUNCEY O. GREENE, Troy, N. Y.—*Water-Reservoir for Cooking-Stoves.*—March 23, 1869.

Claim.—1. In combination with a cooking-stove, or range, the location and suspension of a hot-water reservoir, or tank B, from below or under the ash-pit C, and its side hearth-plates E E, and next to or adjoining the oven H thereof, in manner substantially as hereinbefore described and shown, for the purpose set forth.

2. In cooking-stoves, or ranges, the combination and attachment of the water-reservoir, or tank thereof, with and to the hearth-plates E E and ash-pit C, when extended outward from below the fire-grate, or fire-place, I, in manner so as to form, together, a covering for the top of said reservoir B, and also to hold and support the same in permanent suspended position from thereunder, substantially as herein set forth.

3. The combination of the hinged lifting, or removable cover or covers F, with the hearth-plates E E, opening G, ash-pit C, and water-reservoir, or tank B, of a cooking-stove, when arranged at the side, or sides of the ash-pit C, and so as to form a part of the hearth's surface, adjoining said ash-pit, when closed over said water-reservoir opening G, in manner substantially as set forth and shown.

4. Forming the end-wall, or side of a cooking-stove, or range, below the hearth-plates D E and ash-pit C, and next the oven H thereof, by means of a water-reservoir, or tank's side, J, when arranged in combination therewith, in manner substantially as described and shown.

5. As arranged with a diving-flue cooking-stove, or range, the combination of the hearth-plates E E, ash-pit C, and water-reservoir, or tank, B, when suspended therefrom, as described, with the heating-chamber *d*, oven H, and oven-bottom flue-space K, in manner substantially as herein shown, for the purpose set forth.

88,161.—J. DURELL GREENE, Cambridge, Mass.—*Breech-Loading Fire-Arm.*—March 23, 1869.

Claim.—1. A breech-loading gun, with its breech-piece mortised through, when provided with a breech-bolt arranged to move longitudinally in the axial line of the bore, and a mechanism adapted to operate on the cartridges, substantially as described.

2. The breech-bolt, in combination with the sleeve, breech-piece, and hammer, when arranged and constructed as described, so as to prevent, in all positions of the parts, access of dirt and moisture to the mechanism.

3. In combination with the breech-bolt and the breech-piece, the slotted sleeve *r*, bearing the hooks *o o* and tang *v*, and fitting on the breech-bolt and in the breech-piece, substantially as described.

4. The breech-bolt, as made, with the right-angular groove 5 6, and sere-embracing slot, operating on the cartridge-shell extractor, to start and draw back the shell by rotation of the breech-bolt, substantially as described.

5. The breech-bolt, as made, with the offset 3 in the sere-slot, and the spring-catch *u* in the groove 5 6, and combined with the sleeve, to permit the separate and conjoined movements of both the bolt and the sleeve at the rear of the mortise, substantially as described.

6. As a safety-device, the sere-piece *j*, with the cross-groove *s*, arranged to operate in the sere-groove, to prevent withdrawal of the sere till the breech-bolt is fully turned, in the act of locking the cartridge in its chamber, substantially as described.

7. The attachable cartridge-pannier, constructed and arranged to operate substantially as set forth.

88,162.—CHARLES F. HADLEY, Chicopee, Mass., assignor to CLIFFORD ARRICK, St. Clairsville, Ohio.—*Rotating-Oscillating Steam-Valve.*—March 23, 1869.

Claim.—1. The valve-spindle C, constructed with tapering arms D D, arranged with the valve B, in the manner herein set forth.

2. The cam E, with the lugs F F, in combination with the tappet G and spiral spring H, as herein set forth.

86,163.—CHARLES F. HADLEY, Chicopee, Mass., assignor to CLIFFORD ARRICK.—*Device for Converting Rotary into Reciprocating Rectilinear Motion.*—March 23, 1869.

Claim.—1. The arrangement of the rack C, pinion D, and clutch I, in combination with the drum E, cord F, and arms G G attached to the slider A, in the manner and for the purpose set forth.

2. The arrangement by which motion is obtained for the slider A from opposite sides of the pinion D and drum E, or equivalents, in combination with the rack C, or cord F and clutch I, in the manner and for the purpose above described.

88,164.—JOHN W. HANSEL, Peoria, Ill.—*Sash-Holder.*—March 23, 1869.

Claim.—The spring G, provided with the knob H, in combination with the arm B and suspension-bolt D, and dog L, all arranged and operating as herein shown and described, and for the purposes set forth.

88,165.—A. B. HENDRYX, Ansonia, Conn.—*Paper Box.*—March 23, 1869.

Claim.—A paper box, in which the angles are secured by means of the tails *d* on one side, turned into corresponding recesses on the other, substantially as set forth.

88,166.—ROBERT HILL, St. Louis, Mo.—*Clay-Molding Machine.*—March 23, 1869.

Claim.—1. The core B, supported upon the base-block A, when arranged and combined with the sliding piece D and bolt *b b'*, substantially as set forth.

2. The stationary mold C and core B, when combined with the rammers E, and ring L, and guides M, substantially as set forth.

3. The rammers E, ropes G, and cams H, substantially as set forth.

4. The ring L, pitman N, crank N', shaft O, worm-wheel *o*, and worm P, when operating substantially as set forth.

88,167.—DANIEL HODGKINS, Newburyport, Mass.—*Knife-Scourer and Sharpener.*—March 23, 1869.

Claim.—1. Holding the channeled rubbers by a

jaw, pivoted to the box, holding the seouring-material substantially as set forth,

2. So constructing the box F and its jaw. and hanging them to the standard E, that the spring G shall both hold the jaw and press the box and rubbers down, substantially as above described.

88,168.—John Holtz, Baltimore, Md.—*Automatic Boiler-Feeder.*—March 23, 1869.

Claim.—A device for percussing water of condensed steam to the boiler, substantially as shown and described.

88,169.—Joseph Eves Hover, Philadelphia, Pa.—*Paper-Sizing.*—March 23, 1869.

Claim.—A composition, consisting of the ingredients described, for the purpose specified.

88,170.—Peter H. Jackson, New York, N. Y.—*Steering-Apparatus.*—March 23, 1869.

Claim.—1. The combination, with the steering screw-shaft B and nuts F F, of the guide-rod G, arranged over said screw-shaft, and serving to guide both nuts, or screw-boxes, and prevent them from turning, substantially as specified.

2. The combination of the guide-rod G and vertically-sliding boxes D D, with the screw-shaft B and nuts F F, essentially as shown and described.

88,171.—William H. Jackson, Salem, Mass., assignor to George B. Upton, David D. Stackpole, and Samuel H. Gookin.—*Powder for Blasting and other Purposes.*—March 23, 1869.

Claim.—The combination of gunpowder or other explosive compound with vegetable fiber, prepared as above described, for the purpose specified.

88,172.—P. N. Jacobus, Flatbrookville, N. J.—*Shears.*—March 23, 1869.

Claim.—1. The slot *c*, formed in the part A of the shears, in combination with the curvilinear portion *b* of the part A′, substantially as and for the purpose set forth.

2. The arrangement of the bows or loops to the handles of a pair of scissors or shears, in such manner as that either bow or loop lies diagonally across the handle to which it belongs, and, where both loops are so twisted or set, the same made to occupy reverse positions relatively to each other, substantially as shown and described.

88,173.—Jacob Jameson, Philadelphia, Pa.—*Manufacture of Iron and Steel.*—March 23, 1869.

Claim.—1. The herein-described process of making iron or steel direct from the ore, with mineral coal, substantially as set forth.

2. The furnace for treating ores, and producing iron or steel direct therefrom, when constructed and arranged to operate substantially as herein described.

88,174.—Charles C. Johnson, Springfield, Vt.—*Toy-Hoop.*—March 23, 1869.

Claim.—1. The application, to a toy-hoop, of a series of bells, in such a manner as to be struck successively, or in unison, by the operation of spring-hammers, actuated by pins brought into juxtaposition by the revolution of the hoop, substantially as set forth.

2. In combination therewith, the retaining-stop *f*, for preventing the backward rotation of the hoop, substantially as described.

88,175.—Job Johnson, Samuel J. Smith, and Simon Ingersoll, Brooklyn, N. Y., assignors to Job Johnson and Samuel J. Smith.—*Clothes-Line Fastener.*—March 23, 1869.

Claim.—1. The fastening for lines and ropes, formed of tapering, rounded, stationary side-pieces, between which are open, tapering jaws, for wedging and clamping the line, or rope, as specified.

2. The finger *b*, in combination with the stationary, tapering jaws, to cause the line to wedge down into such jaws, by the pull on the same, substantially as set forth.

88,176.—Nelson Johnson, Jasper, N. Y.—*Saw-Gummer.*—March 23, 1869.

Claim.—1. The combination of the bail F F*, rotary cutter C, and lever A^2, employed substantially as and for the purpose set forth.

2. The bail E, when provided with a V or chisel-shaped bearing-surface, *f*, substantially as and for the purpose set forth.

3. The adjustable frame, or carriage B, when employed in combination with the gumming-roller or cutter C of a saw-gummer, in the manner and for the purpose specified.

4. The clamping-screws G G′, in combination with the perforated frame A *a′** and perforated bail F *f′*, substantially as described.

88,177.—Nelson Johnson, Jasper, N. Y.—*Saw-Swage.*—March 23, 1869.

Claim.—1. The adjustable punch, or swage-pin holder, consisting of the perforated arms C and roller D *d*, employed in combination with the stock A and punch E, substantially as described, for the purpose set forth.

2. In combination with the stock A, constructed in two parts, as represented and described, the set-screw *a* and clamping-screw a^1, arranged and employed in the manner described, for the purpose specified.

3. The dies F, arranged, relatively to the point-die B, in the manner set forth, and employed to form side-cutting flanges on the tooth, substantially as described.

4. The adjustable gauge or rest G, in combination with the stock A and adjustable bars C C, substantially as and for the purpose specified.

5. The eccentric-lever H, employed in combination with the die B, substantially as and for the purpose set forth.

88,178.—William J. Johnson, New Orleans, La.—*Locomotive Drive-Wheel.*—March 23, 1869.

Claim.—1. The arrangement of certain of the parts thereof, by which a portion or the whole of the weight of said engine is borne upon the axles of small car-wheels, which rest and run upon the inner periphery of the rims of the driving-wheels, substantially in the manner and for the respective purposes herein set forth.

2. When the principal portion, or the whole of the weight of a locomotive-engine, is made to bear upon the axles of car-weeels which rest and run upon the inner periphery of the rims of the driving-wheels thereof, the combination of the steam-cylinders O O with said driving-wheels, through the medium of the short cranks *q q*, the longer cranks *r r*, and the side coupling-bars S S, substantially in the manner herein set forth.

88,179.—Hubert L. Judd, Brooklyn, N. Y.—*Cord-Tightener for Curtain-Fixtures.*—March 23, 1869.

Claim.—The slide *a*, with rack-teeth 3, or projections in its bottom surface, in combination with the pulley *d*, blocks *b* and *c*, with their inclined surfaces provided with a tooth, or projection, 4, that is forced back against said bottom surface of the slide, as and for the purposes set forth.

88,180.—Ansel N. Kellogg, Chicago, Ill.—*Block for Holding Stereotype-Plates.*—March 23, 1869.

Claim.—The combination of a spring, *c*, with the block B, when constructed with a longitudinal dove-tailed groove, or bed, and the removable plate A, when provided with rebated sides *e e*, all arranged to operate substantially as and for the purposes herein shown and set forth.

88,181.—John J. Kelly, Slippery Rock, Pa.—*Bridge.*—March 23, 1869.

Claim.—1. The span, when constructed of plates C D E, the two latter provided with flanges *d d′* and *e e′*, which are arranged to form a support for the braces F G H, substantially as and for the purposes set forth.

2. The plates *g*, when bolted to the flanges *d′ e′*, and supporting between them the upper eyed ends of supports F and braces G H, substantially as and for the purposes set forth.

3. The clips *j*, when supporting the lower eyed ends of supports F and braces G H, and sliding

freely on rope I, substantially as and for the purposes set forth.

88,182.—T. K. Bolton, Cleveland, Ohio, executor of Samuel H. Kimball, deceased.—*Process of Manufacturing Sheet-Iron.*—March 23, 1869.

Claim.—The within-described process for the manufacture of sheet-iron.

88,183.—George S. Koontz, Washington, D. C., and Edward Potts and McLeod D. Lewis, Baltimore, Md.—*Railroad-Car Heater.*—March 23, 1869.

Claim.—1. The water-tank E, when made substantially as shown and described, and placed vertically over the stove, in combination with the ball I, chain H, and valve G, all as and for the purpose specified.

2. The combination of valve G, rod R, and valve M, all as and for the purpose specified.

3. The combination of the ball I, chain H, and valve G, all substantially as shown and described, with the ring J, supported on braces *a a*, substantially as and for the purpose specified.

88,184.—Hugh W. Lafferty and Robert Lafferty, Gloucester City, N. J.—*Centrifugal Draining-Machine.*—March 23, 1869.

Claim.—1. The combination of the loose band-division N of the cone friction-pulley M N, driving the spindle, or shaft A of a centrifugal machine, with a bearing and support separate and distinct from said shaft, or spindle, substantially as herein set forth.

2. A sleeve, or hollow shaft, G or Q, interposed between the loose band-division of the cone friction-pulley and the spindle, or shaft of a centrifugal machine driven thereby, substantially as herein set forth.

3. The combination of the loose, or band-division N of the cone friction-pulley M N, driving the spindle, or shaft A of a centrifugal machine, with the hanger supporting the spindle, by means of a sleeve, or hollow shaft interposed between the pulley and spindle, substantially as herein set forth.

4. An oil-cup, H, encircling the bearings of the loose, or band-division of the cone friction-pulley, substantially as herein set forth.

5. A wire draining-basket, O, in combination with the spindle A of a centrifugal machine.

88,185.—Hugh W. Lafferty and Robert Lafferty, Gloucester City, N. J.—*Centrifugal Sugar-Draining Machine.*—March 23, 1869.

Claim.—1. The annular oil-cup D, when so combined with the spindle A as to support and inclose the bearings thereof, substantially as herein set forth.

2. An enlarged waste-oil cup T, having a contracted rim, or neck, and combined with the spindle, or shaft, of a centrifugal machine, substantially as and for the purpose herein set forth.

3. A corrugated draining-basket, or cylinder, B, in combination with the spindle, or shaft, A, of a centrifugal machine, substantially as herein set forth.

4. India-rubber or other elastic packing, interposed between the supports of a centrifugal machine and the beams or base to which it is attached, or from which is supported, substantially as herein set forth.

5. The combination of a cone friction-pulley, M N, with the driving-spindle A of a suspended centrifugal machine, substantially as and for the purposes herein set forth.

6. The within-described combination and arrangement of the friction-pulley M N, of the spindle A, the driving-pulley S, and connecting-band O, for the purpose herein specified.

88,186.—Thomas Lincoln and George Hubbard, New Haven, Conn.—*Door-Button.*—March 23, 1869.

Claim.—The button B, provided with the recess C, and combined with the plate A constructed with the boss *a*, and fitted with one or more springs, *f*, so as to operate substantially in the manner specified.

88,187.—Marshal Long, New York, N. Y.—*Tellurium.*—March 23, 1869.

Claim.—1. The mechanical arrangement of the wire *r x y z*, the vertical belt *r s t*, and the horizontal semi-belt *u v*, with the revolving globle G, and stationary globe D, substantially as herein described, and for the purpose set forth.

2. The combination of the bracket *a b e d e* with the vertical pole B C, the horizontal shaft E F, the gear-wheels *f*, *g*, *h*, *i*, the spindle *m*, the arm *j k*, the pivot *l*, the mechanical arrangement of the wire *r x y z*, the vertical belt *r s t*, and the horizontal semi-belt *u v*, and the globes D and G, substantially as herein described, and for the purpose set forth.

3. The combination of the mechanical devices above mentioned with the wire *b′ e′ d′*, the dark globe K, the metal cap L, the elastic thread *o′ p′ q′*, and the weight *q′*, substantially as herein described, and for the purpose set forth.

88,188.—Theodor Lüke, St. Louis, Mo.—*Carpet-Cleaning Machine.*—March 23, 1869.

Claim.—1. In combination with the rollers of a carpet-beating machine, the apron-attachment, composed of the hooks and ropes, substantially as hereinbefore described.

2. Making the flexible beaters removable, by means of snap-hooks, or equivalent devices, substantially as set forth.

88,189.—Isaac V. Lynn and William J. Lynn, Pittsburgh, Pa., assignors to themselves, J. J. McCormick, and Willis D. Baker, same place.—*Car-Coupling.*—March 23, 1869.

Claim.—Providing the coupling-pin of car-buffers with a pivoted pedestal, constructed, arranged, and operating substantially as herein described and for the purpose set forth.

88,190.—Levi H. Mace and Frederick S. Gwyer, New York, N. Y.—*Construction of Refrigerators.*—March 23, 1869.

Claim.—The ice-bottom, constructed substantially as herein described, so as to compensate for expansion and contraction, and soldered to the adjacent parts, as and for the purposes herein set forth.

88,191.—Edwin Martin, Springfield, Mass., assignor to himself, S. W. Porter, and J. F. Cranston.—*Metallic Cartridge.*—March 23, 1869.

Claim.—1. An interior conical-shaped pocket, or receptacle, containing the fulminate and anvil, when the wall of said pocket is formed of two thicknesses of metal contiguous to each other, substantially as described.

2. Turning over the upper part of the perforated conical portion of the reënforcing-cup upon and into the pocket, or receptacle, for the fulminate and anvil, forming a gas-check, substantially as described.

88,192.—John H. Martin, Columbus, Ohio.—*Breast-Strap Slide.*—March 23, 1869.

Claim.—A breast-strap slide, having its ring-stops B B, constructed upon one edge, as shown and described.

88,193.—Alfred McDaniel, Dubuque, Iowa.—*Wash-Boiler.*—March 23, 1869.

Claim.—The series of projecting strips E, between the inner and outer boilers, forming passages *b*, and the ledge F, in combination with the internal and external boiler, as and for the purpose described.

88,194.—James W. McDonald, Chicago, Ill.—*Street-Sweeper.*—March 23, 1869.

Claim.—1. The sweeping-cylinder, when the brooms are arranged thereon in a spiral form, substantially as and for the purposes described.

2. The combination of the shaft R′ with the incline T, screw-conveyer Y, and trough U, in a street-sweeping machine, when constructed and arranged substantially as and for the purposes specified.

3. The combination of the trough U, screw-conveyer Y, and endless-chain conveyer A′, when constructed and arranged substantially as described.

4. The blocks L, when suspended on the chains O, in combination with the pinion J and cogs I of wheel C, all constructed and arranged substantially as herein specified.

5. The combination of the screw-rod H′ with the

adjustable bearings E′, when raised and lowered by means of nuts F′, all constructed and arranged in a street-sweeping machine, substantially as specified.

88,195.—SAMUEL MENDENHALL, Muncy Station, Pa.—*Harrow.*—March 23, 1869.

Claim.—The construction of the double-barred iron harrow with oblique ends, B, and elevated coupling D, when arranged and combined with teeth having diamond-shaped necks J and shoulders H, as herein described, and for the purpose set forth.

88,196.—WILLIAM MUNSON, Abington, Pa.—*Fifth-Wheel.*—March 23, 1869.

Claim.—1. The wheel or plate C, and its lugs *n n*, recesses *s*, pins *i*, and rollers *m*, when the said recesses are so formed to prevent the escape of the rollers, in case of the breaking of the pins, as set forth.

2. The combination of the wheel C, its rollers and hollow hub *b*, and the plate D, and its projection *p*, the whole being constructed and adapted to each other, substantially as described.

3. The arrangement of the bolts *e*, in respect to the pins *i*, of the friction-rollers, as and for the purpose specified.

88,197.—ANDREW W. NICHOLSON, Brooklyn, N. Y.—*Walking Doll.*—March 23, 1869.

Claim.—The wheels D D, axle C, pulley *g*, and belt *f*, in combination with the crank-shaft *c*, pulley *e*, and slotted connections of the legs with the body of the doll, substantially as and for the purpose specified.

88,198.—WILLIAM L. PAINE, Boston, Mass.—*Velocipede.*—March 23, 1869.

Claim.—The arm, or support E, hinged at *f*, in combination with catch *c*, as applied to a velocipede, substantially in the manner and for the purpose set forth.

88,199.—CHESTER PALMER, Willoughby, Ohio.—*Potato-Digger.*—March 23, 1869.

Claim.—1. In combination with the share B, the detachable separator E D, substantially as described, and for the purposes set forth.

2. The arrangement and combination of the share B and separator E D, with the frame A, substantially as described, and for the purposes set forth.

88,200.—I. E. PALMER, Hackensack, N. J.—*Roller-Stop for Window-Shades.*—March 23, 1869.

Claim.—The abutment or stop-shoulder *e*, on the inner periphery of the eccentric surface *j* of the rim or barrel *d*, in combination with the bolt or pin *b*, all arranged and operating substantially as shown and described.

88,201.—FRANK D. PARADIS, Chicago, Ill.—*Washing-Machine.*—March 23, 1869.

Claim.—The bars or pieces A, supporting-irons H, cylinder E, zinc sheet C, springs *c*, and gear-wheels F G, when combined, and arranged, and constructed, and operating substantially as and for the purposes specified.

88,202.—W. F. PARKER, Meriden, Conn.—*Cartridge.*—March 23, 1869.

Claim.—1. A cartridge-shell, the head of which is constructed with a recess, *a*, for the percussion-cap, its head recessed so as to expose the rim of the cap, substantially in the manner and for the purpose set forth.

2. The channels *f*, in the head of a cartridge, with or without the recess *a*, substantially in the manner and for the purpose set forth.

88,203.—DEXTER E. PEASE and GEORGE RICHARDS, Richland Centre, Wis.—*Self-Registering Lumber-Measure.*—March 23, 1869.

Claim.—The arrangement of the handle A, disk B, spring-arm D, friction-wheel E, and index-wheel F, all constructed as described, and operating substantially as and for the purposes herein set forth.

88,204.—HART F. PEASE, Brooklyn, N. Y.—*Operating Valves of Steam-Engines.*—March 23, 1869; antedated March 15, 1869.

Claim.—The free or independent valve F, ports or passages *c c* and *d d*, slots *e e*, and valve-stems H H, all arranged for operation of the valve by the piston, essentially as described.

88,205.—REUBEN H. PLASS, New York, N.Y.—*Velocipede.*—March 23, 1869.

Claim.—1. The laterally-oscillating seat or saddle, in combination with suitable gearing, whereby the rocking or lunging of the body is made to steer the vehicle, substantially as set forth.

2. The arrangement and combination of the driving-rollers I and friction-rollers K with the axle J of the driving-wheel, or rollers thereon, substantially as shown and described.

3. So connecting the gear-wheels E E′ with the bifurcated axle-supports, that the steering power may be applied to either one or both of said axles at pleasure, substantially as specified.

88,206.—JOSEPH T. POPE, New York, N. Y.—*Lamp-Shade Holder.*—March 23, 1869.

Claim.—The combination of the shade and mirror F and the mirror-holder B, constructed and arranged with its bent portions C D and curved portions E E, so as to attach to an ordinary lamp-burner, substantially as and for the purposes herein specified.

88,207.—JAMES RAE, London, England, and GEORGE MILLER, Glasgow, Scotland.—*Construction of Railway-Wheels.*—March 23, 1869.

Claim.—The combination of the hook rings *h h* with the tire *t* and disks *p p*, as shown and described.

88,208.—JOHN RALSTON, ABRAHAM L. THOMAS, and WILLIAM PARKINSON, Tamaqua, Pa.—*Manufacture of Iron and Steel.*—March 23, 1869.

Claim.—The using of the Leader Hill iron ore, or any other iron ore containing the same ingredients, as a flux for the removing of impurities from the iron, and so neutralizing it, during the process of melting, and combining the ore with the cast-iron in the furnace, that the person working the furnace can, out of the same material, and at the same heat, produce a superior quality of steel or malleable wrought-iron at his pleasure.

88,209.—AMOS RANK, Salem, Ohio.—*Harvester.*—March 23, 1869.

Claim.—1. The combination with the finger-beam of oscillating platform sections or rakes, having their bearings in supporting shoes or brackets attached to the finger-beam, for the purposes specified.

2. The combination, substantially as set forth, with oscillating platform sections or rakes of an automatically-operated reciprocating driving-bar, for alternately and successively oscillating the rakes, by a positive motion from the main axle without rigid connections.

3. The combination, substantially as set forth, of oscillating platforms or rakes carrying recoil springs and swinging wipers, with studs on a slide-bar moving parallel to the finger-beam.

4. The combination of the cam-guide, vibrating lever, and adjustable bracket, as set forth.

5. The reel-ribs, constructed in two pieces, as described, and adjustable at either end.

88,210.—J. V. REARDON, Elkton, Md.—*Nerving-Bridle.*—March 23, 1869; antedated March 11, 1869.

Claim.—The straps *a a* and straps *d*, connecting the ring on the neck, straps *f*, and rings *e*, with the check-lines *h*, lines *c c*, and bit A, all arranged as herein described, and dispensing with the headstall, as and for the purposes specified.

88,211.—SHELBY REED, Scottsville, N. Y.—*Sheep-Rack.*—March 23, 1869.

Claim.—1. Constructing a sheep-rack with three horizontal apartments, the two outer ones being for the reception of the animals, and the central one for the convenience of the person feeding the same, and two or more floors or stories, one above another, all of which are arranged for the reception of animals, substantially as shown and described.

2. The arrangement of the sliding racks or bars,

with reference to the partitions between the compartments and the feeding-troughs, substantially as shown and described.

88,212.—JOHN E. RICHARDSON, Lowell, Mich.—*Chalk-Line Spool.*—March 23, 1869; antedated March 18, 1869.

Claim.—The hinged box A, containing the line-spool B and chalk-chamber H, with packing, and having attached the cap F, inclosing spring G, and wheels E D, all arranged to operate substantially as herein set forth.

88,213.—JOHN H. ROELKER, Evansville, Ind.—*Grate for Cooking-Stoves.*—March 23, 1869.

Claim.—As an article of manufacture, the "fire-bottom" herein described, consisting essentially of the parts A and B, united by the flanges *a b* and screws or rivets *c*, and adapted to operate together, substantially as and for the purposes herein described.

88,214.—JOHN ROOT, New Haven, Conn., assignor to himself and MCLAGON and STEVENS, same place.—*Bolt-Heading Machine.*—March 23, 1869.

Claim.—The arrangement of the holding device, the open cam-wheel F, the upsetting die C, and the forming dies *a*, in the manner and for the purpose set forth.

88,215.—STEPHEN P. RUGGLES, Boston, assignor to J. HERBERT SHEDD, Walthan, Mass.—*Meter.*—March 23, 1869.

Claim.—The combination of the cylinder A, revolving shafts D H I, and radial pistons E F G, by means of which one piston serves alternately as an abutment, while the other revolves, all substantially as described.

88,216.—JAMES W. RUTTER, St. Louis, Mo.—*Crushing and Grinding Machine.*—March 23, 1869.

Claim.—1. The gange-ring C, arranged and operating in combination with the cylinder A and crusher or grinder B, substantially as and for the purposes herein set forth.

2. The combination, with the gange-ring C and cylinder A, of the stripper or clearer *j*, substantially as and for the purpose herein set forth.

88,217.—RICHARD SAVAGE, Chicago, Ill.—*Clutch for Slaughtering Purposes.*—March 23, 1869.

Claim.—1. The hook-shaped jaw C, of the clutch A, in combination with the jaw E, when constructed and arranged substantially as and for the purposes specified.

2. Constructing one of the handles of the clutch A with the slot F, substantially as and for the purposes specified.

3. The link J, in combination with the shoulder K, when constructed and operating substantially as described.

88,218.—EILERT O. SCHARTAU, Philadelphia, Pa.—*Apparatus for Evaporating Medicines in Treating Diseases.*—March 23, 1869.

Claim.—The calorific apparatus, as herein set forth, to be used as a heater only, or in connection with the box containing medicine, to generate some strong or aromatic vapors.

88,219.—WILLIAM SEAMAN and GEORGE A. BANTA, New York, N. Y., assignors to WILLIAM SEAMAN.—*Sink.*—March 23, 1869.

Claim.—1. The metallic sink, formed with the grooves 3 and channels 2, in the flange *d*, and the back flange *e*, upon the edge of the flange *d*, as and for the purposes set forth.

2. The metallic sink, formed with the cavity *i*, and dome-shaped strainer *k*, as and for the purposes set forth.

88,220.—J. H. SEYMOUR, Hagerstown, Md.—*Water-Closet.*—March 23, 1869.

Claim.—The connection of the valve *e* with the cover C, by means of the joint *d*, rod *b*, and arm *f*, in such manner that when the cover C is raised, the valve *e* shall be closed, and *vice versa*, essentially as shown and described, for the purpose set forth.

88,221.—GERARD SICKELS, Boston, Mass.—*Water-Meter.*—March 23, 1869.

Claim.—1. The reciprocating vertical hollow shaft C, provided with the partition *e*, extending through the entire shaft, and the wing *e'*, and openings and ports, substantially as and for the purposes set forth.

2. In combination with the reciprocating hollow shaft C, the moving sleeve J, constructed and operating as and for the purpose specified.

3. The combination of the rollers *l* and moving double incline *m m*, with the sleeve, or piston J, as and for the purpose set forth.

4. The stationary diaphragm I, in combination with the sleeve J, as specified.

5. In combination with the vertical-chambered reciprocating shaft C, extending through both cylinders, the openings *h h'*, and wing *e'*, substantially as and for the purpose described.

6. The combination of the vertical shaft C, constructed as described, wing *e'*, and partition *f*, as and for the purpose set forth.

7. The combination of the cylinders A B, the hollow, chambered shaft C, and sleeve J, substantially as and for the purpose specified.

88,222.—THOMAS SIM and ELIAS S. HUTCHINSON, Baltimore, Md.—*Apparatus and Process for Extracting Oil from Vegetable and other Matter.*—March 23, 1869.

Claim.—1. The process of separating bisulphide of carbon or other chemical from oil, by the aid of an exhaust, substantially as herein described.

2. The apparatus, constructed and arranged to operate substantially as herein set forth.

3. The combined process of extracting oil from vegetable matter, by means of bisulphide of carbon, or other suitable chemical, and afterward separating the chemical from the oil, by the aid of an exhaust, substantially as herein described.

88,223.—AMOR SMITH, Baltimore, Md.—*Fertilizer.*—March 23, 1869.

Claim.—1. The mode of preparing leather for use as a fertilizer, by simply steaming, drying, and pulverizing it, without the necessity for the employment of chemical agents, substantially as set forth.

2. As a new article of manufacture, a fertilizer, composed of a phosphate, and leather which has been steamed, dried, and pulverized, substantially as set forth.

88,224.—GIBSON SMITH, Croton Junction, Mass.—*Compound for Coloring the Hair.*—March 23, 1869.

Claim.—A new and improved mode of coloring and preserving the hair, by the use of hyposulphite of soda.

88,225.—JAMES SNOWDIN, Westford, and JOHN KENT, Beaver Dam, Wis.—*Harrow.*—March 23, 1869.

Claim.—The bands C, chains D, drums E, ratchet-wheels E', ratchet-springs *d*, and levers F, in combination with the frames A and harrows B, as arranged, substantially in the manner and for the purpose as described.

88,226.—ORVILLE SPERRY and JOHN W. HOPSON, Hartfield, N. Y.—*Churn-Dasher.*—March 23, 1869.

Claim.—The arrangement of the dasher in two clamp-heads, *a a*, *b b*, which clamp the sieve B between, the construction being such that said sieve may be applied and removed at pleasure, as herein set forth.

88,227.—MICHAEL J. STEIN, New York, N. Y.—*Last-Holder for the Manufacture of Boots and Shoes.*—March 23, 1869.

Claim.—1. The combination, with the movable base-plate A, of the swinging last-holding plate or frame C, provided with adjustable toe and heel-supports *i c*, for operation substantially as described.

2. The combination of a locking-dog, or dogs, and rack, with the adjustable or swinging last-holding plate, or frame, and base-plate, or portion of the jack, for locking or stopping the last-holding plate

at different angles, or elevations, essentially as described.

3. The combination with the base-plate A and adjustable or rocking last-holding plate C, of the rack G, the slotted slides F F, the springs H H, the levers I I, and the dogs *r r*, carried by said slides, and set, or arranged relatively to the teeth of the rack, for operation substantially as specified.

88,228.—LEANDER R. STREETER, Chelsea, assignor to himself and A. B. ELY, (trustees,) Newton, Mass.—*Method of Veneering Articles with Pyroxyle.*—March 23, 1869.

Claim.—1. The use of plastic pyroxyle or xyloidine, and its compounds, as a veneer or facing upon dental base-plates, or artificial gums, substantially as described.

2. The combination of pyroxyle, or its compounds, with dental plates, or gums, substantially as described.

3. The combination of artificial teeth with dental plates, or gums, veneered with pyroxyle, or its compounds, substantially as described.

4. Dental plates and gums, veneered with pyroxyle, or its compounds, substantially as described.

5. Veneering the surfaces of articles with plastic or flexible pyroxyle, or its compounds, when the same is attached as a veneer, substantially as described, with or without cement, and made to adhere and assume shape in presses, or molds, by compression, with heat, if need be, substantially as set forth.

88,229.—LEANDER R. STREETER, Chelsea, assignor to himself and A. B. ELY, (trustees,) Newton, Mass.—*Dentists' Flask.*—March 23, 1869.

Claim.—The removable cast of the back, or cornice part of artificial-teeth mountings, for flasking purposes, substantially as described.

88,230.—GEORGE C. TAFT, Worcester, Mass., assignor to LORING COES, same place.—*Wrench.*—March 23, 1869.

Claim.—1. The combination, with the reduced bar, as shown at C, of the sliding-jaw D, substantially as and for the purposes set forth.

2. The combination, with the ferrule F and shank H, of the holding-pin *a*, substantially as and for the purposes set forth.

3. A combined head and bar, cast in one piece, with the head cored out, as shown at *b*, for the purposes stated.

88,231.—ELMER TOWNSEND, Boston, Mass.—*Wire for Shoe-Pegs.*—March 23, 1869.

Claim.—1. A continuous wire, having a spiral thread raised upon it by pressure, without the removal of any portion of its substance, as described.

2. Giving to the thread of a continuous wire, formed as described, such an inclination to the line of the wire, as to adapt screws, or pins cut from it, to be driven by percussion in the direction of their length, instead of by turning, as screws are usually driven, substantially as set forth.

88,232.—ELMER TOWNSEND, Boston, Mass.—*Wire for Shoe-Pegs.*—March 23, 1869.

Claim.—Giving a concave form to the sides of a triangular wire for the manufacture of shoe-pegs, for the purpose set forth.

88,233.—A. J. TRAVER, Lisburn, Pa.—*Plow.*—March 23, 1869.

Claim.—The levers E E and spiral springs F F, as constructed and arranged forward of the shafts or standards D D, substantially in the manner and for the purpose as herein shown and described.

88,234.—GEORGE W. TUCKER, Eugene, Ill.—*Corn-Marker.*—March 23, 1869.

Claim.—1. The within-described gauge, consisting of the bar F, marker *f*, and brace G, secured to and in combination with the field-marker, and operated by means of the lever H, substantially as and for the purpose shown.

2. The combined field-marker and gauge, consisting of the axle A, frame B B, pole C, marking wheels D D D, bar F, marker *f*, brace G, and lever H, all constructed and arranged to operate substantially as described, and for the purpose set forth.

3. In combination with the gauge, as described, the reversible lever H, by means of which said gauge is raised or lowered, substantially as herein specified.

88,235.—GEORGE W. UMBAUGH, Lima, Ohio.—*Bee-Hive.*—March 23, 1869.

Claim.—The arrangement within a bee-hive, on the side thereof, of feeding-troughs, substantially as herein shown and described, and for the purpose set forth.

88,236.—CHARLES H. UNDERWOOD, Dorchester, assignor to JAMES A. DUPEE, Boston, Mass.—*Miter-Box.*—March 23, 1869; antedated March 18, 1869.

Claim.—The combination of the radial arms D D′ with a platform, and saw-guides attached to the platform, when so arranged that the saw will pass between the arms, through the center, from which they radiate, and the wood will have a bearing against the stroke of the saw, upon each arm, the opening between the arms being only sufficient to admit the free passage of the saw, all substantially as and for the purpose specified.

88,237.—OLIVER VALLANDIGHAM, St. Louis, Mo.—*Cigar-Drier.*—March 23, 1869.

Claim.—1. The combination of the box A, inner casing *b*, burner *v*, gauze cap *g*, ventilators *e*, *e′*, and *k*, all arranged, constructed, and operating substantially as and for the purpose shown and specified.

2. The combination of the box A, inner casing *b*, ventilators *e*, *e′*, and *k*, piping *s*, and elbow *p*, of a cigar-drying apparatus, with an ordinary coal-oil lamp, all constructed, arranged, and operating substantially as and for the purpose shown and specified.

3. A cigar-drying apparatus, combining the devices above set forth, when constructed, arranged, and operating substantially as and for the purpose shown and specified.

88,238.—WILLIAM VAN ANDEN, Poughkeepsie, N. Y.—*Velocipede.*—March 23, 1869.

Claim.—The ratchet-device *a* B, in combination with the pedal-cranks C, as described, for the purpose set forth.

88,239.—JAMES VARLEY, Hudson City, N. J.—*Neck-Tie Retainer.*—March 23, 1869; antedated March 15, 1869.

Claim.—1. A neck-tie retainer, formed of a shield or brooch-face piece A, and yielding neck-clip B, composed of curved arms *a a*, and body *b*, having a slot, *c*, in it, in combination with a catch or projection, *f*, in rear of the shield or brooch-face piece, for operation together, substantially as specified.

2. The slotted neck-clip B, formed with an elastic extension, or arm, *d*, for attachment to the shield, or brooch-face piece A, and for action in concert with the catch or projection *f*, constructed and arranged substantially as herein set forth.

88,240.—FREDERICK VOLKMANN and AUGUSTUS MILLER, Philadelphia, Pa.—*Carriage-Axle.*—March 23, 1869.

Claim.—The metallic washer D, flanged nut F, and notches *i i*, in combination with a locking-spring, *j*, the whole relatively arranged, and operating as and for the purpose described.

88,241.—W. W. WAIT, Richmond, Ind.—*Fanning-Mill.*—March 23, 1869.

Claim.—1. The lever *a*, operating on a fulcrum-pin, and so arranged that the latter may be changed to different points for the purpose of increasing or diminishing the action of said lever on the screen, without changing the lowest point in the lever's motion, substantially as set forth.

2. The eccentric *b* on the fan-shaft J, and rods *c* and *e*, for the purpose of giving an end-shake to the shoe, substantially as set forth.

3. The grain-board I, provided with the divergent partitions, and the board I′, as set forth, and for the purpose described.

88,242.—Lewis Wakefield, Minneapolis, Minn.—*Axle-Box.*—March 23, 1869.

Claim.—The axle-box A, provided at one end with a solid beveled flange B, and the other with screw-threads, which receive the beveled nut-flange D, substantially as and for the purposes herein set forth.

88,243.—Samuel Jacob Wallace, Keokuk, Iowa.—*Wash-Boiler.*—March 23, 1869.

Claim.—The steam, or automatic washer, made substantially as described, with a cone-shaped and imperforated roof-part, B, radiating ribs G G, or clothes-rack, tube D, from top of arch of roof B, and, at one side, provided with head K and scalloped part E, for the purpose set forth.

88,244.—John P. Ware, Montgomery City, Mo.—*Corn-Planter.*—March 23, 1869.

Claim.—The arrangement of the beam A, plow C, cutter D, seed-box E, and adjustable shovel, or shoe F, all constructed as described, and operating substantially as and for the purposes herein set forth.

88,245.—William Webb, Waterbury, Conn.—*Expanding-Chuck.*—March 23, 1869.

Claim.—1. The combination, with the rotary expanding-chuck, consisting of one or more expanding-slides, mounted in or upon the chuck-body, or stock, as set forth, of the vibratory or reciprocatory frame, arranged to move said slides back and forth upon the chuck, without interfering with its rotation, substantially as and for the purposes described.

2. The construction and arrangement of the vibratory adjusting-lever, or frame, in relation to the chuck-stock, or body, and slides mounted in or upon the said chuck-body, as and for the purposes specified.

88,246.—Thomas B. Webster, Sekaukus, N. J.—*Automatic Boiler-Feeder.*—March 23, 1869.

Claim.—The surplus-escape valve *k*, closed by pressure of steam on the piston *m*, in combination with the check-valve *f* and float E, and arranged between said check-valve and the feed-pump, substantially as specified.

88,247.—Horace Wells, Hopkinton, R. I.—*Roller-Cleaner in Spinning-Machines.*—March 23, 1869.

Claim.—1. The traveling cleaner D E, constructed as shown and described.

2. The traveling cleaner D E, in combination with the feed-rollers of a spinning-jack, or frame, substantially as shown and described.

3. The arrangement of the cleaner G, spring G′, and roller C, substantially as and for the purpose shown and described.

88,248.—C. Westbrook, Harrisburg, Pa.—*Automatic Transmitting Telegraph-Apparatus.*—March 23, 1869.

Claim.—In combination with a telegraph-instrument, adapted to receive and record messages upon the Morse plan, or system, a transmitting-apparatus, consisting essentially of the spring-finger D, acting as an automatic key, operated by the projections of the embossed fillet, as it passes from the recording-instrument, so as to make and break the circuit, and thereby automatically reproduce the message, substantially as described.

88,249.—Samuel P. Williams, Sheridan, N.Y.—*Gate.*—March 23, 1869.

Claim.—The gate, weighted as described, and hung at a point between both ends, but remote from its center, in combination with the short post, substantially as shown and described.

88,250.—William L. Williams, New York, N. Y.—*Machine for Splitting Wood.*—March 23, 1869; antedated March 18, 1869.

Claim.—1. The horizontal yielding and toothed feeding-wheels *q*, arranged at the sides of the feeding-trough, and actuated substantially as specified, to move the wood along when the knives are above said wood, as set forth.

2. The side-bars *p*, extending from end to end, or nearly so, of the trough *b*, and united by a bolt at the ends, where the wood is entered, and provided with springs near the other ends, for the purposes and as set forth.

3. The plate, or frame, adjusted by screws, as specified, in combination with the feeding-trough and reciprocating cutters, substantially as set forth.

88,251.—G. W. Williamson, Gouldsborough, Pa.—*Dish and Clothes Washer.*—March 23, 1869.

Claim.—1. The bottom, K, provided with the hollow conical perforated projections M, and the angular elevations O, or either separately, and combined with the vessel A, substantially as and for the purpose specified.

2. In combination with the above, the rack P, constructed as described for the purpose specified.

88,252.—John Q. A. Yonkey and Francis M. Rawson, Frankfort, Ind.—*Fence.*—March 23, 1869.

Claim.—A portable self-supporting fence, composed of posts A C, dovetail B, gains D D, and planks E E, when constructed and arranged substantially as and for the purpose set forth.

88,253.—Martin Woodard, Des Moines, Iowa.—*Combined Sower and Cultivator.*—March 23, 1869.

Claim.—The arrangement, on the frame A C D, of the removable seed-box G, having longitudinally-grooved agitators *h h*, operated by friction-wheels *f g*, and the bar *d*, under its bottom, with the hinged bars H H, slotted arms I I, pivoted shanks J J, teeth K K, levers L L, and railing M, all substantially as and for the purposes herein set forth.

88,254.—George W. N. Yost, Corry, Pa.—*Harvester.*—March 23, 1869.

Claim.—The combination of a bar S, projecting through and within a loop, R′, of the floating-bar, with a cylinder, R, of the body A and A′, provided with a groove, *g*, and having the end of the bar S′ within said cylinder R, in said groove *g*, when made and used as described for grass and grain-cutting-machines.

88,255.—William Zimmerman, Bloomington, Ill.—*Table-Attachment for Chairs.*—March 23, 1869.

Claim.—1. The construction and arrangement of the standard B, the clamp K, the table A, the metal plate E, the hinged forked brace C, combined to operate substantially as set forth.

2. The adjustable hinged clamp K, consisting of the parts J *h i o p l*, constructed and arranged substantially as and for the purpose described.

88,256.—Fred. Walton Bacon, New York, N. Y.—*Artists' Easel.*—March 23, 1869.

Claim.—1. The attachment and adjustment of the sketch-board D, by means of the groove *g g*, and set-screw and nut A, for the purpose set forth.

2. The attachment of the color-box B, or receptacle for colors, brushes, and other articles used for painting or drawing, either permanently, or adjustable by means of the pivot *p* and set-screw *t*, substantially as and for the purpose set forth.

3. The box F, a receptacle for sketches, drawings, canvas, paper, or other material, substantially as described.

4. The T-shaped slide and groove.

88,257.—G. F. Hargis, Decatur, Ill.—*Machine for Winding Cloth.*—March 23, 1869.

Claim.—1. The convexed boards *c* c^1, when they are convexed on both edges, and when the whole are so combined, in an independent frame, C, as to retain the same relative position in regard to their convexity, no matter at what width adjusted, substantially as described.

2. The combination of the tension-rollers B B^1 B^2, frame A A′, convexed boards *c* c^1, thumb-screws *a* a^1 a^2, clamping-jaws *e* e^1, and board D, when the whole is constructed and arranged substantially as described, as and for the purpose specified.

88,258.—Warren E. Johnson, Chicago, Ill.—*Process of Deriving Useful Products from Garbage, &c.*—March 23, 1869.

Claim.—The utilization of garbage, or refuse ma-

terial collected from hotels, boarding-houses, and private dwellings, and the production therefrom of valuable materials, substantially by the process detailed in the specification, as above.

88,259.—J. HERBERT SHEDD, Waltham, Mass.—*Liquid-Meter.*—March 23, 1869.

Claim.—1. The fans D E F, within a cylinder, so arranged that one of them shall operate as a plunger, another moving tardily as a diaphragm, and the third being measurably ineffective in its transition from the condition of a diaphragm to that of a plunger, or from the condition of a plunger to that of a diaphragm, all operated by means substantially as described.

2. The combination of eccentric-gearing, as described, with a system of fans of varying movement, upon a common center, in the manner and for the purpose herein shown.

3. The arrangement of the fan-chamber and the gearing-chamber, containing the parts hereinbefore recited, within a case, A, and cap C, whereby the whole shall be protected, with the occurrence of but one single joint, all as and for the purpose shown.

88,260.—LEANDER R. STREETER, Chelsea, Mass., assignor to himself and A. B. ELY, trustees.—*Composition for Dental Plates.*—March 23, 1869.

Claim.—1. The use of soluble pyroxyle, or xyloidine, or gun-cotton, prepared and combined with other substances, substantially as described, in such manner as will give the requisite toughness, durability, hardness, elasticity, and strength, for forming dental plates and artificial gums for teeth, substantially as set forth.

2. The method of preparing and manipulating the material, substantially as described, for the purposes set forth.

3. The attachment, or combination of artificial teeth to or with artificial bases, or gums, composed and prepared substantially as described.

4. Dental plates and gums for artificial teeth, &c., substantially as described, when composed of the material and made in the method substantially as set forth.

88,261.—ALONZO ASTON, New Britain, Conn., assignor to RUSSELL AND IRWIN MANUFACTURING COMPANY, same place.—*Reversible Knob-Latch.*—March 30, 1869.

Claim.—1. In combination with the latch D, and the ordinary devices for operating the same, the supplemental riding-plate H, arranged to connect the latch with its operating mechanism, substantially as described, for the purposes specified.

2. In combination with the supplemental riding-plate H, a sliding stop, *m*, arranged to operate in the manner substantially as described, for the purposes specified.

88,262.—E. A. BAGLEY, Worcester, Mass.—*Screw-Machine.*—March 30, 1869.

Claim.—1. The combination, with the spindle E and adjustable carriage C, of the notched holding-plate K and tongue H, substantially as and for the purposes set forth.

2. The combination, with the spindle E, and adjustable carriage C, of a holding-plate or device, tongue H, and lever F, arranged to be operated substantially as and for the purposes set forth.

88,263.—DANIEL BELCHER, Easton, assignor to himself and ALVIN COLBURN, Lynn, Mass.—*Mechanism for Connecting Horses to Vehicles:*—March 30, 1869.

Claim.—The combination of the slotted bar, or plate A, the catch-hook *a* and the clamp-screw *d*, or equivalent devices, with the spring-case B, the bolt-receiving bar C, and the spring D thereof, the said slotted bar, catch-hook, and clamp-screw enabling the case B to be adjusted to and fixed in different positions on the shaft of a carriage, as and for the purpose hereinbefore explained.

88,264.—CHARLES P. BIGELOW, Clinton, Mass.—*Edge-Plane.*—March 30, 1869.

Claim.—An edge-plane for shoemakers' use, having knife E, with lip *a*, body B, ear-shaped throat C, shield *b*, and plate F, with shoulder *e*, combined, arranged, and operating substantially as herein described.

88,265.—DOUGLAS BLY, late of Macon, Ga.—*Mucilage-Brush.*—March 30, 1869.

Claim.—1. An instrument for applying mucilage, consisting of a tubular section of elastic non-absorbent material, with a handle affixed, substantially as herein described.

2. Said instrument, when formed as above, and provided with an exterior covering of fibrous and absorbent material, to which the inner, or non-absorbent and elastic tube serves as a supporting and form-retaining structure, substantially as set forth.

3. The corrugated handle, in combination with the correspondingly-indented neck of the capsule, substantially as set forth.

88,266.—JACOB BRINKERHOFF, Auburn, N. Y.—*Washing-Machine.*—March 30, 1869.

Claim.—1. The clothes-box B, constructed in sections, and with perforated bottom, in combination with springs *g g g g*, and arranged to operate substantially as described.

2. The clothes-box B, in combination with press-board M, so to operate that while the box is ascending the board will descend, substantially as and for the purpose set forth.

88,267.—FREDERICK H. BRINKKOTTER, Callahan's Ranch, Cal.—*Machine for Fitting Fellies to Wheels.*—March 30, 1869.

Claim.—1. The bands B B, secured together on each end of the hub A, for retaining the clamping-frame, substantially as and for the purpose described.

2. The clamping-frame, consisting of the block C, having the longitudinal openings *d d d'* and cap D, together with the block G, yoke F, and screw E, the whole arranged substantially as above described.

3. The clamp K, with its arms *f f*, spring *h*, and rack *i*, for securing the spokes, substantially as herein described.

88,268.—WILLIAM M. BRISBEN, Philadelphia, Pa.—*Bobbin for Spinning-Machine.*—March 30, 1869.

Claim.—A sheet-metal bobbin, having an open seam the whole length of the tube A, and spring-tongues *b b'* in incision *a a'*, and bell-shaped, or flaring bottom B^2, constructed to operate substantially in the manner set forth.

88,269.—THOMAS BULLIVANT, Newark, N. J.—*Last.*—March 30, 1869.

Claim.—As a new article of manufacture, a last, having its sole, or bottom curved upwardly at the toe, so that the bottom, or sole of said last, at the toe shall project above the upper leather, in the manner and for the purpose set forth.

88,270.—HIRAM M. BURDICK, Ilion, N. Y.—*Hay-Spreader.*—March 30, 1869.

Claim.—Giving the tedding-forks, or teeth, a vibrating, or tumbling motion, to leave, or drop the hay, by means of the spider N and notched circle P, substantially as described.

88,271.—GUSTAV BURKHARDT, Homer, Ill.—"*Tinkers' Pot.*"—March 30, 1869.

Claim.—1. The removable funnel C, forming an automatic fuel-supply, supported on the ring *d*, so as to leave a space between it and the body A *a* of the pot, substantially as and for the purpose herein set forth.

2. The tinkers' pot composed of the removable funnel C, fuel-reservoir A *b*, with ring *d*, cover E, and pipe B, and the cast fire-pot *a* supported on perforated ring D, and provided with an opening, *e*, all combined and arranged substantially as herein described.

88,272.—T. M. BUSH, Hastings, Mich.—*Cistern-Top.*—March 30, 1869.

Claim.—A cistern-top, made of cement, laid on a removable covering of boards, around a central curb,

B, so as to form tight joints therewith and with the main walls, all constructed in the manner substantially as described.

88,273.—Calvin G. Cahoone and Bela E. Brown, Providence, R. I.—*Fastening for Breast-Pins.*—March 30, 1869; antedated March 15, 1869.

Claim.—The combination and arrangement of a "hinged guard," C, with the catch A of a pin-tongue, substantially as described, for the purpose specified.

88,274.—Cyrus Chambers, jr., Philadelphia, Pa.—*Car for Brick-Driers.*—March 30, 1869.

Claim.—1. The bottom of the car, constructed of the hinged slats S S, &c., capable of being turned over on to each other, in the manner and for the purpose described.

2. The slats S, constructed in the manner herein specified.

3. The swinging apron V, constructed and suspended substantially as and for the purpose described.

88,275.—James H. Chapman, Newton, Iowa.—*Garden-Cultivator.*—March 30, 1869.

Claim.—The combination of the curved arms C C, axle A, wheels B B and F, cross-bar G and its plates *a a*, supporting the shovels H I J K, or their substitutes, all substantially as herein specified.

88,276.—John H. Cole, North Bridgewater, Mass.—*Welted-Seam-Finishing or Reducing Machine.*—March 30, 1869.

Claim.—1. The combination as well as the arrangement of the peripheral-grooved feed-wheel D, the peripheral-grooved, or pressing-wheel C, the two slotted, or grooved guides F G, and the welt-cutter E, the whole being to operate together substantially as specified.

2. The combination and arrangement of the inside-edge trimming-knife H, with the peripheral-grooved feed-wheel, the peripheral-grooved, or pressing-wheel, the slotted guides, and the welt-cutter, arranged and applied so as to operate together, as specified.

3. The feed and smoothing-wheels, as made, not only with the welt-receiving grooves, extending around their peripheries, but with the arrangement, as described, of beveled surfaces on opposite sides of the said grooves, such being for stretching the leather laterally from the welt, as set forth.

4. The combination and arrangement of the gauge a^2, and the adjusting-screw b^2, with the gauge G and the knife H, combined with the guide F, the feeding and pressing wheels C D, and the knife E, arranged to operate as set forth.

5. The application of the guide G and the knife H to the frame, so as to be adjustable vertically with respect to the feed-wheel, as may be necessary to adapt the machine to operate on leather of any particular thickness.

88,277.—John Craig, San Francisco, Cal.—*Dumping-Wagon.*—March 30, 1869.

Claim.—1. The two longitudinal boards C C, hinged to the reaches, and swinging vertically to the center, for depositing the load beneath the wagon, substantially as described.

2. The longitudinal rods E E, angular metal plates *b b*, cranks *e e*, slotted bars F F, and staple I, the whole arranged substantially as and for the purpose described.

88,278.—Archibald C. Crary, Utica, N. Y.—*Steam-Engine.*—March 30, 1869.

Claim.—The arrangement, with reference to the steam-generator A and drum B, constructed as described, of the engine H, fan I, and tube N, with pipes G and E, the cylinder M, and its pipes R and M, as herein set forth.

88,279.—Munson C. Cronk, Auburn, N. Y.—*Clamp-Bar for Holding the Cutters of Mowing-Machines while being Ground.*—March 30, 1869; antedated March 19, 1869.

Claim.—The clamps B B, constructed as described, and provided with thumb-screws, in combination with the bar A, all arranged and operating substantially in manner and for the purpose set forth.

88,280.—Artemas Davison, San Leandro, Cal.—*Gang-Plow.*—March 30, 1869; antedated March 20, 1869.

Claim.—1. In combination with the arms D D′ and axes *a a′*, on the bar C, the clutch, consisting of the jaws F and G, on the wheel and axle, respectively, substantially as and for the purpose described.

2. The pin, or arm H, and the spring M, with the lever E, or equivalent device, for engaging and disengaging the clutch, substantially as described.

3. The rack J, constructed with the lip K, together with the holding-projection L, on the lever E, for retaining the jaws F and G in contact until the plows are raised, substantially as described.

4. The slotted arm D, with its set-screws *c c*, to raise and lower the axle *a*, and adjust the plows, substantially as and for the purpose herein described.

88,281.—Henry T. De Montigny, West Troy, N. Y.—*Ironing-Table.*—March 30, 1869.

Claim.—1. The folding skirt-table top E, formed of the sections *e e′ e″*, in combination with the standard C, and base, B, constructed and arranged as specified.

2. The brackets F F′ F″, in combination with the folding sections of a skirt-table top E, as and for the purpose set forth, as specified.

3. The base B, standard C, braces, or brackets *c c*, the table-top E, made with folding sections, *e e′ e″*, and the folding brackets F F′ F″, all in combination and constructed and arranged in the manner described, for the purpose specified.

88,282.—Charles F. Dunbar, Erie, Pa.—*Sewing-Machine.*—March 30, 1869.

Claim.—1. The revolving and reciprocating sleeve G, provided with a series of crossing-grooves, arranged on the shaft F, in combination with the swivel-toed stud *m n* and needle-carrying slide H I, as and for the purpose set forth.

2. The screw *f*, in combination with the sleeve G, provided with crossing-grooves *b b*, and with a groove, so that the needle-carrying box may be held stationary or be made to reciprocate, as and for the purpose set forth.

88,283.—George D. Edmands, Saugus, Mass.—*Channeling-Tool.*—March 30, 1869.

Claim.—1. The formation of slitting-knife A, with its edge on one side of the median line of its body, and its blade with a broad back to completely cover the upper part of hole D, when arranged in connection with the gouge-knife, having its lower end beveled upward and backward, as and for the purpose described.

2. The adjustment of the gouge, with its hole D not in the median line of the tool, but removed toward the interior side of the channel it is to cut, when said gouge has its sides hollowed and curved upward, outward, and backward, as and for the purpose described.

88,284.—Marmont B. Edson, New York, N. Y.—*Railway-Track.*—March 30, 1869; antedated March 18, 1869.

Claim.—1. The wire rope B B, either round or flat, in combination with the rails F F, substantially as and for the purpose set forth.

2. The stiffening-bar G, as constructed, in connection with the bow-clasps H H, wire rope B B, and rails F F, for the purposes herein specified.

88,285.—Moses G. Farmer, Salem, Mass.—*Application of an Electrical Current to Steam-Boilers.*—March 30, 1869.

Claim.—1. Passing a current, or series of currents, of positive electricity, from a conductor of the same electrical character as the boiler-shell, and suspended in the water of the boiler, through the water, to the boiler-shell, by connecting the suspended conductor with the positive pole of a battery, or other source of electricity exterior to the boiler, while the boiler-shell is connected with the negative pole of said battery, the purpose being to prevent the corrosion and incrustation of the boiler, as specified.

2. The combination and arrangement described of the boiler B, plate P, insulating-supports *h h*, and battery *p n*, for the purpose set forth.

88,286.—Alonzo Farrar, Boston, Mass.—*Velocipede.*—March 30, 1869.

Claim.—1. The combination and arrangement of the arm-rests or pitmen O O, and the cranks or crank pins N N, with the seat, and the steering-wheel band and wheels, applied to the perch and the steering-wheel carrier, substantially as set forth.

2. In the tricycle-velocipede, the arrangement of the two pedals F F and their hangers G G, the driving-shaft E, its cranks *a a*, and wheels A A, the perch D, the seat C, and the steering-wheel B, provided with mechanism as set forth, such arrangement being as represented in the accompanying drawings, and as heretofore described.

88,287.—Louis Fischer, Brooklyn, N. Y.—*Vapor-Burner.*—March 30, 1869.

Claim.—In combination with the burner-tube A, the shield I, passage H, and heating-chamber K, when constructed and arranged to operate substantially as described.

88,288.—Addison C. Fletcher, New York, N. Y.—*Steam-Generator.*—March 30, 1869.

Claim.—1. A steam-generator, constructed substantially as described, of a series of vertical slabs, A, arranged at suitable distances apart, side by side, and each being cast or formed with tubular steam and water passages *a*, arranged one above the other, and running in direction of the length of the slabs, with openings *b*, establishing communication between them at their ends, in combination with a vertical return fire-flue arrangement on the exterior of the slabs, essentially as specified.

2. The hollow slabs A, arranged as described, and formed with outside ribs *d*, made with tongues and grooves on their edges, for locking the slabs longitudinally, and keeping them at suitable distances apart, essentially as shown and described.

88,289.—John Geiger, Peoria County, Ill.—*Churn.*—March 30, 1869.

Claim.—In a churn, the combination of the cutters *a b d e* on the lower dashers, with the horizontal oblique dashers F G H I, set on a vertical shaft, each alternate dasher having its face at right angles to the face of and a little above the plane of the face of its forerunning dasher, as and for the purposes described.

88,290.—George F. Green, Kalamazoo, Mich.—*Pneumatic Tooth-Mallet.*—March 30, 1869.

Claim.—1. The reversing-valve E, arranged and operated as described, in combination with the independent double-headed valve T and partition S, substantially as and for the purpose set forth.

2. The point-holder H and jointed case J, in combination with the cylinder A, for the purpose described.

3. The swivel elbow-pipe F, for the purpose set forth.

88,291.—Eberhard Harrsch, New York, N.Y.—*Manufacture of Colors and Pigments.*—March 30, 1869.

Claim.—The extraction of colors or dyes from Franklinite-ores, the residue thereof, or any other ore containing oxide of zinc, manganese, and iron, substantially as described.

88,292.—Orrin L. Hart, Millville, Wis.—*Water-Wheel.*—March 30, 1869.

Claim.—A water-wheel, consisting of a shaft or hub, having the radial, plain-surfaced, extended buckets or floats C, with the spiral buckets D, inclosed by the rims E attached, all as herein shown and described.

88,293.—D. Healy, Dansville, N. Y.—*Wagon-Brake.*—March 30, 1869.

Claim.—1. A brake, constructed and arranged to work on an incline, *j*, in such a manner that the friction of the wheel thereon, in its forward movement, will hug it closer and wedge it in position, substantially as herein described.

2. In combination, the rocking slotted arm D, operated by the sliding tongue B, with the sliding brake, when constructed and arranged to operate substantially as herein described and for the purpose set forth.

3. The shoe L, with the cap K, in combination with the head J, when constructed and arranged to operate substantially as herein described and for the purpose set forth.

88,294.—Isaac V. Holmes, New York, N. Y.—*Metallic Studding for Fire-Proof Walls.*—March 30, 1869.

Claim.—1. A stud formed of corrugated sheet-metal, for supporting a lath surface, and constructed substantially as and for the purpose described.

2. An adjustable lug, in combination with a metal stud, used for supporting a lath surface, constructed substantially as and for the purpose set forth.

88,295.—John R. Hopper, Rochester, N. Y.—*Potato-Digger.*—March 30, 1869.

Claim.—The arrangement, in the auxiliary frame D D, of the endless apron G and shaking-riddle K, combined together as described, and operated in the manner and for the purpose herein set forth.

88,296.—Daniel Hughes, Henry E. Shaffer, and William S. Thompson, Rochester, N. Y., assignors to Henry E. Shaffer and William S. Thompson, same place.—*Fruit-Jar.*—March 30, 1869.

Claim.—The arrangement and combination, in a cover for fruit-jars, of the concavo-convex stopper B, when so constructed as to insure greater thickness of the periphery to occupy the space usually left vacant around the neck of the jar, and prevent the fruit from approaching the joint, said stopper being grooved and shouldered at the periphery, and provided with the elevated flange *k*, notch *d*, and extended horizontal-bearing plane for the inwardly-projecting flange of the clamp-ring C, substantially as and for the purposes set forth.

88,297.—George Hunzinger, New York, N.Y.—*Chair.*—March 30, 1869.

Claim.—1. The braces *e*, connected permanently at their upper ends to the back, and near their middle to the seat, in combination with the front legs *a*, to which the braces *e* are permanently connected, substantially as set forth.

2. The rail *f*, in combination with the braces *e* and legs *a*, as and for the purposes specified.

88,298.—George Inwood, San Francisco, Cal.—*Device for Securing Bed-Clothes.*—March 30, 1869.

Claim.—The clamping-bar D, when held and operated by rods *b*, sliding in or upon the fixed rail or rails of the bedstead, and secured at the proper point by the set-screws *e*, substantially as and for the purpose herein set forth.

88,299.—Jacob Jameson, Philadelphia, Pa.—*Process and Apparatus for Making Iron and Steel.*—March 30, 1869.

Claim.—1. The process of treating or deoxidizing ores, by means of a series of closed chambers, constructed and arranged to operate substantially as described.

2. A reducing frame, so constructed as to be also used for heating blooms, substantially as set forth.

88,300.—Charles E. Jaycox, San Francisco, Cal.—*Flea-Powder.*—March 30, 1869.

Claim.—The ingredients above enumerated, mixed and compounded in the manner and in about the proportions specified, substantially as and for the purpose herein described.

88,301.—Jacob D. Johnson, Tylersville, Pa.—*Portable Field-Harrow.*—March 30, 1869.

Claim.—A portable field-harrow, consisting of a rotary harrow and sled, constructed, arranged, and combined in the manner shown, and for the purposes herein set forth and described.

88,302.—Richard M. Johnson and Ezra Stiles, Bridgeport, Conn.—*Railway Safety-Switch.*—March 30, 1869.

Claim.—1. The combination of the mortised block C (which has a tenon, *c*, and an eccentric, *d*) with the wheels *e*, endless chain *p*, and rods *r*, when operated by the lever N, rack *l*, and pinion *i*, substantially as described.

2. In combination with the above, the arrangement of a bevel-gear wheel to the lower end of the arbor *h* of the spur-wheel *e*, (which is connected with other bevel-gear,) to operate the signal staff L, substantially as described, as and for the purposes set forth.

3. In combination with the device for vibrating the switch and operating the signal, the safety-track E E′, when constructed as and for the purpose specified.

88,303.—William R. Johnson, Binghamton, N. Y.—*Stump-Extractor.*—March 30, 1869.

Claim.—The combination of the longitudinal bar H with the inclined top of the frame, and the mode of holding the driving-pinion in gear by means of the detent K, and the wheel and pinion-gearing with the pulleys and blocks G G, all being constructed as herein described and represented, for the purpose set forth.

88,304.—James Jorey, Westville, Conn.—*Horseshoe.*—March 30, 1869.

Claim.—The plate B, provided with calk *c* and clip *d*, on the forward end, and clamp *b* on the rear end, all constructed in one piece, and fitted between the shoulder *f*, on the shoe, and secured to the latter by means of the screw *e*, as herein set forth and shown.

88,305.—James M. Keep, New York, N. Y.—*Dancing-Motion for Toys.*—March 30; 1869; antedated September 30, 1868.

Claim.—The within-named platform and disk, or their equivalents, so combined and so operating, by rotating the disk, as to give a vibrating motion to the platform, as and for the purpose herein described.

88,306.—Oscar R. Kendall and Lemuel C. Kendall, Groton, N. H.—*Clapboard-Machine.*—March 30, 1869.

Claim.—The arrangement of the lever H, rods I′, and springs *i*, as described, for the purpose set forth.

88,307.—Gebhard Koeb and Louis Houcke, Springfield, Ohio.—*Belt-Fastening.*—March 30, 1869.

Claim.—A belt-fastener, consisting of the metallic plate A, provided with the central ridge *c* and the studs *a*, constructed for use, substantially as herein described.

88,308.—John Lamb, Jeffersonville, N. Y.—*Washing and Wringing Machine.*—March 30, 1869.

Claim.—1. The eccentric *d′*, in combination with the crank *d*, and wringers B C, arranged to operate substantially as described.

2. The frame A, provided with wringers and washers B C D E, crank *d*, eccentric *d′*, pins *a a*, screw-plate *c′*, and springs *a′ a′*, all arranged to operate substantially in the manner and for the purpose described.

88,309.—John Lane, Chicago, Ill., assignor to himself, C. H. Hapgood, William B. Young, and G. H. Laughton, same place.—*Plow-Colter.*—March 30, 1869.

Claim.—1. Imparting to the colter A a lateral adjustment, by making that portion D of its bearing which comes in contact with the beam, rounded, substantially as described.

2. The combination of the holder C and slotted adjustable block D, for holding the colter in position, and adjusting the same vertically, as set forth.

3. The corrugated or grooved plate F, in combination with the holder C and staple E, for adjusting the colter, and adapting it to plows with different-sized beams, substantially as set forth.

4. The holder C, constructed as described, and having the diagonal groove for the staple, as set forth.

5. The combination of the holder C, adjustable slotted plate D, and standard B, with the pin *a*, all constructed and arranged to operate substantially as and for the purpose set forth.

88,310.—Rufus Lapham, Boston, Mass.—*Heel for Boots and Shoes.*—March 30, 1869; antedated March 11, 1869.

Claim.—1. The catch *h*, for the purpose specified.

2. The treading-part *g g d p*, constructed as described.

3. The serrated rim *a a*, for the purpose set forth.

4. A boot or shoe heel, consisting of the spring-case *c* and detachable tread-piece, substantially as described and set forth.

88,311.—James R. Little, Galesburgh, Ill.—*Cultivator.*—March 30, 1869.

Claim.—1. The journal-spindle C, upright *m*, wheel-spindle B, flange L, braces F, D, and E, arranged substantially as described, and combined with the axle A, hounds K, and draught-pole H, in the manner and for the purpose set forth.

2. The upper plate O, when provided with the elevations R *g*, and recess S, and operating in combination with the lower plate P, beam N, and bolts Q Q and Y, and clamping-plates W W, in the manner set forth, so as to secure the adjustments described.

88,312.—J. C. Mahaffey, Little York, Ill.—*Horse-Collar.*—March 30, 1869.

Claim.—In a horse-collar, the combination of the tongue B, and eyed flap A, arranged to operate with the staple D, as shown, and for the purposes described.

88,313.—John A. Marvin and Samuel E. Vose, Milwaukee, Wis.—*Cooking-Stove.*—March 30, 1869.

Claim.—1. The draught-opening A, in the top of the stove, when operating as described.

2. The perforations or slots Z Z Z, at the sides and front of the oven, for circulating the heated air, as set forth.

3. The combination of the plates N and O with the partition-plates P, making the bottom flues, and the corresponding plates, making the back flues, when suspended for the purposes and in the manner described.

4. The reservoir-flue, formed by plate W, with opening and damper X, as described.

88,314.—Nathan F. Mathewson, Barrington, R. I.—*Hay-Spreader.*—March 30, 1869.

Claim.—1. The combination of the hinged frame A, spring *a*, and strap *b*, the whole constructed and arranged substantially as described, for the purposes specified.

2. The combination of the hinged frame A, spring *a*, post C, and wheel D, for the purposes specified.

3. The combination of the head-piece M, tines K, bolt *n*, and hollow tube *t*, the whole constructed as described, for the purposes specified.

4. The hinging of the journal-box P to the frame A, for the purposes specified.

88,315.—T. F. McCafferty, Columbus, Ohio.—*Bee-Hive.*—March 30, 1869.

Claim.—1. The honey-board D, when provided with slides *e*, *e*, and *f*, and covering openings *c*, *c*, and *h*, substantially as described, and for the purpose specified.

2. The slide *f* and openings *h*, to admit of ventilation from the top, as set forth.

3. In combination with the slide *f* and openings *h*, the removable foot-blocks *i i*, as shown and described.

88,316.—J. M. McCarthy, Canal Dover, Ohio.—*Brick-Kiln.*—March 30, 1869.

Claim.—Providing the mouth of the arches of a brick-kiln with a metallic frame, A, having horizontal bars, *d d*, and suitable lugs, or projections, C C, D D, to place one or more adjustable doors, B, upon, said doors being so constructed that

they may be entirely closed, or partially opened, substantially as and for the purposes herein set forth.

88,317.—DAVID MCCARTY and J. F. BECK, Tiffin Township, Ohio.—*Tool for Shearing Sheep.*—March 30, 1869.

Claim.—The device for shearing sheep, composed of the the two plates A and B, having the whole and half teeth, of form shown, each plate being provided with cutting-edges, as described, the two parts being attached to each other, and provided with a handle, all being arranged substantially as and for the purpose set forth.

88,318.—GEORGE MCGREGOR and GEORGE VOLL, Cincinnati, Ohio.—*Sash-Lock.*—March 30, 1869.

Claim.—In a sash-bolt, the arrangement and combination of the base-plate C with the segment *c* thereon, case D, spring-bolt F, arm G, and catch H, as shown and described, for the purpose specified.

88,319.—JOHN C. MILLER, Danville, Ky.—*Gun-Lock.*—March 30, 1869.

Claim.—1. Constructing the butt of a fire-arm in such a manner, that by pressing the butt against the shoulder, the piece may be rapidly cocked, substantially as herein set forth.

2. The combination of the spring butt-plate B, springs E E, pitman F, and lifting-wheel G, from which a connection may be made with the gun-hammer, for operating the same, substantially as herein set forth.

88,320.—MORGAN B. MILLER, Peoria County, Ill.—*Churn.*—March 30, 1869.

Claim.—1. The use of either vertical or inclined dash-boards *a a*, tapering from their inner to their outer edges, with or without perforations, arranged around a pair of vertical shafts, E E, so placed that a dasher on either shaft alternately passes through the same space, and within the radius of the dasher on the other shaft, substantially as described, and for the purposes set forth.

2. In combination with the above, and working together, the interior cistern B, the outer or tempering cistern A, the covers C C, and the gearing *b d e*, all operating substantially as described, and for the purposes set forth.

88,321.—SARAH F. MILLS, San Francisco, Cal.—*Apparatus for Composing and Exhibiting Groups of Card-Pictures.*—March 30, 1869.

Claim.—1. Attaching to card-pictures a support, composed partly of wood or other non-metallic substance, glued or pasted on the back, and partly of a metal point, for entering the floor and sustaining it upright, substantially as herein described.

2. As an article of manufacture, a card-support, partly of wood or other light and stiff substance, which will adhere to glue or paste, and partly of a metal point for entering the floor.

88,322.—GEORGE E. MILROY, Lowell, Mass.—*Stop-Motion for Looms.*—March 30, 1869.

Claim.—The mechanism herein described for stopping a loom, on the occurrence of imperfections in the woven cloth, when constructed, combined, and operated substantially as set forth.

88,323.—ALMON T. MORRIS, Seal, Ohio.—*Farm-Gate.*—March 30, 1869.

Claim.—The arrangement, in connection with a gate that slides on a rail, and then swings around with said rail upon a pivot-pin, of a sliding panel in said gate, with its own fastening, so that a passage may be made for small or for large stock to go through, or for teams, as may be desired, and as set forth and described.

88,324.—WILLIAM MORROW, San Francisco, Cal.—*Aerial Car.*—March 30, 1869.

Claim.—The combination and arrangement of the supply-pipes E, blowers B, and discharge-pipes F, substantially as and for the purpose set forth.

88,325.—H. F. MORTON, West Sumner, Me.—*Drag-Rake.*—March 30, 1869.

Claim.—A drag-rake, the head and handle of which are connected or swiveled together substantially in the manner and by the means herein shown and described, whereby the angle at which the handle stands to the head may be varied at pleasure, for the purposes set forth.

88,326.—PETER MUNZINGER, Philadelphia, Pa.—*Gas-Purifier.*—March 30, 1869.

Claim.—The purifier A, when constructed as and for the purpose shown and described.

88,327.—ADDISON NORMAN, Rochester, N. Y.—*Extension-Basket.*—March 30, 1869.

Claim.—1. A basket, when provided with a removable bottom, as and for the purpose set forth.

2. A basket, when provided with an extension-case, B, for the purpose set forth.

3. Pin *x* and sustaining-rods *y*, in combination with the removable bottom *c*, as herein shown and described.

4. The lever D, pins *p*, lugs *d*, and guides *a*, in combination with the vertical moving case B, when arranged substantially as and for the purpose set set forth.

88,328.—ISAAC T. PACKARD, Chicago, Ill.—*Tremolo-Regulator for Reed Musical Instruments.*—March 30, 1869.

Claim.—The lever E, the friction-spring G, the valve *a*, and the tracker *e*, when they are made as herein described, or equivalent thereto, and operated and used for the purpose herein set forth.

88,329.—TURNER C. PURINGTON, Lincoln, Cal.—*Grape-Crusher and Stem-Separator.*—March 30, 1869.

Claim.—1. The half-oval crusher C, attached to the shaft D by the arms E E, and imparting to it a reciprocating, or to-and-fro movement, whereby the grapes are deprived of their stems, and crushed beneath upon the grated bottom of the machine, substantially as described.

2. The combination and arrangement of the grated bottom B B′ B′, with the crusher C, substantially as and for the purpose specified.

88,330.—JOHN R. RICH, Tremont, Me., assignor to W. J. STOCKBRIDGE, Gloucester, Mass.—*Securing Ships' Hatches.*—March 30, 1869.

Claim.—1. The combination and arrangement of the clamp-bars C, and their clamp-screws, and elastic water-proof strips, or linings, with the hatchway-frame, and so as to operate with the hatches thereof, as specified.

2. The application of the elastic strips, or linings to the lower and inner surfaces of the bars C, and arranging the clamp-screws in the oblique manner, with reference to the bars and hatchway-frame, as described.

3. The combination of either or both of the elastic water-proof strips, or linings *e g* with the two hatches and the bars C, and their water-proof elastic linings and clamp-screws, applied to the hatchway-frame, as and to operate as explained.

88,331.—JOHN RICHARDS, Cincinnati, assignor to himself and J. N. BRITTINGHAM, Columbus, Ohio.—*Machine for Making Joints in Table-Leaves.*—March 30, 1869.

Claim.—1. The beveled cutter-heads *g g*, in combination with the traveling carriage *b*, arranged to operate in the manner and for the purposes set forth.

2. The combination of the traveling carriage *b*, inclined supports *n*, and spindle *r*, operating as herein specified and for the purposes described.

88,332.—CYRUS LAWTON SABIN, Barnard, Vt.—*Milk-Cooler.*—March 30, 1869.

Claim.—The combination and arrangement of water-tank B, with pipe C and D, the milk-receptacle L, with pipe M, and the broad, flat water channels, above and below a similar channel for the milk, all substantially as and for the purpose set forth.

88,333.—E. W. SKINNER, Madison, Wis.—*Journal-Box.*—March 30, 1869.

Claim.—A journal-box, consisting of the cast-iron frame A, provided with the lips *b* and the flange *a*, in combination with the detachable brass plate B, all constructed and arranged for use substantially as and for the purpose set forth.

88,334.—WILLIAM D. SLACK, Lewisburg, Pa.—*Harvester.*—March 30, 1869.

Claim.—1. In combination with the drag-bar and brace, arranged as described, the neck and washer, so that the connection between the two may be made rigid, or flexible, as desired, by simply shifting said washer from one side to the other of said brace, as set forth.

2. In combination with the drag-bar and brace, and a lifting-lever, I, for raising them, a caster-wheel, *j*, on the brace, to take the strain from the drag-bar and brace, and facilitate the turning around of the machine, substantially as described.

3. In combination with a brace for bracing the heel of the drag-bar, that carries a cutting-apparatus, the link, or loop *e*, and adjustable plate *f*, into which it is hooked, for the purpose of drawing the drag-bar nearer to or moving it farther from the main frame, and thus adjust, without detaching or altering the pitman, substantially as described.

4. The use of two or more connecting-rods between the main driving-wheels, or axle, and the rake-gears, so as to transmit motion to the rake, or beater-arms across the flexible connection between the frame and the drag-bar, substantially as and for the purpose described.

5. In combination with the cast frame A, and the plate E attached thereto, the brace Q, extending from the rear of the main frame to said plate, as and for the purpose described.

88,335.—FRIEND W. SMITH, Jr., Bridgeport, Conn.—*Croquet-Wicket.*—March 30, 1869.

Claim.—1. The combination, substantially as set forth, with a croquet-wicket, of spiral springs, which allow the wicket to yield laterally.

2. The combination, substantially as set forth, of vertical supports, provided with eyes, and spring-wickets, for the purposes specified.

3. The combination, with the yielding spring-wicket, of the numbered hinged label, arranged and operating as and for the purpose described.

88,336.—HENRY SMITH, 3d, North Chili, N. Y.—*Stump-Extractor.*—March 30, 1869.

Claim.—The combination of bail G and connecting-chain H with base, A, the whole arranged as described, and operating in the manner and for the purpose specified.

88,337.—OLNEY L. SMITH, Providence, R. I.—*Railway-Car Coupling.*—March 30, 1869.

Claim.—The combination of the hunter A with the link E, piston D, spring J, and pin H, constructed and arranged to operate substantially as herein described.

88,338.—PETER C. SMITH, Providence, R. I., assignor to himself, EZRA S. DODGE, and LOUIS A. KOTZOW, same place.—*Safety-Toggle for Watch-Chains.*—March 30, 1869.

Claim.—The safety-toggle, consisting of the face-plate *a*, the standards B, the barrel C, the bar D, and spring E, constructed and operating substantially as herein described, for the purposes specified.

88,339.—RUFUS M. SMITH, Lafargeville, N. Y.—*Farm-Gate.*—March 30, 1869.

Claim.—1. The combination, with the hinged, or swinging extensible frame, or crane and rollers, of the gate, which, while mounted upon and moving with said frame, is also capable of an independent sliding movement back and forth upon the same, substantially as herein shown and set forth.

2. The combination, with the parts specified in the preceding clause, of an extension-post, connected with and supporting the hinged gate-frame, under the arrangement described, whereby said frame, together with the gate which it carries, may be raised or lowered, as set forth.

3. The employment, with a gate such as described, of an extension-post, constructed substantially as herein specified, so as to be adjusted to and receive the free end of the said gate, whether the same be raised or lowered, as set forth.

4. The construction of the gate-carrying frame, or crane with a hinged arm, which carries the forward roller, and a pivoted extensible brace, or bar, for raising and lowering, or effecting the adjustment of said arm, substantially as and for the purposes shown and set forth.

5. The combination of the sliding gate, its frame, or crane, and the extension-post to which said frame is hinged, the said parts being constructed and arranged for joint operation, as herein shown and specified.

88,340.—ROSWELL T. SMITH and JOSEPH K. PRIEST, Nashua, N. H., assignors to themselves, WILLIAM EARLE, Jr., and J. G. BLUNT, same place.—*Animal-Shearing Machine.*—March 30, 1869.

Claim.—1. In a shearing-machine, of the kind described, the combination of the presser *c'*, and its adjusting or presser-screw or screws, or the equivalent therefor, with the cutter-shaft *y*, the cutter H, and the cutter-plate G, as described.

2. The presser, as made with the oiling-passage arranged within its head, or point, substantially as set forth.

3. The combination of the gear-case, or box *w'*, with the carrier F, the same being to swivel, with respect to the handle of the carrier, and extend about, and entirely cover the gears contained in such case *w'*, as specified.

4. The combination and arrangement of the cap, or case *l*[1], with the bevel-gears therein, and the shaft-supporter, or swivel-arm D.

5. The application of the cutter-shaft to its bevel-gear, so as to be capable of being moved endwise through it, and of being revolved by it, as and for the purpose specified.

6. The combination and arrangement of the guard *p'* with the shaft bearing *m'*, and the cutter-head, or shield *b*[1].

88,341.—WILLIAM HENRY SNYDER, Phelps, N. Y.—*Turbine Water-Wheel.*—March 30, 1869.

Claim.—The wheels C and D, constructed and arranged substantially as herein shown and described, so as to run in opposite directions, propelled by a lateral horizontal stream, delivered through the chute J, and discharged centrally, at the base, in combination with the case B, all substantially as and for the purposes set forth.

88,342.—HENRY SOGGS, Columbus, Pa.—*Car-Coupling.*—March 30, 1869.

Claim.—The elliptic spring E, provided with the recessed jaws *s s*, when used in connection with the headed pin *c* and link *b*, as described, for the purpose set forth.

88,343.—GEORGE C. STEINHAUER, Indianapolis, Ind.—*Automatic Fan.*—March 30, 1869.

Claim.—The oscillating frame F G I K L M, in combination with the counterpoise P, screw H, and arm D E, for giving an oscillating motion to the fan, substantially as herein described, for the purpose specified.

88,344.—U. T. STEWART, Fayette County, Tenn.—*Shovel-Plow.*—March 30, 1869.

Claim.—The combination of four cutters, *c c c c*, attached to the center of the plow, so as to cut the turf, or roots in front of the plow, constructed as described and shown.

88,345.—JOEL TIFFANY, Albany, N. Y.—*Steam-Generator.*—March 30, 1869.

Claim.—1. The vessels H and G, two or more, constructed and combined substantially as herein set forth.

2. The force-pump F, in combination with the boiler H and vessel G, substantially in the manner described.

3. The pump F, in combination with the pump O and the cross-head Y, substantially in the manner and for the purpose above described.

4. The screw-rod L, in combination with the cross-head Y and pumps O and F, substantially as above described.

88,346.—ALFRED S. TRAFTON and TIMOTHY J. TRAFTON, Portsmouth, N. H.—*Grappling for Anchors.*—March 30, 1869.

Claim.—1. In combination with the stock A, of a grappling, the plate C, secured upon the same, and provided with holes G, for holding and strengthening the flukes, substantially as described.

2. In combination with the projection H upon the flukes, the shoulder I and ring, or ferrule B, for securing the flukes upon the stock, substantially as set forth.

88,347.—JOHANNES A. VAN DER WAAG, Brooklyn, N. Y., assignor to THEODORE VAN SKELLINE, for one-half of said invention.—*Veloeipede.*—March 30, 1869.

Claim.—In a velocipede, the arrangement of the body A, seat F, axle B, driving-wheels C C, standards I I, crank-shaft J, revolving in the bearings K K, cross-bar L, and connecting-rod M, the pulleys N and O and belt, with respect to the shaft J, all constructed as herein shown and described, and for the purpose set forth.

88,348.—PETER H. VANDER WEYDE and JOHN MATTHEWS, Jr., New York, N. Y.—*Preparation of Aerated Drinks for Medicinal Purposes.*—March 30, 1869; antedated March 18, 1869.

Claim.—1. The combination of a solution of sugar or its equivalent, in water with nitrous oxide, or laughing-gas, for medicinal purposes.

2. The combination of a solution of sugar, or its equivalent, in water with nitrous oxide, or laughing-gas, carbonic-acid gas, and any flavoring ingredient, forming an exhilarating substitute for the injurious, irritating alcoholic drinks.

88,349.—FRANCIS S. VOGEL and JOHN R. ALBRIGHT, Lancaster, Pa.—*Cabbage-Cutter.*—March 30, 1869.

Claim.—The arrangement of a cabbage-cutter, A, with the screw-shaft S, sliding nut N, and lid D, combined with a rotary bottom, *o*, armed with knives R, the arrangement of the step K, all operating in the manner and for the purpose substantially in the manner specified.

88,350.—DONALD G. WALKER, Oshkosh, assignor to himself and GEORGE H. BUCKSTAFF, Winnebago County, Wis.—*Weather-Strip.*—March 30, 1869.

Claim.—The arrangement of the pivoted weights W W, working in a semicircular recess in the door, for operating the strip *b*, as specified.

88,351.—FRANCIS H. WALKER, Boston, Mass.—*Hinge.*—March 30, 1869.

Claim.—1. The construction of the leaf C of the hinge, with a bearing, *a*, and perforated pintle, *b*, adapted for receiving the eye *e* of leaf B, and also the shank *g'* of a locking-pin, as shown and described.

2. The self-locking gravitating pin *g g' i*, constructed and adapted for use in combination with a notched eye, *e*, of leaf D, and the perforated pintle *b*, on the eye, or bearing of leaf C, substantially as described.

3. A handle, or finger-piece, D' formed on the leaf D, and adapted for use upon a shutter, or blind, substantially as described.

88,352.—RICHARD H. WALDRON, Portsmouth, N. H., assignor to himself and JOHN J. FLANDERS, same place.—*Portable Cooking-Furnace.*—March 30, 1869.

Claim.—1. In combination with a furnace constructed substantially as herein described, the interior dome, G, and the exterior pyramid, H, substantially as and for the purposes set forth.

2. In combination with such a furnace, the register F, under the grate, for letting the ashes down into the stove or range beneath, substantially as described.

3. The arrangement of the horizontal passage E and grate C above the top of the stove, or range, whereby the draught is admitted without descending, and the fire may be raked without removing the furnace from its place.

88,353.—WILLIAM G. WHITE, Bedford, Ohio.—*Method of Pressing Bricks.*—March 30, 1869.

Claim.—The cam L, sliding board H, friction-wheels *b* and *b'*, adjustable press-shaft M, and press-board O, when constructed, combined, and operating in the manner and for the purposes herein set forth and described.

88,354.—HENRY WHITNEY, East Cambridge, Mass.—*Method of Making Inkstands, &c.*—March 30, 1869.

Claim.—The combination and arrangement of the open space C, with such projection, and the surrounding base D, the purpose of such space being substantially as specified.

88,355.—JAMES YOCOM, Jr., Philadelphia, Pa.—*Grate-Bar.*—March 30, 1869.

Claim.—1. A sectional grate-bar, having the sections B connected to the bearer A by wrought-metal ear-pieces, *g*, substantially as described.

2. Grate-bar sections B, which are cast with wrought-metal pieces *g g*, substantially as described.

88,356.—AZRO B. ALLEN, Rutland, Vt., assignor to himself and J. D. ALLEN, same place.—*Axle-Box Bearing.*—March 30, 1869.

Claim.—The axle-box, of the construction described, with rounded transverse groove A, when held in place by the removable key, fitted and arranged substantially as and for the purpose set forth.

88,357.—S. R. BAILEY, Bath, Me.—*Cheese-Cutter.*—March 30, 1869.

Claim.—The combination of the bar, supplied at the top with a rigid or hinged knife, and at the bottom with a stirrup, to be worked by the foot, substantially as and for the purposes specified.

88,358.—CHARLES BARNS, Oskaloosa, Iowa.—*Harvester-Rake.*—March 30, 1869.

Claim.—1. The levers D and G, cam-plate E, arms F, connecting-bars *f'* and J, rigid frame H, sliding frame I, rake-bar, or head K, and connecting-bar L, combined with each other and with the shaft C, and inclined and horizontal platforms A and B, substantially as herein shown and described, and for the purpose set forth.

2. The slide X W, levers T U, and connecting-bars V and S, combined with each other, with the horizontal platform B, and crank R of the shaft P, substantially as herein shown and described, and for the purpose set forth.

88,359.—WALLACE H. BATE, Medford, and GEORGE F. PINKHAM, Cambridge, Mass.—*Fire-Extinguisher.*—March 30, 1869.

Claim.—1. An open or closed receptacle, for containing one of the gas-generating ingredients, when so arranged that it may be turned over, within the main reservoir, by means of suitable mechanism, operated from the outside of the apparatus, to bring the acid and alkali into contact with each other, to generate carbonic-acid gas, as set forth.

2. The receptacle E, so hung, or supported in a frame, C, attached to the cap B, that it may turn over, within the reservoir A, on the withdrawal of the stopper *g*, substantially in the manner and for the purpose described.

3. A frame, C, pivoted to the cap B, so as to allow the receptacle E to turn over within the reservoir A, substantially as and for the purpose set forth.

88,360.—JOHN A. BERRILL, Waterville, N. Y.—*Paint-Mill.*—March 30, 1869.

Claim.—The combination of two or more scrapers C with the hopper A and runner B of a paint-mill, said scrapers C being attached to the hopper A, and their inner edges being made to correspond in form with the form of the outer surface of the runner B, substantially as herein shown and described, and for the purpose set forth.

88,361.—Edward B. Black, Joseph Hinkle, Jr., and Thomas S. White, Columbia, Pa.—*Brick and Mortar Hod.*—March 30, 1869.

Claim.—An improved hod, A a^1 a^2, made of sheet-iron, strengthened with wire, and provided with a handle B C, and a shoulder cushion D, the whole being constructed as herein shown and described.

88,362.—John A. Bradshaw and William H. Brown, Lowell, Mass.—*Water-Meter.*—March 30, 1869.

Claim.—1. The combination of the meter-ease b', foothold f, with packing g and inclined plane g', when constructed and arranged to operate as herein described, and for the purposes set forth.

2. In combination with the arms o, o', and p, the semicircular projection m, when constructed and arranged to operate the floats j', k, and k', as herein described.

3. The arrangement and construction of the float-plate h, with recesses h', i and i', and elastic packing j j j, when used in connection with the floats j', k, and k', as and for the purposes described and set forth.

4. The combination and arrangement of the cap s, with semicircular projection m, float-plate h, with floats j', k, and k', shaft p', adjustable screws q and r, meter-ease b', with chamber d', foothold f', inclined plane g', and discharge-pipe f, stand b, with receiving-pipe c, all when constructed and arranged to operate substantially as and for the purposes herein described and set forth.

88,363.—George W. Bressler, Lafayette, Iowa.—*Combined Harrow and Cultivator.*—March 30, 1869.

Claim.—1. The standards F K, hung to the cross-bar E, by means of the V-shaped rods H N, substantially as and for the purpose herein shown and described.

2. The slotted plates M, hinged to the axle, and connected with the standards K, by means of the pin or screw e, in the manner described.

3. The slotted bars I, hung to the rear of the axle, to operate in the manner and for the purpose herein set forth and shown.

4. The harrow O, suspended from the pole C by the rod P, and raised and lowered by the lever Q and rod h, in combination with the adjustable standards F K, all operating as described, for the purpose specified.

88,364.—James Burson, Yates City, Ill., assignor to James and George B. Waterhouse, New York City.—*Railway Hose-Bridge.*—March 30, 1869.

Claim.—1. A sheet-metal arch, A, with sills of wood, a, and flanches A′ A′ A′ A′, substantially as shown and set forth.

2. In a hose-bridge, when combined with a supporting arch-piece, A, the hinge-joint of the inclined rails B B, for the purposes of transportation and stowage, substantially as shown and set forth.

3. Supporting the tracks of a hose-bridge by the combination of the undulating metallic plate D D and the intervening wooden supports C C′, substantially as and for the purposes shown and described.

88,365.—Hugo Carstaedt, New York, N.Y.—*Take-Up Mechanism for Looms for Weaving Irregular Fabrics.*—March 30, 1869.

Claim.—1. The two rolls, B and C, continuously rotating at a distance nearly equal to their diameters, and the series of sectional rollers or wheels D, mounted and operated so as to be pressed wedgewise between them, when the take-up is to act, all substantially as and for the purposes herein set forth.

2. The inclined needles or points k k, fixed on the stationary bar K, and arranged as specified, so that the fabric, in being drawn to the take-up proper, is continually drawn and pressed against the inclined points of the needles, so as to form an angle or deflection of the material along such line, and to receive the points and be arrested when a reverse movement of any part of the fabric is commenced, substantially as herein set forth.

3. A series of needles, k k, in combination with a take-up, containing sectional rollers or wheels D, arranged and operated to take up at intervals on parts of the work, and to liberate other parts, as and for the purposes herein specified.

4. Supporting the levers F by the holder I, and releasing them therefrom, as and for the purposes herein set forth.

88,366.—J. M. Case, Worthington, Ohio.—*Velocipede.*—March 30, 1869.

Claim.—1. The sliding knob d', so arranged, in connection with the lever d, that the leverage of the latter may be increased or decreased at pleasure.

2. The slotted sliding handle d'', so combined with the driving-lever d and the guide-lever e as to govern the direction of the steering-wheel, substantially as described.

88,367.—S. S. Cole, Henryville, Ind.—*Corn-Sheller.*—March 30, 1869.

Claim.—An improved corn-sheller, formed by the combination of the hollow cylinder B, made with one or more lateral openings, b^2, through its body, provided with internally projecting cogs or teeth b^1, and having a crank, C, attached to one of its ends, with the box A, substantially as herein shown and described, and for the purpose set forth.

88,368.—Francis C. Cone, San Francisco, Cal.—*Spading-Machine.*—March 30, 1869.

Claim.—1. The above described machine-spade, when provided with an adjustable arm, E, and a cutting-edge, F, projecting in front of the blade G, substantially as set forth.

2. The revolving flanges B, having the tangential slots D, for determining the angle of the spades, substantially as herein described.

3. The notches or shoulders a a, in the sides of the slots D, for holding the spades, substantially as herein described.

88,369.—Lewis B. Covert, Brooklyn, N. Y.—*Music-Binder.*—March 30, 1869.

Claim.—The binder formed of the covers a, strips e, and back b, united together, as shown, in combination with the metallic rivets d, that secure the sheets of paper within such binder, as specified.

88,370.—Arthur W. Cox, Malden, Mass.—*Combined Knife and Fork.*—March 30, 1869.

Claim.—The improved combined knife and fork, having the plane upper surface b, concave under surfaces e, and the slots between the outer tines and those adjacent thereto shortened, whereby they are strengthened, all substantially as specified.

88,371.—Robert Creuzbaur, Brooklyn, N.Y.—*Piston-Valve for Steam and other Enginery.*—March 30, 1869.

Claim.—1. One or more elastic rolls, arranged in relation to the ports of a piston-valve, substantially in the manner described.

2. The arrangement, consisting of the cylindrical open valve-casing G, rolls h h', flanges g, ports B C D E, and stem M, substantially as described.

88,372.—Lewis P. Dayton, North Buffalo, N. Y.—*Truss.*—March 30, 1869.

Claim.—The combination, with the two parts A A′, forming the truss, of the hinge C D and adjusting-screw a, arranged as described, and operating in the manner and for the purpose specified.

88,373.—R. d'Heureuse, New York, N. Y.—*Attachment for Adjusting Cords for Pictures, &c.*—March 30, 1869.

Claim.—An adjusting attachment for cords, made with one or two tubes, and provided with longitudinal and transverse notches or slots, either or both, and whether used with or without teeth, hooks, or pins, substantially as herein shown and described, and for the purpose set forth.

88,374.—Benjamin Dobson and William Slater, Bolton, England.—*Cotton-Gin.*—March 30, 1869.

Claim.—1. The application of the treadle-lever D, for agitating the hopper C and gird b, and for clearing the teeth of the saws of saw-gins, substantially as herein shown and described, for the purpose of liberating the hands of the operator, as specified.

2. The application of two perforated cylinders, F F, to a cotton-gin, which cylinders are connected with a fan, G, in such manner that a partial vacuum is produced in them, substantially as and for the purpose herein shown and described.

3. The arrangement of the stationary dampers K K within the rotating perforated cylinders F F, to operate substantially as and for the purpose herein shown and described.

88,375.—EDGAR EASTON, Ashland, Ill.—*Whip.*—March 30, 1869.

Claim.—1. Securing the lash and the handle together, by the means and in the manner substantially as herein shown and specified.

2. The whip herein described, when the handle and lash are connected, as specified, as an improved article of manufacture.

88,376.—T. H. ELDER, Chicago, Ill.—*Carriage-Axle.*—March 30, 1869.

Claim.—The combination of the box G, flanges T F D N R, cylinders S N, axle A B C, and packing L P, constructed and arranged as set forth.

88,377.—GEORGE B. FAIRMAN, Rochester, N.Y., assignor to JOHN TELFORD, same place.—*Chuck.*—March 30, 1869.

Claim.—The construction and relative arrangement of the rack A, grooves *c*, buttons G, or their equivalents, case B and B′, screw-pinions D, and jaws F, operating substantially in the manner and for the purposes herein shown and described.

88,378.—E. E. FISHER and WILLIAM H. MACK, Indianola, Ill.—*Horseshoe-Nail Clincher.*—March 30, 1869.

Claim.—As an improvement in horseshoe-nail clinchers, the adjustable and detachable toothed jaw C, substantially as herein shown and described and for the purpose set forth.

88,379.—EDWARD F. FLOOD, Chicago, Ill.—*Apparatus for Discharging Coal.*—March 30, 1869.

Claim.—1. The chute E and platform F, in combination with the supporting-frame *a*, all constructed and operating substantially as and for the purposes specified.

2. The apron *x*, in combination with the chute E, platform F, and adjustable supporting-frame, as described, all constructed and operating substantially as and for the purposes specified.

3. The supporting-frame *a*, when hinged to the movable blocks *c*.

4. The combination and arrangement of the chains *t* with the swinging frame *a* and track-frame C, substantially as specified.

5. The combination and arrangement of the swinging frame *a*, when provided with a coal-chute, with suitable carrying-tracks A B, substantially as and for the purpose specified.

88,380.—DAVID FORREST, Eastport, Me., assignor to himself and JAMES ELDRIDGE, same place.—*Metallic Boot-Strap.*—March 30, 1869.

Claim.—The metallic boot-strap, when constructed as described, of the elastic metal shank B, secured to the side of the boot-leg, and provided, at its top, with the curved handle C, recessed upon its under side, as herein described, for the purpose specified.

88,381.—WILLIAM F. GOODWIN, East New York, N. Y.—*Harvester.*—March 30, 1869.

Claim.—1. A main or cutter-frame, which vibrates about the worm-wheel shaft as a center, provided with bearings for a worm-screw shaft, arranged tangentially to the worm-wheel.

2. A worm-wheel on the main axle, in combination with a screw-crank shaft, whereby motion is communicated directly to the cutters, without the interposition of other gearing.

3. Mounting the rear end of the worm-screw shaft, or that end opposite the crank or crank-wheel, on an adjustable pivot-bearing, as set forth.

4. The screw on the forward or crank-end of the shaft F, operating in combination with the crank-wheel, as described.

5. The hinged coupling H, provided with the flanged annular head H′, for the purpose set forth.

6. The flanged rings H′ I′, or their equivalents, on the coupling and shoe or shoe-standard, for uniting the cutting-apparatus and main frame, substantially as described.

88,382.—ROBERT AMOS GREEN, Martinsville, Ohio.—*Combined Marker and Planter.*—March 30, 1869.

Claim.—1. The combinaton, substantially as described, of the central runner A, slotted beams B *b* *b′* C *c* *c′*, bolts D *d*, outer and adjustable runners E F, hoppers G *g*, sectional seed-slide H *h* I I′ *i* *i′* J K, channel L, and operating-mechanism M N O P *p* R, or their equivalents, for the purpose specified.

2. The combination of the runner A *a* *a′*, detachable share S *s* *s′*, removable rod T, and staple U, or their mechanical equivalents, for the object stated.

88,383.—ALONZO GRIFFIN, Meshoppen, Pa.—*Mode of Lettering Signs, &c.*—March 30, 1869; antedated March 25, 1869.

Claim.—1. The improved method herein described of lettering signs, or ornamenting carriages, or other articles.

2. As a new article of manufacture, letters or ornaments, constructed as herein described.

88,384.—TROUTMAN GROB, San Francisco, Cal.—*Acoustic Stage.*—March 30, 1869.

Claim.—1. The above-described floor, consisting of radiating timbers B B, diagonal timbers C C and D, and boards *d* *d*, when constructed substantially in the manner and for the purposes set forth.

2. In combination with the above-claimed floor, the posts *a* *a*. blocks *c* *c*, intervening glasses *b* *b*, and the sounding-post E, arranged to support said floor, substantially as described.

88,385.—JAMES W. HILTON, Bradford, Pa.—*Lock-Nut.*—March 30, 1869.

Claim.—The combination of a perforated bolt, a perforated nut, and a wire, bent and locked, substantially as and for the purpose shown and described.

88,386.—MORISON HOYT, Brooklyn, and G. VAN CLEEF, New York, N. Y., assignors to themselves and J. T. LOCKHART, New York City.—*Vault-Cover.*—March 30, 1869.

Claim.—1. The combination of the standard B and pivoted angular arms C with each other and with the cover A, said parts being constructed and operating substantially as herein shown and described and for the purpose set forth.

2. The combination of the weighted chain D, or equivalent, with the arms C and standard B of the cover A, substantially as herein shown and described, and for the purpose set forth.

88,387.—P. H. INMAN and CHARLES B. WITHINGTON, Janesville, Wis.—*Wash-Boiler.*—March 30, 1869; antedated March 27, 1869.

Claim.—1. The valve H, constructed and applied to the tube A, as herein described.

2. The tube A, combined with the valve H, and applied to the boiler *e*, as herein described.

88,388.—JACQUES JACQUET, Newark, N. J.—*Combined Footstool and Foot-Warmer.*—March 30, 1869.

Claim.—A combined footstool and foot-warmer, consisting of the box A, with the hinged cover B, said cover having the foot-receptacles *a*, and of the heating-box C, all made and operating substantially as herein shown and described.

88,389.—HENRY JAMES, Hudson, N. Y., assignor to himself and WILLIAM H. GIFFORD, same place.—*Adjustable Reamer.*—March 30, 1869.

Claim.—The stock A, having the flat-head C recessed, to receive the cutters E E, attached thereto by the bolts K, working in the inclined slots D, formed in the wings or recessed portions of said head, and adjusted by the nut H, on the shank I, all constructed as herein set forth, for the purpose specified.

88,390.—Peter Johnson, Wauconda, Ill.—*Clothes-Pin.*—March 30, 1869.

Claim.—1. The yoke B, connecting the jaws A A′, and pivoted to one or both of the same, substantially as and for the purposes set forth.

2. The spring C and legs *e c′*, in combination with the yoke B, pins *b b′*, and jaws A A′, the whole arranged and operating substantially as and for the purposes described.

88,391.—E. O. Jones, Brandon, Mich.—*Land-Roller.*—March 30, 1869.

Claim.—1. The arrangement of the roller-sections in such relation to each other that the lines of their circumferences cut each other, and thus free each other from clogging, substantially as set forth.

2. In combination with the central section of the roller, the pins or other supporting arrangements upon which it rests when raised, as and for the purpose described.

3. The rear or middle section of a sectional roller, when attached, by means of connections, as described, pivoted to any part of the main frame, substantially as described.

88,392.—Charles Karmrodt and Nicholas Thilmany, Bonn, Prussia.—*Preserving Wood.*—March 30, 1869.

Claim.—The herein described chemical compound, consisting of the chloride of barium, muriate of barytes, or baryta in any of its forms, in combination with sulphate of copper or blue vitriol, for the purpose specified.

88,393.—Moses Kinsey, Newark, N. J.—*Skate.*—March 30, 1869.

Claim.—1. The plates E E, pivoted to the front of the skate, and provided with the adjustable toe-clamps G and heel-clamps H, and adjusted by means of the transverse screw F, in combination with the toe-plate C and heel-plate D, all arranged and operating as described, for the purpose specified.

2. The application, to a skate-fastening, of the longitudinally and laterally-adjustable wedge-shaped heel-clamps H *h*, when the same are so arranged as to fit against the inner side of the heel, as set forth.

88,394.—C. Lidren, La Fayette, Ind., assignor to himself and R. Jackson.—*Harvester-Rake.*—March 30, 1869.

Claim.—1. The slotted-cams R R′, the bail L, and the hinged carriage I I′, arranged and operating substantially as and for the purposes herein shown and described.

2. The latch *t*, for holding the bail in position, substantially as and for the purposes set forth.

3. In combination with the automatic raker F, the gear-wheels *u u′* and coupling *a′ b′*, with the shafts, cranks, arms, and rods, by which motion is conveyed to the carriage, arranged substantially as shown and described, for the purposes specified.

88,395.—William Loofbourow, Fayette, Wis.—*Hop-Drier.*—March 30, 1869.

Claim.—1. The herein-described arrangement of a hop-house, having the cooling, drying, and store-rooms, and provided with openings *a* and gates *b*, in one partition, and with movable carriages G G, substantially as described, all operating as specified.

2. Providing the carriages G with perforated bottoms, and with one or more folding sides or ends, as set forth.

88,396.—Leonard Low, Peoria, Ill.—*Grain-Separator.*—March 30, 1869.

Claim.—1. The combination of the inclined sieves, or screens *a* and chutes *b*, in quadrate sets, with the center-spout A, in the manner and for the purpose substantially as described.

2. The combination of the inclined channels *q* with the screens, substantially as and for the purpose set forth.

88,397.—Abraham W. Lozier, New York, N. Y.—*Horse Hay-Fork.*—March 30, 1869.

Claim.—The arrangement and combination of the fork-tines C C, fork-head A, pivoted hoist-bar and handle B, plate F, and catch E, the whole constructed and operating substantially as described.

88,398.—Andrew Main, Delaware, Ohio.—*Flood-Gate.*—March 30, 1869.

Claim.—The gate A, in combination with the swiveling hooks *h*, bent plates and friction-rollers *d*, and swiveling guide-bars *e*, as and for the purpose described.

88,399.—Morgan A. McAfee, Talbotton, Ga.—*Churn.*—March 30, 1869.

Claim.—The self-adjusting head F, having the arms G, in combination with the dasher-shaft C, as herein described, for the purpose specified.

88,400.—B. W. McClure, Wyoming, Iowa.—*Horse-Collar.*—March 30, 1869.

Claim.—An improved horse-collar, the covering of the outer part, or side of which is made of raw hide, and which has the hames-tng ears attached directly to it, as herein shown and described, and for the purpose set forth.

88,401.—James W. McCormick, Youngstown, N. Y.—*Fence.*—March 30, 1869.

Claim.—The combination of the curved suspension-wire E, and binding-wire F, with the pickets C and posts A, substantially as herein shown and described, and for the purpose set forth.

88,402.—James W. McKee, Brooklyn, (E. D.,) N. Y., assignor to himself and John Gibbs, same place.—*Ventilating-Faucet for Discharging Liquids.*—March 30, 1869; antedated March 19, 1869.

Claim.—The combination, with a beer-cask, or barrel, or other liquid-vessel, of a rod, provided with a valve at or near each end, closing against respective rests, on opposite sides of the said cask or liquid-vessel, the said seats constituting respectively a discharge-orifice, and an air-vent, so arranged that the valves may be opened and closed simultaneously, substantially as and for the purposes herein specified.

88,403.—Achille F. Migeon, Wolcottville, Conn.—*Cattle-Tie.*—March 30, 1869.

Claim.—The cattle-tie, formed of the hinged clamps *c* and *d*, and screw *f*, for grasping the rope and the eye *g*, extending out from the clamp *c*, for receiving the snap-hook, as set forth.

88,404.—Giacomo Migliavacca, Napa, Cal.—*Bottle-Corking Apparatus.*—March 30, 1869; antedated March 19, 1869.

Claim.—1. The vertically-moving block C, with the inclined operating-gauge *b*, and the parallel retaining-bars *c c′*, the whole constructed and arranged substantially as herein described.

2. The block D, with its tapering passage *e*, with the plunger E, the bent arm *g*, and the hand-lever F, substantially as and for the purpose described.

88,405.—Monroe Morse and Charles H. Morse, Franklin, Mass.—*Boiler-Flue Cleaner.*—March 30, 1869.

Claim.—1. The elastic perforated boiler-scraper plate C, which is bent into a cylindrical form, so that its edges are spiral, as set forth, to form cutting-edges of the scraper, substantially as specified.

2. The construction of the cylindrical or spiral boiler-scraper C, with the perforation *d*, whereby to obtain additional cutting-edges, as set forth.

88,406.—D. F. Mosman, Chelsea, Mass.—*Governor for Steam and other Enginery.*—March 30, 1869.

Claim.—The combination of the reciprocator with the shaft of the prime mover, provided with the cam, for causing the movements of the reciprocator, substantially as herein specified.

88,407.—Cyrus W. Palmer, Riga, N. Y.—*Wind-Wheel.*—March 30, 1869.

Claim.—The rods B, and rear wheel B^2, movable upright D, self-acting regulator F, spring G, ratchet and cam H, movable lever I, double rack J, balls K K, and revolving platform M, when arranged and

operating as herein described, and for the purposes set forth.

88,408.—ADOLPH PHILIPP, Manchester, Great Britain.—*Cigar-Ash Holder, &c.*—March 30, 1869.

Claim.—The device described and shown, consisting of the box *a* with compartments *b* b^1 *c*, bars *d*, with cigar-cutter d^1, removable drawer d^2, band *e*, and marking devices, substantially as and for the purpose herein set forth.

88,409.—JOHN POWELL, Sullivan, Ill.—*Cultivator.*—March 30, 1869.

Claim.—1. The beams B, in combination with the chains E and F, adjustable bolts C, links D, and frame A, as herein described, for the purpose specified.

2. In combination with the above, the handles G, adjustable bars H, and chain I, as herein described, for the purpose specified.

88,410.—CHARLES PRATT, New York, and CONRAD SEIMEL, Greenpoint, N. Y.—*Soldering Apparatus.*—March 30, 1869.

Claim.—1. The combination of a retaining-frame with a base-piece and soldering-pot, constructed and operating substantially as and for the purpose described.

2. The arrangement of the retaining-frame, for sustaining the can, substantially as described.

88,411.—CHARLES H. RAYMOND, Southington, Conn.—*Tinman's Machine.*—March 30, 1869.

Claim.—1. The tapering shaft *c* or *k*, fitted into the correspondingly-shaped bearings, and carrying the roller *d* or *l* at one end, in combination with the set-nuts, applied to the shaft at the back bearing, substantially as and for the purposes specified.

2. The bearings *m n*, connected by the yoke *q*, in combination with the tapering shaft *k* and set-nuts *o p*, substantially as set forth.

3. The bearings *m n*, connected together, and carrying the upper shaft *k* of the tinman's machine, in combination with mechanism substantially as set forth, for adjusting said shaft endwise, and allowing of the swinging movement, substantially as specified.

4. The case, or frame, formed of the side pieces *e e* and top piece *f*, in combination with the shaft *k*, bearings *m n*, and wheel *w*, so that these parts can be introduced from the rear, and sustained in place, substantially as set forth.

88,412.—JOSEPH RICHARD, Columbiaville, Mich.—*Fence.*—March 30, 1869.

Claim.—1. An improved portable fence, formed by the combination of the pickets B and chains A with each other, substantially in the manner herein shown and described, a suitable number of said pickets being made long, to be driven into the ground, as and for the purpose set forth.

2. Strengthening the fence A B, at its angles or other parts, by brace and supporting-stakes C, substantially as herein described and set forth.

88,413.—JOHN G. ROBINSON, Springfield, Ill.—*Gang and Trench Plow.*—March 30, 1869; antedated March 23, 1869.

Claim.—1. The combination of the angular lever A, ratchet C, and spring B, with the pitman D and sliding axle-tree-arm E, in the manner described, and for the purposes forth.

2. The combination of the vertical coupling F, and pivot M, and horizontal bar H, with the vertical lever G, ratchet I, and spring K, in the manner described, and for the purposes set forth.

88,414.—JOHN G. ROBINSON, Springfield, Ill.—*Trench-Plow.*—March 30, 1869; antedated March 22, 1869.

Claim.—The attaching this stationary colter to the heel of the sod-plow, extended downward and sloping backward, for cutting the furrow-slice of the trench-plow, in the manner described.

88,415.—PETER ROGERS, Sharon, Ohio.—*Corn-Planter.*—March 30, 1869.

Claim.—1. The arrangement of the revolving crank-axle F, connecting-rods G, oscillating levers H, rock-shaft I, slotted and hinged rods J, and the seed-slides K, all operating as described, for the purpose specified.

2. The arrangement of the plow-standards Q V, rock-shafts R W, bar Z, bolster C, and independently adjustable rods T Y, all operating as described, for the purpose specified.

88,416.—MATTHEW SACKETT, Montiecllo, Iowa, assignor to himself and JOHN FILSON, same place.—*Broadcast-Seeder.*—March 30, 1869.

Claim.—The combination of the sliding board B, grooved transversely with the perforated bottom of the box A and eyelets *a'*, when the board is connected to the crank E F by the spring D, arranged as described for the purpose specified.

88,417.—AUGUST M. SCHILLING, Chicago, Ill.—*Scroll-Sawing Machine.*—March 30, 1869.

Claim.—1. The plates S S, recessed as described, to receive the adjustable plate T and the plates U^1 U^2, clamped by the front set-screws, as herein described, for the purpose specified.

2. The support N, carrying the extension plate Q and adjustable guide-blocks R, when jointed as described, for the purpose specified.

88,418.—ADOLPH SCHLINGMAN, West Alexandria, Ohio.—*Washing-Machine.*—March 30, 1869.

Claim.—The combined arrangement, substantially as herein described, of the main roller I, the rubber D E F G H, and the upper roller M, acting with variable pressure on the roller I, for the purposes set forth.

88,419.—CONRAD SEIMEL, Greenpoint, N. Y.—*Soldering-Furnace.*—March 30, 1869.

Claim.—1. Arranging a channel, *f*, around the solder-pan E, to receive the solder, substantially as set forth.

2. The combination of the furnace with a removabel trough and reservoir, when constructed and arranged in the manner substantially as described.

3. The solder-pan E, arranged as described, so that the furnace may be closed during the operation of soldering, and thereby prevent escape of heat, substantially as set forth.

4. The application of the treadle G, and of the levers *i j*, and spring *k*, as constructed and arranged, for operating the adjustable plunger F.

88,420.—JOHN P. SHERWOOD, Fort Edward, N. Y., assignor to himself and BENJAMIN S. BURNHAM, same place.—*Stove-Pipe Shelf.*—March 30, 1869.

Claim.—The collar B, constructed as described, in two parts, secured together, at one end, around the pipe, by the slot and hook, and at the opposite end by the open slot and bolt, and adapted to receive upon the hook *b'* and upward-projecting ends *d*, the flanged shelf C, as herein described, for the purpose specified.

88,421.—ALEXANDER G. SLAGLE, Memphis, Tenn.—*Game.*—March 30, 1869.

Claim.—A game, which is composed of a combination of letters and numbers disposed upon cards, balls, and a chart, or register, and played substantially as herein described.

88,422.—JAMES E. STEVENSON, New York, N. Y.—*Water-Wheel.*—March 30, 1869.

Claim.—1. The annular or cylindrical gate E, provided with a horizontal flange, *l*, at its lower end, notched to form projections *fx* to extend into the chutes *g*, in combination with the guides *f*, placed or arranged tangentially in the casing D, inclosing a turbine or horizontal water-wheel, A, constructed and arranged to operate substantially as set forth.

2. The arrangement of the annular water-chamber *h*, guides *f* in the casing D, centrally-discharging wheel A, and the annular or cylindrical gate E, provided with the projections *fx* at its lower flange *l*, with the outer ends or edges of said projections rounded, or beveled, substantially as and for the purpose set forth.

3. The packing *p* in the inner edge of the flange *fxx* of the cap, or cover G, and the guides, or ribs *q*

on the inner surface of the cap, or cover, all arranged substantially as and for the purpose specified.

4. The casing D, cap, or cover G, gate E, and wheel A, all constructed and arranged substantially as shown and described.

88,423.—Stephen Upson, New York, N. Y.—*Device for Violin Practice.*—March 30, 1869.

Claim.—1. A block, A, when provided with grooves, or their equivalent, to allow the motions for playing a violin to be practiced upon it, substantially as herein shown and described.

2. The groove *b*, having the beveled bottom, when arranged in the block A, substantially as and for the purpose herein shown and described.

3. The straight groove *a*, or its equivalent, when arranged in the block A, substantially as and for the purpose herein shown and described.

4. The sliding case, D, when arranged on the block A, to practice the shifting motion of the bow, as set forth.

5. Providing the block A with a scale for finger-practice, as set forth, and with one or more raised lines, *c*, as specified.

88,424.—Isaac L. Vansant, Glasgow, Del.—*Car-Coupling.*—March 30, 1869.

Claim.—1. The gravitating coupling pin G, pivoted to the draw-head at *g*, in combination with the lever I, arranged across the draw-head, and having an eccentric head, or disk, which projects down into the cavity thereof, substantially as shown and described, and for the purposes specified.

2. The pivoted block F, when constructed and applied to the draw-head in the manner described, and adapted to operate in connection with the stop *o* and the link D, as and for the purpose set forth.

3. The combination of the vertically-rocking draw-head with the supporting-plate B, and a stop for limiting the motion of the draw-head, substantially as described, and for the purpose set forth.

88,425.—George Walworth, Peckskill, N. Y.—*Flask for Molding Kettles.*—March 30, 1869.

Claim.—1. The flask A, constructed as shown and described, for casting sugar-kettles, substantially as set forth.

2. The combination of the flask B, having the projections E, with the flask A, substantially as and for the purpose described.

88,426.—Edward Whitehead, Cincinnati, Ohio.—*Velocipede.*—March 30, 1869.

Claim.—1. The combination, with the steering or guiding wheel C, of the spherical hub *c*, the curved socket *a' a''*, axle *c'*, and slot P, substantially as and for the purpose described.

2. The combined arrangement of the pedals I I' and L L' with the saddle J and seat M, substantially as described, for the purpose set forth.

3. The general arrangement and combination of the frame A, *a' a''*, P P', driving-wheels B B', *b b'*, guiding-wheel C, *c c'*, divided axle D D', belts F F', pulleys *g g'*, crank-shafts G G', H H', *h h'*, pedals I I', pitmen K K', bell-cranks L L', *l l'*, and tiller R, for the purpose of producing an improved three-wheeled velocipede.

88,427.—Henry C. Wilson, West Elkton, Ohio.—*Portable Fence.*—March 30, 1869.

Claim.—The divided posts *a a*, in combination with the bolts *d d'*, keys *e*, and forked wedge M, when the parts are constructed, arranged, and used for erecting portable fences, in the manner substantially as and for the purpose described.

88,428.—Charles F. Woodruff, Newbern, Tenn.—*Water-Elevator.*—March 30, 1869.

Claim.—The combination of the plate B, having the journals *b*, the ratchet-plate C, having the holes *c c* and the hollow journal *c*, the chambered cylinder A', the spring *s*, the crank E, and the sliding shaft F, having the arms G G, bent as described, the whole being constructed and arranged to operate together substantially in the manner and for the purpose specified.

88,429.—Sidney Alderman, Stafford Township, Ind.—*Road-Scraper.*—March 30, 1869.

Claim.—The bar F, in combination with the guides I I, and also in combination with the bent rod G, pivoted upon the roller H, and so constructed as to form a double lever, all arranged as and for the purpose specified.

88,430.—Joseph Bell Alexander, Washington, D. C.—*Lamp-Shade.*—March 30, 1869.

Claim.—The combination of the groove G, formed on the upper rim of a lamp-shade or reflector, with the spring N, or any other suitable spring, for the purpose of supporting adjustably the said lamp-shade or reflector on the glass chimney of a lamp, substantially as described and set forth.

88,431.—Jearum Atkins, Washington, D. C.—*Device for Controlling Fluids under Pressure.*—March 30, 1869.

Claim.—The combination of a movable valve-case, D, provided with ports E F, and a movable valve, H I, said valve and valve-case having a reciprocal movement, as described, so that the ports will be opened by a movement of the valve and closed by a movement of the valve-seats, substantially in the manner and upon the principle herein set forth.

88,432.—B. H. Aylworth, Oxford, N. Y.—*Manikin, with Fœtus, &c., for Illustrating the Practice of Obstetrics.*—March 30, 1869.

Claim.—1. A manikin, constructed to exhibit, in an operative manner, by providing, in the various organs illustrated, for movements representing their natural action, the science and practice of obstetrics, substantially as specified.

2. The covering L to the artificial uterus, operated from the exterior of the manikin by cords and pulleys, or other suitable mechanical devices, to assist in illustrating the expulsive action of said uterus, essentially as described.

3. An artificial fœtus, constructed substantially as described, with its joints *k* made capable of extension and flexion, to secure to it its natural position in the uterus, and so that said jointed portions extend automatically when withdrawn therefrom, substantially as specified.

4. An artificial fœtus, with its skull, constructed substantially as described, and made compressible, essentially as and for the purpose or purposes herein set forth.

88,433.—Henry Bachman, Philadelphia, Pa.—*Extension-Table.*—March 30, 1869.

Claim.—The extension-table herein described, provided with a frame, B, at each end, and with slides D D, which are arranged outside of the frame, and, when closed, lie in a receptacle formed by said frame B and the stationary bars D' D', all substantially as herein set forth.

88,434.—Eli D. Bannister, St. Louis, Mo.—*Apparatus for Distilling Spirits.*—March 30, 1869.

Claim.—1. The condenser A', when connected with the still, in the manner and for the purpose substantially as described.

2. The combination of the still A, condenser A', and heater B with the doubler C and worm-tub D, for the purpose substantially as described.

3. The distilling of spirits, by means of still A, heater B, doubler C, and worm-tub D, substantially as described.

4. The condenser A', containing water, the manner of conducting the vaporized impure spirits into A' and below the surface of the water, and the discharging the spirits into heater B, after receiving the water-bath, substantially in the manner and for the purpose described.

88,435.—Jabez Bayston, Chicago, and George W. Nicholson, Naperville, Ill.—*Iron Bedstead.*—March 30, 1869.

Claim.—The combination of the side-pieces A, grooved their entire lengths, as specified, and with rounded lugs, L, on each end, with the end-pieces B, with sockets and rests, P, for the lugs L to fit into and upon, cross-pieces H, slotted slats F, pins *f*, and springs S, all as herein shown and described.

88,436.—Hiram Berdan, New York, N. Y., assignor to the Berdan Fire-Arms Manufacturing Company, same place.—*Breech-Loading Fire-Arm.*—March 30, 1869.

Claim.—1. The attachment of the hinged breech-piece to the barrel of a breech-loading fire-arm by a sliding connection, operating substantially as and for the purpose herein specified.

2. Securing the strap-piece C, or its equivalent, to the barrel, by means of a spring-catch, which provides for its easy attachment and detachment, substantially as and for the purpose herein specified.

3. The strap-piece C, serving the two purposes of attaching the hinge-joint of the breech-piece to the barrel, and as a base for the sight, as herein described.

4. A spring, so constructed and applied as to serve the two purposes of securing the strap-piece or plate, which forms the attachment of the hinge-connection of the breech-piece with the barrel, and of a sight-spring, substantially as herein described.

5. Providing a passage for the escape of gas between the said strap-piece and the top of the barrel, substantially as and for the purpose herein specified.

6. The formation of one side of the breech-receiver, whereby the fulcrum-point, on which the swinging breech-piece works as a lever in closing, is brought nearly to a level with the center of the bore, substantially as illustrated at *j*, in Fig. 6, as herein described.

7. The direct-action or center-bolt hammer, with a comb at its rear end, in combination with a swinging breech-piece, which opens with an upward and forward movement over the barrel or breech-receiver, when the said hammer serves also as a means of locking the said breech-piece, substantially as herein described.

8. The combination of longitudinal slot 32, in the center-bolt hammer, the collar P, inserted into the rear end of the breech-pin, to serve as a bearing for the main-spring, and the stationary pin 31, passing through the said slot and collar, for the purpose of securing the said collar, and preventing the turning of the hammer, substantially as herein specified.

9. A spring, so applied in combination with the ejector of a breech-loading fire-arm that, by the act of opening the breech-piece, it is caused to act alternately above and below the center of motion of the ejector, and thereby to restrain the action of the ejector during the first part of the motion of the breech-piece, and afterward to produce its sudden action, substantially as herein described.

10. The arrangement of the ejector-spring between the barrel and the strap-piece, which attaches the breech-piece thereto, substantially as herein described.

11. A recess, 41, in the breech-piece, for the reception of the spur of the ejector, whereby the latter is rendered inoperative, when there is no cartridge or cartridge-shell in the fire-arm, substantially as herein described.

88,437.—Laurent Berenger, Paris, France.—*Ironing-Machine.*—March 30, 1869.

Claim.—1. A traveling-frame, *b*, provided with rollers *a a a a*, and guide-rollers *i i*, working upon said rails, or platform, carrying a screw, to which an iron, fixed or movable, is attached, and by which pressure, or not, as required, can be given to the material to be ironed or pressed, substantially as described.

2. A hollow screw, serving the double purpose of carrying off the products of combustion, and also of adjustment of the iron, substantially as described.

3. The platform *y*, capable of being turned upon its center, combined with the iron supporter, arranged to be raised and lowered, substantially as described.

4. The iron, constructed with means for internally heating it, with an outlet for the products of combustion, and adapted for attachment to its hollow support, substantially as shown and described.

88,438.—Albert A. Bliven, Jersey City, N. J.—*Car-Brake.*—March 30, 1869.

Claim.—The shaft C, ratchet D, pawls *d d*, and lever F, combined and applied to a railway-car, whereby the braking of the wheels of one or more cars may be effected by the lateral movements of the lever, and the releasement of the wheels by the forward movement of the same, substantially as described.

88,439.—Lewis R. Boyd, New York, N. Y.—*Mode of Preventing Corrosion in Metallic Caps.*—March 30, 1869.

Claim.—The new article of manufacture, consisting of a metallic cap or cover for fruit-jars, preserving-cans, and other analogous articles, when the same is provided with a plating, or partial lining of glass, or its equivalent, combined therewith, and operating substantially in the manner and for the purposes set forth.

88,440.—Warren L. Braddock, Boston, Mass., assignor to himself and C. H. Minor, same place.—*Car-Coupling.*—March 30, 1869.

Claim.—The coupling B, with lever *f e*, plate *a*, crank *c*, link F, axle D, cushions *r r'*, stirrup *h*, cam *g'*, chain-wheels *i i'*, *k k'*, and shaft *l*, in the manner and for the purpose above specified.

88,441.—Gershom W. Bradley, Weston, Conn.—*Spike for Over-Shoes.*—March 30, 1869.

Claim.—The form of the spike for the purpose, and the mode of attaching the same to the sole, substantially as and for the purpose herein set forth.

88,442.—Ira Buckman, Jr., Williamsburgh, N. Y.—*Refrigerator and Weighing Apparatus.*—March 30, 1869.

Claim.—1. A detached movable ice-box, within a refrigerator-case, in combination with a weighing-apparatus, substantially as and for the purposes described.

2. The funnel-shaped tube D, the flexible tube F, and trap G, constructed as described, for conducting off the water, substantially as and for the purposes herein set forth.

88,443.—Samuel Adam Burkholder and George W. Wilson, Bendersville, Pa.—*Fertilizer.*—March 30, 1869.

Claim.—The above-described fertilizing-compound, composed of the ingredients named, in about the proportions herein specified.

88,444.—J. K. Caldwell, Allegheny City, Pa.—*Drying Furnace and Oven.*—March 30, 1869.

Claim.—1. The furnace X, with its arched roof *b*, track-supporting ledges E, perforated arched sheets G, placed over said furnace, and above the radiating-pipes C, leading from the rear of the furnace through the hot-air chamber F to the cross-flues D, all arranged together substantially as and for the purposes herein set forth.

2. The arrangement of the perpendicular or concave car-supporting ledges or walls E E, in the drying-house A, for conducting the heat to the central portions of the chamber, constructed substantially as specified.

3. The arrangement, in combination with the furnace X, of the cold-air pipes *f*, with perforations *i i*, that face the exterior convex surface of the radiating-arch *b*, whereby jets of cold air may be transmitted by any exterior apparatus, substantially as specified.

4. The series of valves I I, with graduated openings connected and simultaneously operated by one and the same rod, substantially as herein described.

5. The arrangement of the movable arched plates G G, provided with graduated perforations, and placed over the chamber F, between the ledges E E, substantially as shown and described.

88,445.—S. N. Caldwell, Pilot Grove, Ind.—*Hedge-Fence.*—March 30, 1869.

Claim.—1. Preparing the earth, by cutting down into the same on each side of the plant, and elevating the center, between the cuts, at an angle of about eighteen degrees from the center, each way, to the base of each cut, substantially as shown and described.

2. Planting the hedge-sprouts in the center of earth formed as above, in a vertical manner, and

cultivating the same to form a dwarfed head, substantially as set forth.

3. Bending over the hedge-plant and its roots, with the adhering earth, to an inclination of about eighteen degrees, after having attained sufficient growth therefor, preserving the flow of sap through the stock, and the continuous development of the dwarfed head, substantially as shown and described.

4. A hedge-fence formed by preparing the earth as specified, then planting the young sprouts in a vertical manner, and bending the same and its roots over, at an angle of about eighteen degrees, and growing the same in said position, substantially as set forth.

88,446.— F. E. CANDA, Chicago, Ill. — *Iron Bridge.*—March 30, 1869.

Claim.—1. The peculiar construction of the posts P, when the same are applied to a bridge, either as posts or top members of each panel, their several parts being combined and arranged in the manner substantially as shown and described, and for the purpose set forth.

2. The combination of the top members of each panel in a bridge, provided with the posts above described, with the connecting-parts, constructed and operating in the manner as shown and described, forming the upper chord.

3. The combination of the posts P with the bottom chord A, in the manner as shown and described.

4. The combination of the top chord, angle-block E, rods O J, posts P, plate H, key G, angle-block F, and bottom chord A, constructed and arranged as shown and described.

88,447.—RALPH R. CARPENTER, Tippecanoe, Ohio.—*Railway-Car Brake and Starter.*—March 30, 1869.

Claim.—1. The pawls or bolts *h i*, actuated by the eccentric, in combination with the shells *a b*, and spring, constructed and operating substantially as set forth.

2. The forked shifting-plate h^2, in combination with the shells *a b*, and ratchet-disks *e f*, all constructed and operated in the manner and for the purposes set forth.

88,448.—WILLIAM H. CHANDLER, Winchester, Mass.—*Printing-Press.*—March 30, 1869.

Claim.—1. In combination with a cylinder printing-press, and its nippers, a leaf, or equivalent device for throwing off the edge of the printed sheet, when released from the nippers, into position to be guided to or seized by take-off mechanism, substantially as described.

2. In combination with the leaf *k*, the fingers *i*, and rolls *d f*, substantially as shown and described.

88,449.—JOHN C. CLIME, Philadelphia, Pa.—*Umbrella-Cover.*—March 30, 1869.

Claim.—The body *d*, of flexible material, and the devices *e* and *f*, combined and arranged with the flanged device *g*, and the devices *h* and *i*, substantially as and for the purpose set forth.

88,450.—B C. COLDWELL, Wyoming, Pa.—*Spinning-Mule.*—March 30, 1869.

Claim.—1. The mechanism for operating the faller, constructed in the manner substantially in the manner and for the purpose herein described and represented.

2. The combination, with the faller, of the racks F^6 F^8, pinion G^4, and rack G^5, all arranged and applied as herein described, and operating in the manner and for the purpose specified.

3. The combination of the cam G^2, elbow-lever G^1, rod G^2, cross-head G^3, and pinion G^4, all arranged and operating substantially as and for the purpose herein set forth.

4. The combination of the racks F^6 F^8, lever F^7, spring F^9, set-screw f^2, and pins f^3 f^4, arranged and operating substantially as described.

88,451.—ISAAC COLE, New York, N. Y.—*Button.*—March 30, 1869.

Claim.—The tubular shanks *c d*, fitting within each other, one of which is secured to the head *a*, and receives the spring-catches *e*, and the other is secured to the back *b*, and contains the ring *f* and button *g*, constructed and operating substantially as and for the purpose described.

88,452.—TERRENCE COLLINS and ASHER CASTIEL, St. Louis, Mo.—*Lathe.*—March 30, 1869.

Claim.—The cutters F I I^1 I^2, supports L, holders L^1, standard P, rack P′, and operated as described, in combination with the table K, cam *r*, and its connections with table K, and the devices for operating the same, in the manner and for the purpose substantially as described.

88,453.—GRANT T. COOLMAN and CHARLES M. YOUNG, Corry, Pa.—*Harvester.*—March 30, 1869.

Claim.—1. The combination, in a harvester, of two main wheels, a main frame, carrying the gearing, a coupling-frame, such as described, and a shoe, secured to the coupling-frame, with the finger-beam pivoted to but turning independently of the shoe, as set forth.

2. The combination with the three-sided coupling-frame and its fixed shoe, of the finger-beam, secured to the long rocking brace-bar, having one pivot in the shoe, and the other in the coupling-frame, but both on the same level, as set forth.

3. The combination, substantially as set forth, of the finger-beam, stud *u*, lifting-lever f^2, for the purpose specified.

4. The combination, substantially as set forth, of the coupling-frame, shoe, and hinged finger-beam, with locking lifting-devices inclosed within the shoe.

5. The combination of the main axle, the countershaft, the second shaft F′, and the long crank-shaft, with their respective gears, when arranged and operating as described, for driving the cutters.

6. The arrangement of the second shaft F′ below the main axle, and the crank-shaft below the shaft F′, as and for the purpose described.

88,454.—J. MASLIN COOPER, Philadelphia, Pa.—*Making Nails.*—March 30, 1869.

Claim.—As an improved method of making improved cut-nails, cutting the same of equal breadth from end to end, of a plate of equal thickness, but of which an edge is beveled on opposite sides, as described.

88,455.—JOHN R. CUSHER, New York, N. Y.—*Wooden Pavement.*—March 30, 1869.

Claim.—The double-dovetailed strips B C, formed with a rectangular central portion longitudinally, in combination with the blocks A, having dovetailed grooves *a b* on their sides, so arranged that said central portions of the strips B C are made to cross each other, holding the blocks a given distance apart, and forming bearings for cement, to fill the spaces between said blocks, substantially as shown and described.

88,456. — ANTHONY G. DAVIS, Watertown Conn.—*Mouse-Trap.*—March 30, 1869.

Claim.—The trap described, consisting of the grooved cover A, annular rim B, and partitions *c*, the whole being constructed, combined, and arranged as described, for the purpose set forth.

88,457.—CONSTANTINE DE BODISCO, St. Petersburgh, Russia.—*Sled.*—March 30, 1869.

Claim.—A sled for ice-hills, constructed entirely of metal, as herein shown, and provided with the guides *a a*, possessing the rubber feet *e e*, the whole constructed and arranged in the manner and for the purposes herein set forth and described.

88,458.—WILLIAM PENN DELAPLAIN, Peoria, Ill.—*Sign.*—March 30, 1869.

Claim.—A sign-board, having grooved rails B and C, grooved side rail D, slotted side rail L, transverse bar E, grooved, as described, together with the gates F and adjustable letter-blocks *a*, constructed, arranged, and operating as specified.

88,459.—PATRICK DOOLEY, Newark, N. J.—*Skate-Fastening.*—March 30, 1869.

Claim.—The detent-levers O O′, pivoted to the

same standard, but independent of each other, to one of which is connected, by link and slide, the movable cap S, and the other the heel-clamps K, in combination with the ratchet H, when the parts are arranged to operate as described.

88,460.—JOHN DOUGHERTY, San Francisco, Cal.—*Machine for Cutting Screws.*—March 30, 1869.

Claim.—1. Arranging together, in a screw-threading machine, in the manner described, the feed-screw P, carriage D, worm-wheel H, and worm-chuck G, each being constructed as shown and described.

2. The arrangement, on the two rotating shafts, of the loose gears X V, fast gears W, and head-stock S, as and for the purpose specified.

88,461.—WILLIAM T. DOWNS, St. Louis, Mo.—*Heel.*—March 30, 1869.

Claim.—The retaining-plate G, the nut F, screw E, mortises *d*, and pins D, when arranged with the heel-piece B, the plate C^2, and cap C, substantially as and for the purpose set forth.

88,462.—H. C. DREXEL, Baltimore, Md.—*Sad-Iron Heater.*—March 30, 1869.

Claim.—1. The telescopic tube B B^1 B^2, arranged and operating, with relation to a smoothing-iron, substantially as shown and described.

2. The combination of the flexible tubing C, telescopic tube B B^1 B^2, and tubes D and E, substantially as shown and described.

3. The perforated or gauze chimney-cap *g*, arranged as and for the purpose specified.

4. The iron F, provided with the perforations *f*, sliding-door H, and sliding bottom-plate I, substantially as shown and described.

5. The combination of the spring S, section B, and standard A, substantially as shown and described.

6. The platform K, arranged as shown and described, for the purpose specified.

88,463.—E. C. EDMONDS, Albany, N. Y.—*Toy-Gun.*—March 30, 1869; antedated March 25, 1869.

Claim.—1. A toy-gun, constructed as described, so that the ball returns to the barrel after being fired off, substantially as herein set forth.

2. The combination of the barrel B, stationary collar C, and hollow rod D, the latter provided with collars E F, and hammer G, and spring H, substantially as and for the purposes herein set forth.

3. The combination of the reel L, spring M, and cord *e*, for the purpose of returning the ball K into the barrel, substantially as herein set forth.

4. The combination of the stock A, barrel B, hollow rod D, spring H, hammer G, trigger I, and reel L, all arranged and operating substantially as and for the purposes herein set forth.

88,464.—HORACE L. EMERY, Albany, N. Y.—*Cotton-Gin.*—March 30, 1869.

Claim.—1. A receiving-chamber attachment, or extension, for the saw cotton-gin, with its lower side or bottom constructed of a slowly moving endless or cylindrical screen, having the ends of said screen open to the right and left of the gin, and its lower or returning portion unobstructed, to permit the free escape of wind, sand, dust, and other foreign matter.

2. So placing the receiving-chamber with its screen-bottom relatively toward the blast entering it from the gin, that this screen shall, in its movement, constantly present an unobstructed portion of its surface toward and nearest the blast as it comes from the brush-cylinder.

3. The solid doffing-cylinders, with or without flaps, in combination with a receiving-chamber of a cotton-gin, having its lower side or bottom constructed of a moving or revolving screen, for the purpose of stripping the bat or sliver from the said screen, and delivering it out from the chamber.

4. The distributing air-chamber over the brush-cylinder, with its openings *e e* and *d*, as and for the purpose specified.

5. The elastic adjustable false lining in the saw-chamber of a cotton-gin, opposite the ribs and breast, for the purpose of adjusting its form and varying the capacity of the saw-chamber to the different kinds and conditions of the seed-cotton, and to the size and density of the cotton-roll.

6. The arrangement and use of alternate saws and blanks upon the saw-cylinder of a cotton-gin, in combination with the picker-roll supporter mounted in the saw-chamber, over the saw-cylinder of a saw cotton-gin.

88,465.—JACOB J. ESLER, Belleville, Ill.—*Seeding-Machine.*—March 30, 1869.

Claim.—The shaft C, its feed-cylinder D^2, gauge-block G, and screw H, substantially as set forth.

88,466.—LEVI S. FALES, New York, N. Y.—*Fertilizer.*—March 30, 1869.

Claim.—The artificial fertilizer, composed of the materials herein set forth, compounded in the manner and proportions substantially as specified.

88,467.—JOHN H. FRENCH, Albany, N. Y.—*Slate-Frame.*—March 30, 1869.

Claim.—1. A metallic band, of such form as to fit the elastic cap and the two adjacent pieces of the frame, for the purposes of holding the elastic cap securely in its place, leaving the pads projecting beyond it, and of making a strong brace for the frame.

2. The combination of the elastic cap or cushion B, and a metallic band, C, forming a noiseless corner for school-slate frames, as herein described.

88,468.—ROBERT S. GODFREY, Philadelphia, Pa., assignor to himself, THOMAS BANER, and JAMES C. HIRES, same place.—*Refrigerator.*—March 30, 1869.

Claim.—One or more hollow shelves or partitions, communicating with the ice reservoir, and extending horizontally from the reservoir into the chamber of a refrigerator, substantially as herein described.

88,469.—WILLIAM P. GOFF, Yorkville, Wis.—*Portable Fence.*—March 30, 1869.

Claim.—1. Panels A, braces B, pin C, stakes D, and stays E, constructed and arranged substantially as described.

2. Panels A, clasp F, wedges G, and notched ends H of the panels, for turning a corner, substantially as described.

88,470.—WILLIAM GOLCHER, St. Paul, Minn.—*Breech-Loading Fire-Arm.*—March 30, 1869.

Claim.—The combination of the lever G, barrel A, cartridge-retractor J, spring M, and hammer C, with the lever I, pivoted, at its upper end, to the barrel, and, at its lower end, to the lever G, in front of the fulcrum of the latter, and with the arm H, pivoted, at its forward end, to the lever G, above said fulcrum, when the forward end of the lever G is bifurcated, so as to pass over lever I, in raising the barrels, and is provided with a point which strikes the retractor, and operates it; all said parts being constructed and operating together, in the manner and for the purpose described.

88,471.—LEWIS GOODWIN, Bangor, Me.—*Sash-Balance.*—March 30, 1869.

Claim.—1. A sash, provided with a strip, K, slide H, pin *l*, and screw E or E′, said screw serving the double purpose of holding the sash in position, and of retaining or releasing the slide, substantially as set forth.

2. The combination, with the devices embraced in the preceding claim, of a cord and pulley, connecting the upper and lower sashes.

3. The combination of the devices embraced in the last preceding claim, with a friction locking-device, applied to the lower sash, substantially as set forth.

88,472.—GORDON Y. GRAY, Niles, Mich.—*Oven.*—March 30, 1869.

Claim.—A mechanical bakery, consisting of an oven, O, inclosed within the walls B, with a continuous intervening flue, F, and having the endless apron A arranged to move through the oven O, substantially as shown and described.

88,473.—A. J. HARMON, Charlestown, Mass., assignor to himself, WILLIAM H. HOWLAND, and

JOHN E. HASSELTINE.—*Weather-Strip.*—March 30, 1869.

Claim.—The spring-hinge D D, composed of coils *a a*, arms *b b*, joint *e*, and arms *i i*, constructed and applied to strips A B, substantially as described and specified.

88,474.—JOHN HARPER, Hillsborough, Iowa.—*Churn.*—March 30, 1869.

Claim.—1. A churn, in which the air that is admitted to the contents thereof is caused to pass through a vessel containing hot or cold water, as circumstances may require, by which means said air is heated or cooled, as desired, substantially in the manner shown and described.

2. The construction of the vessel F, with its reservoir for water, and its air-passages, substantially as shown and described.

3. The combination and arrangement of vessels D and F, substantially as shown and described.

88,475.—JAMES HARRIS, Boston, Mass.—*Meter.*—March 30, 1869.

Claim.—A new arrangement, substantially as described, of the piston-chambers *b b'*, and the several ports, and the connecting oblique water-passages of the two pistons and their cylinders, the two end-ports, under such arrangement, being in a vertical plane passing through the axis of the cylinder, while the two inlet-ports are on one side of such plane, and the outlet-port is on the other side of it, and the connections of the inlet-ports with the end-ports are effected by the oblique passages N O P Q, leading through the body of the case, all as set forth.

88,476.—LEWIS T. HAWLEY, Salina, N. Y.—*Milk-Cooler.*—March 30, 1869.

Claim.—1. The vessel C, having the air-chamber D and cooling-tubes *a a* formed within it, substantially as and for the purpose set forth.

2. The combination of the vessel C with a clothed or covered can, or vessel, substantially as and for the purpose described.

88,477.—GEORGE W. HEATH, Burlington, Pa.—*Horse Hay-Fork.*—March 30, 1869.

Claim.—1. The arrangement of the bar A, bar D, point C, hooked bar E, cross-bar G, and its forks H H, when constructed and operating as specified.

2. The combination of the lever F, the latch *f*, and angular bar *d*, constructed and operating substantially as and for the purposes herein set forth.

88,478.—C. W. HERMANCE, Schuylerville, N.Y.—*Washing-Machine.*—March 30, 1869.

Claim.—The arrangement of the thin perforated metal disk E, with its radical hollow tubes *b b*, open at their outer ends, and perforated, all attached to the vertical shaft B, passing through the movable bar F, and within the wash-boiler A, as shown and described.

88,479.—CHARLES HEWITT, Hamilton Township, N. J.—*Puddling-Process for the Manufacture of Wrought Iron.*—March 30, 1869.

Claim.—The process of puddling iron, by mixing cast iron, divided into coarse granules or pieces, with oxide of iron, melting, and boiling them together, and balling the iron in a puddling-furnace, substantially as described.

88,480.—GEORGE JAMES HINDE, Wolverhampton, England, and THOMAS CALLENDER HINDE, Ynispenllwch, near Swansea, Wales.—*Manufacture of Iron and Steel, and Furnace and Apparatus therefor.*—March 30, 1869.

Claim.—1. The improvements in the manufacture of iron and steel hereinbefore described; that is to say, smelting iron-ores, and producing therefrom either malleable iron, steel, or cast iron, by subjecting a mixture of the iron-ores and flux, either with or without carbonaceous matter, to the action of a mixture of highly heated carbonic-oxide and nitrogen gases, such mixture of gases being produced by passing atmospheric air through a stratum of ignited fuel, the said fuel not being mingled with the ores to be smelted, substantially by the means and in the manner as above described.

2. The arrangements of furnaces and apparatus to be used in the manufacture of iron and steel, substantially as hereinbefore described, and illustrated in the accompanying drawings.

88,481.—EDGAR HITT, Poundridge, N. Y.—*Wagon-Seat.*—March 30, 1869.

Claim.—The button *a*, projecting from the arm C of the riser A, in combination with the spring-latch *c*, in the cleat D, substantially as and for the purpose set forth.

88,482.—CHARLES A. HODGMAN, Tuckahoe, N. Y.—*Picture-Frame.*—March 30, 1869.

Claim.—A cushion, one or more, on the back of a picture-frame, looking-glass, or other article to be suspended against a wall, substantially as and for the purpose described.

88,483.—GEORGE M. JACKSON, North Hector, N. Y.—*Harvester.*—March 30, 1869.

Claim.—1. The arrangement of the clutch I, rod K, spiral spring *i*, and lever M, substantially as and for the purpose shown.

2. The combination of the cylinder S, bearings T T, and crank-shaft O, together with the cutting-apparatus of a harvester, substantially as shown, and for the purpose set forth.

3. The arrangement of the lever *u*, pulley U, cord R, pulley W, shoe Q, and cylinder S, together with the ratchet-bar X and catch Y, substantially as shown and described.

88,484.—SAMUEL F. JACKSON and JEFFERSON A. DAVIS, Eureka, Ill.—*Apparatus for Heating and Separating Lime from Water.*—March 30, 1869.

Claim.—A spray-heater and lime-extractor, having perforated shelves *a b c*, apertures B and C, lid or door G, slats F F, and hinges and wedges, as described, constructed, arranged, and operating substantially as specified.

88,485.—HENRY JAMES and EDWARD DREWETT, Weybridge, England.—*Water-Closet.*—March 30, 1869; patented in England November, 21, 1867.

Claim.—1. The combination of the pan, the seat, and the cover, with a lining of India-rubber, arranged to make a tight joint around the pan when the cover is pressed down, substantially as before set forth.

2. The combination of the pan, the seat, the cover, and the trough for disinfecting material, the whole constructed to operate substantially as before set forth.

3. The combination of the pan and the trough with inlet and outlet air-passages, and a valve to control the passage of air, the whole constructed to operate substantially as before set forth.

88,486.—W. L. JEFFRIES, Lancaster, Ohio.—*Plow-Carriage.*—March 30, 1869.

Claim.—The ratchets *c* and *s*, when constructed, combined, and operating substantially as and for the purposes specified.

88,487.—THOMAS JONES, New York, N. Y.—*Device for Holding Plates of Glass.*—March 30, 1869.

Claim.—The device for handling plates of glass, consisting of beam A, adjustable weight E, swivel C, hook G, and clasps H, combined and operating as described.

88,488.—ROBERT J. JORDAN, New York, N. Y. *Piano-Lock.*—March 30, 1869.

Claim.—1. The arrangement of the guard-plate D, spring F, and revolving bolt C, the latter being operated by a key, and provided with a cross-head, which, after entering the catch-plate, is turned, so that it cannot be withdrawn, except by the key, substantially as herein described.

2. The bolt C, sliding-plate B *b'*, and guard-plate D, in combination with each other, and with the lock-plate A, all operating substantially as herein shown and described, and for the purpose set forth.

88,489.—ERASTUS M. KINNE, Cuba, N. Y.—*Trace-Buckle.*—March 30, 1869.

Claim.—The combination of the aperture A, the chambers C, the boxes D, the shoulder-brace bar E,

with the shoulder-braces G, as above described, for the purpose specified.

88,490.—H. S. LELAND, Mount Union, Ohio.—*Combination-Lock.*—March 30, 1869.

Claim.—1. The slide-bar Q, when used to produce a rotary motion of the arbor N, which connects the outer with the inner portion of the lock, substantially in the manner and for the purpose herein specified.

2. The tumbler *a*, with slot a^1, and tumbler-collar *b*, with slot b^2, and groove b^1, when arranged and combined on the arbor K, by pin a^2 and holes b^4, or their equivalents, substantially in the manner and for the purpose specified.

3. The ratchet-wheel *c*, with face-teeth c^1 and end-teeth c^2, when used in combination with the pawl *p* on the arbor N, and the spring-pawl *g*, substantially in the manner and for the purpose specified.

4. The upright X, with stop *w*, tumbler-arbor K, with stop *v*, and pins h^3 and b^3, ratchet-wheel collar *h*, ratchet-wheel *c*, tumbler-collar *b*, and tumbler *a*, the several parts being arranged and combined substantially as and for the purpose herein specified.

5. The combination of the spring *e*, ratchet-wheel collar *h*, arbor K, and upright X, when said spring *e* is subjected to both a compressive and torsional strain, the several parts being arranged in the manner herein specified.

6. The shifter-plate H, with the tongue *m* attached thereto, when used in combination with the ratchet-wheel collars *h h*, substantially as and for the purpose herein specified.

7. The lock-plate I I′ I′, with stop-bars *j j*, when used in combination with the bolt G and tumblers *a a*, substantially as and for the purpose specified.

8. The retaining-plate J, with knob T and block r^2, when used in combination with the shifter-plate H and bolt G, substantially as and for the purpose specified.

9. The change-bar R, with thin plate *n* and screw r^1, or its equivalent, when used in combination with the tumbler-collars *b b*, substantially as and for the purpose specified.

10. The spindle M and throw-shaft L, with arm L′, when used in combination with the shifter-plate H and lock-plate I, substantially as and for the purpose herein specified.

11. The slide-bar Q, lever-wheel P, arbor N, pawl-wheel O, pawl *p*, ratchet-wheel *c*, arbor K, ratchet-wheel collar *h*, tumbler-collar *b*, tumbler *a*, lock-plate I I′ I′, and bolt G, the several parts being constructed, connected, and arranged substantially as and for the purpose herein specified.

88,491.—JOSÉ RUIZ LEON, Havana, Cuba.—*Tide-Power.*—March 30, 1869.

Claim.—1. The dike, provided with the conduits or passages set forth, in combination with the receiving cistern or receptacle D, provided with a suitable channel or passage, adapted to permit water to fall from said cistern, the whole operating substantially as described.

2. The combination of the dike, containing the conduits or passages, as set forth, with the cisterns D and E, substantially as and for the purposes described.

3. The dike, provided with the conduits or passages set forth, in combination with the cistern D and the canal *g g*, substantially as and for the purposes described.

4, The arrangement, in the cistern E, of the hydraulic wheel V, and the pontoon N, operating as shown and described.

88,492.—H. W. LIBBEY, Cleveland, Ohio.—*Velocipede.*—March 30, 1869.

Claim.—1. The combination of rubber-lined rest N, with rod M, segmental gear J, chain O, crank and crank-shaft, wheels Q P, rollers S, and wheels B, the whole forming the running-gear and steering-apparatus of a velocipede, substantially as described.

2. The rubber-lined rest N, in combination with the rod M, for the purpose set forth.

88,493.—EDWIN B. LOCKE, Exeter, N. H.—*Machine for Making Bolts.*—March 30, 1869.

Claim.—1. The arrangement and combination of the sliding-bars *i j* with the carriage *g*, the former being provided with the differential cam-grades *k* and *l*, and the latter with the inclines *m* and *n*, the whole operating in manner and for the purpose as before explained.

2. As a means of operating the cutter-carrier H, the combination and arrangement of the bars *b′* and c^2, such bars being inclined upon their forward ends, and operating in connection with the said carrier, provided, as before explained, in such manner as to effect the reciprocating movements of such carriage, substantially as hereinbefore set forth.

88,494.—ROBERT O. LOWREY, Salem, N. Y.—*Insole.*—March 30, 1869.

Claim.—A water-proof insole slipper, constructed substantially as herein described, to be worn inside of a boot or shoe, as set forth.

88,495.—JEREMIAH A. MARDEN, Boston, Mass., assignor to JOHN H. and CHARLES E. ABBOTT, same place.—*Steam-Engine Governor.*—March 30, 1869.

Claim.—The within-described stop-motion, consisting of the friction-disk K, with its recess *x*, the pulley D, and the spring *s*, in combination with the arm *w*, connected with the valve, all operating substantially as set forth.

88,496.—JEREMIAH A. MARDEN, Boston, Mass., assignor to CHARLES E. and JOHN H. ABBOTT, same place.—*Steam-Engine Governor.*—March 30, 1869.

Claim.—1. The device for closing a valve by means of cords or wires, substantially on the principle and in the manner herein set forth.

2. The arrangement with the above of the pin *d′* and arm *f*, with its inclined end *i*, for automatically closing the valve on the breakage of the governor-belt, substantially as described.

88,497.—JEREMIAH A. MARDEN, Boston, Mass., assignor to CHARLES E. and JOHN H. ABBOTT, same place.—*Steam-Engine Governor.*—March 30, 1869.

Claim.—1. The sliding adjustable paddle N and rod *h*, substantially as set forth.

2. In combination with the above paddle-blade N, the rocker-shaft *g*, sliding-rod *f*, and weighted lever, for operating the valve, substantially as set forth.

88,498.—JEREMIAH A. MARDEN and CHARLES E. ABBOTT, Boston, Mass., assignors to JOHN H. and CHARLES E. ABBOTT, same place.—*Steam-Engine Governor.*—March 30, 1869.

Claim.—A screw-propeller, C, revolving within the receptacle A, in combination with a float, and the lever K, connected with the steam-valve, substantially as set forth.

88,499.—JOHN N. MCLEAN, Philadelphia, Pa., assignor to himself and B. W. LACY, same place.—*Sewing-Machine.*—March 30, 1869.

Claim.—1. The swiveling block *a″*, in combination with a needle-bar, C, which is articulated to and actuated in its vibratory motion by a vibrating bar, G, operated substantially as and for the purpose described.

2. The vibrating-bar G, in combination with a needle-bar, C, articulated thereto as described, when the said bar G has its center of vibration made adjustable therein for the purpose of varying the length of the stitches in the cloth, as occasion may require, substantially as described.

3. The vibrating-bar G, in combination with a needle-bar, C, articulated thereto as described, when the center of vibration of the said bar G is made adjustable for varying the length of the stitch by means of the slot *g′* and screw *h′*, substantially as set forth and described.

4. The vibrating-bar G, in combination with a needle-bar, C, articulated thereto substantially as described, when the slot *g′* is made in the bar so as to come parallel, in the direction of its length, with the direction of the length of the slot *a′*, in which the thumb-block *h* slides, when the said needle-bar C has reached half the length of its downward motion, substantially as described, for the purpose specified.

5. The slotted vibrating-bar G, in combination

with the needle-bar C, the disk f', and wrist-pin f'', or their equivalents, the sliding thumb-block h, and screw h', or their equivalents, and slotted upright A, the said parts being arranged to operate substantially as and for the purposes described.

6. The obliquely slotted looper-lever D, in combination with the stationary fulerum-pin b^4, for the purpose of allowing the said looper-lever to be moved longitudinally forward and backward on its said fulerum-pin, substantially as and for the purposes described.

7. The obliquely slotted looper-lever D, the stationary fulerum-pin b^4, and the actuating lever K, or its equivalent, operating together in combination with the adjustable stop U, or its equivalent, for the purpose of compelling the said looper-lever to move longitudinally forward at the proper time, substantially as and for the purpose described.

88,500.—William A. McDonald, Alna, Me., assignor to F. G. Cooker, for one-half his right.—*Cheese-Cutter.*—March 30, 1869.

Claim.—1. In cheese-cutters, the pivoted blade, cast or formed with a weighted handle, substantially as and for the purpose described.

2. The knife E, with weighted handle F, in combination with the standard D, frame G, and revolving table C, with pins b c, substantially as and for the purpose described.

3. The metallic frame G, constructed as described, in combination with the knife E and standard D, as and for the purpose set forth.

4. The combination of the knife E, frame G, standard D, bed-piece B, table C, with pins b b, all constructed, arranged, and operating substantially as and for the purpose herein described.

88,501.—Purches Miles, New York, N. Y.—*Fastening for Curtains and Carpets.*—March 30, 1869.

Claim.—The tack and binder, as a new article of manufacture, formed of the penetrating points and flattened bar, as and for the purposes specified.

88,502.—John H. Morris, Philadelphia, Pa.—*Adjustable Door-Sill.*—March 30, 1869.

Claim.—A self-adjusting door-sill, having a metallic covering, B, with oval top c, slotted flange or flanges, and supported by springs C, constructed and operated for the purpose, and in a manner substantially as set forth.

88,503.—Benjamin Oldfield and Edwin Oldfield, Norwich, Conn.—*Loom.*—March 30, 1869.

Claim.—1. The reciprocating head e, hooks h h^1, and toothed slide-rods i i^1, in combination with cog-wheels m k and shuttle-rack n, of a batten, E, combined and operating substantially as and for the purpose set forth.

2. The toothed slide-rods l^2, in combination with the toothed bell-crank levers o p q and gear-wheels k^2, substantially as and for the purpose described.

3. The stop p^2, on the cog-wheel k^2, to act in combination with the bell-crank levers o p q, substantially as and for the purpose described.

4. The slide-rods, provided with oblique cam-slots j^*, in combination with the heddle-frames F and their connecting mechanism, substantially as and for the purpose set forth.

5. The combination with bell-crank levers o, p, q, r, s, t, u, v, w, of rods e^2 f^2 g^2, provided with slots h^2, to catch over studs i^2, which project from the arms of the bell-crank levers, or with studs which catch in suitable slots in the arms of said bell-crank levers, substantially as and for the purpose set forth.

6. The vibrating hooks m^2, pivoted to the slide-rods l^2, and acting, in combination with the pattern-chain and knife, or knives, substantially as and for the purpose described.

7. The combination, with the reciprocating knives G G′, and one or more treadles, I, of racks g^2, and pinions r^2, arranged and operating substantially as and for the purpose set forth.

8. The cog-wheel J, having adjustable roller-studs t^2, in combination with the treadles I I′, knives G G′, their connecting devices, and the pattern-chain, substantially as and for the purpose described.

88,504.—George H. Palmer, New York, N. Y., assignor to William Dale, New York City.—*Vault-Cover.*—March 30, 1869.

Claim.—A cover for the openings in walks, pavements, &c., composed of a dish, A, filled with stone, brick, concrete, artificial stone, wood, or other like material, substantially as shown and described.

88,505.—Isaac E. Palmer, Hackensack, N. J.—*Machine for Stretching Fabrics.*—March 30, 1869.

Claim.—1. The combination of traveling selvage feeding and carrying devices with a stationary intermediate friction-frame or surface, operating as a drag to the center or body of the fabric, and acting, in unison with the selvage-carrying device, to effect the stretch of the fabric, substantially as specified.

2. The combination of independently hung, or traveling selvage carrying and stretching devices, with friction-wheels or appliances for driving the same, when said drivers are so hung and operated as to admit of either or both of the selvage-carrying devices, at opposite ends of the intermediate friction-frame, having feed given them, or otherwise allowed to freely move with and by the passage of the fabric over them, essentially as herein set forth.

3. The combination, with the divided expanding and contracting stretching-frame A, and the independently revolving selvage-carrying rolls C, of the stationary hubs F F, having reversely tapering passages, c, through them, and adjustable in relation to the fixed shaft E, substantially as and for the purpose or purposes herein set forth.

4. The fabric-carrier or receptacle L, hung so as to be capable of being raised or lowered, and adjustable from opposite ends, for operation in concert with and in relation to the fabric-stretching devices or surfaces, essentially as specified.

5. The roughened points m, scattered over the surface of the body of the drying-cylinder, substantially as and for the purpose herein described.

88,506.—William M. Palmer, Middlebush, N. J.—*Water-Elevator.*—March 30, 1869.

Claim.—1. The combination and arrangement of the sheaves, or pulleys H I, spring K, and rope or belt G, substantially as and for the purpose described.

2. The parts enumerated in the above clause, in combination with the friction-pulleys F and F′, substantially as shown and described.

3. The arrangement of the pulleys F F′, drums E E′, rope G, pulleys H and I, and spring K, for the purpose of regulating the position of the buckets with reference to the surface of the water in the well, substantially as shown and described,

4. The arrangement of the levers L N, double clutch-coupling O O′, and clutches P P′, substantially as and for the purpose described.

5. The bucket I, having a weighted bail attached thereto, substantially as shown and described.

88,507.—Thomas R. Pickering, New York, N. Y.—*Velocipede.*—March 30, 1869.

Claim.—1. The reach, or back-bone, constructed of a central or main tube, A, and lateral rear tubes A′ A′, arranged substantially as described, and welded or united together, in combination with the socket B, at the forward end of the reach, essentially as specified.

2. The combination of the sockets B and D D with the reach, constructed of tubes A A′ A′, arranged as described.

3. In combination with the socket B, the fork C, composed of tubes, constructed to form oil-boxes, b b, at their base, and provided with sockets or bearers, a a, for the support of the running-axle, essentially as specified.

4. The stirrups H, made of polygonal shape in their transverse section, and hung to freely turn on the wrist-pins of the cranks which carry them, substantially as described.

88,508.—Nathan M. Powers, Kirksville, Mo.—*Corn-Planter.*—March 30, 1869.

Claim.—The marking-wheels A A, markers B B, shaft F, cog-wheels D and N, dropper-bar S, rods I I, valves J J and R R, and drills M M, when combined, arranged, and operating substantially in the

manner and for the purposes herein shown and described.

88,509.—CHARLES S. RANKIN, Cincinnati, Ohio.—*Fire-Place.*—March 30, 1869.

Claim.—1. The described arrangement of convex recessed grate A, oblique jambs B B′, and front plate C, for the purposes set forth.

2. As a new article of manufacture, the grate A, jambs B B′, and front plate C, cast in one piece, as set forth.

88,510.—ALFRED G. REED, Philadelphia, Pa.—*Corpse-Preserver.*—March 30, 1869.

Claim.—The arrangement described of the partitions D D′ and vessels B B′, in respect to a case and cover of non-conducting material, for the purpose described.

88,511.—MOSES H. RIPLEY and WILLIAM N. TEMPLE, Minneapolis, Minn.—*Harvester.*—March 30, 1869; antedated March 25, 1869.

Claim.—1. The arrangement of the seat D, spring K, slotted bar H, and screw *e*, with the standards, all as shown and described.

2. The arrangement of the lever E, block F, lever I, and wheel C, with lugs *a a*, all as herein shown and described.

88,512.—WILLIAM H. ROBERTS, Mauch Chunk, Pa.—*Steam-Pump.*—March 30, 1869.

Claim.—1. The rocker L, arranged and operated substantially as herein described.

2. The combination of the rocker L with the friction roller O, substantially as herein described.

3. The arrangement of the rocker L, arm *m*, roller O, valve K, rod N, levers P, and tappet-stems S, with reference to each other and the cylinders G and A, substantially as set forth.

4. The piston I, when constructed as described, and arranged in relation to the steam-ports *e e*, valve K, rocker L, roller O, rods N F, and slide-valve E, substantially as specified.

5. The combination and arrangement of the rocker L, arm *m*, valve K, ports *e e*, piston I, rods N and F, levers P P, tappet-stems S S, slide-valve E, dash-pot T, and pipe *d*, containing the choke-valve C, as set forth.

88,513.—A. M. RODGERS, Brooklyn, N. Y.—*Folding-Chair.*—March 30, 1869.

Claim.—A folding-chair, consisting of the pivoted seat A, the pivoted and slotted legs B and B′, and the slotted back-pieces C, combined and arranged for operation, substantially as herein described.

18,514.—SAMUEL ROEBUCK and JOHN ROEBUCK, New York, N. Y.—*Mosquito-Canopy.*—March 30, 1869.

Claim—The upright rod or cord A, forming a support for the top of a mosquito-canopy, when combined with a series of rods or bars, *b b b*, the outer ends of which can be raised vertically, and toward the center rod or cord, for the purpose of closing the canopy-frame.

88,515.—ROBERT W. RUSSELL, New York, N. Y.—*Paper-Stock, Box-Board, Roofing-Paper, &c.*—March 30, 1869.

Claim—1. The above-described methods or processes of making paper-stock, paper box-board, roofing-paper, and other kinds of paper and fibrous articles, as aforesaid, made from cane, or reeds, or similar fibrous vegetable substances, disintegrated by the explosive force of steam.

2. The above-described manufactures, the products of the said processes.

88,516.—ROBERT W. RUSSELL, New York, N. Y.—*Fibrous-Composition Slabs and Panels for Roofs, Floors, Walls, Tanks, and for other Purposes.*—March 30, 1869.

Claim.—1. The making and using of the said fibrous-composition slabs and panels for roofs, walls, pavements, &c., and for other suitable purposes, as and by the means aforesaid, and especially by the employment, in combination with other ingredients, as aforesaid, of the disintegrated cane-fiber, in the condition in which it is expelled from the said steam-gun, without the use of any chemicals to further disintegrate the same, and without reducing it to pulp, or making it into sheets of felt or paper, such process and new manufacture being substantially as hereinbefore specified.

2. The manufacture of said fibrous silicate composition panels or boards, for ceilings and inner walls of houses, in lieu of lath and plaster, and for fireproof floors and linings of railway-carriages, and cabins, floors, and decks of vessels, and for other purposes, substantially as above described.

3. The new articles of manufacture, the said fibrous-composition slabs and panels, made by the said processes, and for the purposes hereinbefore described.

88,517.—ROBERT W. RUSSELL, New York, N. Y.—*Valve of Steam Fiber-Guns.*—March 30, 1869.

Claim.—1. The working of the discharge-valve of the steam-gun used for disintegrating fibrous materials, so as to prevent or diminish concussion, substantially in the manner above described.

2. The combination, with the hinged discharge-valve and its projecting arm, whether provided or not with a friction-roller, of the elastic or yielding curved and divided buffer or cushion, under the arrangement and operation substantially as set forth.

88,518.—ROBERT W. RUSSELL, New York, N. Y.—*Fibrous-Composition Tube.*—March 30, 1869.

Claim.—1. The above-described manufacture of fibrous-composition casings or tubes, for receiving or inclosing wires of telegraph-lines, such tubes or casings being composed of webs or sheets of fiber, disintegrated by the explosive force of steam, in combination with bituminous or other composition, as aforesaid.

2. The method of making the said fibrous-composition tubes, for the conveyence of gas and water, and laying down and protecting the same, substantially as hereinbefore described.

3. As new articles of manufacture, the fibrous-composition casings, pipes, and tubes made by the processes aforesaid, and for the purposes described

88,519.—ROBERT W. RUSSELL, New York, N. Y.—*Manufacture of Paper for Protecting Goods from being Injured by Moths, &c.*—March 30, 1869.

Claim.—1. The above-described process for the manufacture of paper and paper-board from cane disintegrated by the explosive force of steam, or other similar fiber, mixed or charged with tobacco, or a decoction of tobacco, or both, as aforesaid.

2. The new articles of manufacture, viz, the different kinds of paper aforesaid, made by the said processes, and for the purposes above described.

3. The above-described improvements in the manufacture of carpet-linings, or protectors, or carpet-pads.

4. The new articles of manufacture, the different kinds of carpet-linings, carpet-protectors, or carpet-pads, made by the improved methods and processes, substantially as above described.

88,520.—RICHARD SALTER, Cincinnati, Ohio, assignor to himself and JOSEPH B. DAVIS, same place.—*Gas Cooler and Washer.*—March 30, 1869.

Claim.—1. The surfaces of boulders, kept constantly wet, in the manner described, for the purpose described.

2. The pipe B, reverberating plate C, and the wet boulders, for the purpose described.

88,521.—BENJAMIN SHERWOOD and DANIEL FITZGERALD, New York, N. Y.—*Construction of Safes.*—March 30, 1869.

Claim.—A safe, constructed as described, of a block of metal, having an opening on one side, with a chamber or cavity in the center, leaving the walls or sides of the safe of great thickness, so as to be able to resist any attempts to break the same open, substantially as herein set forth.

88,522.—DANIEL H. SHIRLEY, Boston, Mass.—*Piano-Forte Action.*—March 30, 1869.

Claim.—1. The back-catch arm G, hinged to key-

lever, and provided with an upright frame, J, consisting of post K and fly L, with adjusting-screws M, substantially as described, for the purpose specified.

2. An arm, hinged to key-lever, and carrying back-catch, and an upright frame, J, or its equivalent, in combination with a hammer-stem, having but R, or its equivalent, when all arranged together for operation, in a manner substantially as described, and for the purpose specified.

3. The screw-rod Z, with washer or head A^2, in combination with the fly L of upright frame J, substantially as described.

4. The screw M, with washers N and O, in combination with the fly L, or its equivalent, substantially as and for the purpose specified.

5. The cushion D^2, or its equivalent, applied to the back-catch arm, whether arranged for adjustment thereon or not, substantially as and for the purpose described.

88,523.—SANFORD C. H. SMITH, Belpre, Ohio.—*Portable Fence.*—March 30, 1869.

Claim.—1. The combination of post B, braces C C, bolt H, and notched bars D D, as and for the purpose described, when these several parts are arranged as set forth.

2. In combination with the above, the key K, inserted in the dovetailed mortise in the base A, as and for the purpose specified.

88,524.—ROBERT S. STENTON, Brooklyn, N. Y.—*Manufacture of Steel Direct from the Ore.*—March 30, 1869; antedated March 25, 1869.

Claim.—The process, or method, herein described and illustrated, of making steel, by heating the iron-ore with fuel and charcoal, arranged in alternate layers, thus producing steel sponge, and by reducing said sponge, substantially in the manner hereinbefore set forth.

88,525.—HENRY SPRINGER, Brady, Mich.—*Machine for Sowing Grass-Seed.*—March 30, 1869.

Claim.—1. The position of the seed-box F, it being situated between the belt H, connecting pulley A with pulley B, in the manner and for the purpose specified.

2. The combination of the bell-crank E and lever I, in connection with the pulleys A and B, substantially in the manner and for the purpose set forth and described.

88,526.—J. J. ST. LEDGER, Philadelphia, Pa.—*Animal-Trap.*—March 30, 1869; antedated March 25, 1869.

Claim.—1. A box-shaped trap, with its top consisting of two parts, D, connected to two of its sides, B, and with its sides B hinged to its bottom A, and arranged to be held open by the hooks *j*, cross G, and trigger *h*, constructed and arranged to operate substantially as herein described.

2. The cross G, in combination with the trigger *h*, hooks *j*, and spring C, all constructed and arranged to operate substantially as herein described.

3. In combination with the sides B, and projections *e*, the loosely moving bolts *c*, for locking the trap when sprung, substantially as herein described.

88,527.—CONRAD C. STREMME, Austin, Texas.—*Hat-Ventilator.*—March 30, 1869.

Claim.—The elastic ventilating device, consisting of a spirally-wound flat wire, or similarly shaped strip of whalebone, rattan, &c., adapted to be attached to head-coverings, substantially as herein described.

88,528.—SAMUEL STRONG, Washington City, D. C.—*Street Letter-Box.*—March 30, 1869.

Claim.—The flanged lid F with its inclined plate F′, in combination with the aperture C, and surrounding flange D, all constructed to operate substantially as within described.

88,529.—JOSIAH A. TICE, Windsor, sssignor to THOMAS C. SOUTH, Mattoon, Ill.—*Churn.*—March 30, 1869.

Claim.—The arrangement and combination of the jointed journal-box *c*, the piston-rod and clasp *d*, with the cam and cog-wheels *e*, and churn and dasher *a b*, for the purpose and in the manner above set forth.

88,530.—A. L. VARNEY, Watertown, assignor to ALFRED B. ELY, Newton, Mass.—*Breech-Loading Fire-Arm.*—March 30, 1869.

Claim.—The toggle-joint spring ejector, substantially as described.

88,531.—A. L. VARNEY, Watertown, assignor to ALFRED B. ELY, Newton, Mass.—*Breech-Loading Fire-Arm.*—March 30, 1869.

Claim.—1. A spring-sere and ejector, constructed and arranged to operate in combination, substantially as described.

2. The locking-bolt and spring, substantially as described, constructed, and arranged, in relation to and in combination with the swinging breech-block, substantially as set forth.

3. The movable guard, with its lip, constructed and arranged in relation to and in combination with the breech-block and firing-pin, substantially as described.

4. The combination of breech-block, sere, and ejector, when constructed and arranged to operate substantially as described.

88,532.—CHARLES E. WILSON, New York, N. Y.—*Renewing Rolls for Printing, Calendering, and like Purposes.*—March 30, 1869.

Claim.—1. The within-described process for the preservation and utilization of metallic rollers, substantially as herein set forth.

2. Utilizing the old roller, by turning the same round, and tapering it from end to end, with a square groove on its outer surface, and covering said roller with an interior tapering shell, with an interior projection for fitting into said groove and connecting the parts together, substantially in the manner described.

3. Casting the shell with a core, and planing the same out on its inner side, with a taper and square projection, substantially as specified.

88,533.—GEORGE W. N. YOST, Corry, Pa.—*Harvester.*—March 30, 1869.

Claim.—Combining or providing a body, or main frame, or cases A and A′, with flanges, or webs, or web I and I′, having a hole, N′, through said flanges, or webs, or web for a gudgeon-box for an inner end of a pinion and crank shaft, or other gudgeon, as described, for grass and grain cutting machines.

88,534.—JOSEPH ADKINS, Warrenton, Ga.—*Tire-Shrinker.*—March 30, 1869.

Claim.—The construction and the arrangement, relative to each other, and to the jaws F and C, of the tongue B and lever A, each being made separate from the other, and from the jaws, and made adjustable relative to each other, and to said jaws, as described.

88,535.—ASHBEL P. BARLOW, Kalamazoo, Mich.—*Rock-Shaft for Gang-Saws.*—April 6, 1869.

Claim.—1. Making the oscillation of the saw greater or less, by means of the adjustable rock-shaft device, consisting of the removable arm C and pin D, when attached to the shaft, or bar C′, in the manner and for the purpose set forth.

2. Regulating the side-motion of the bar C′, with relation to face-plate E and guide-blocks A A′, by means of nuts B B, substantially as set forth.

3. The guide-blocks A A′, when constructed and arranged to operate in the manner, and with face-plate E, pin D, and arm C, substantially as described.

88,536.—F. G. BEACH, Hartford, Conn.—*Can-Opener.*—April 6, 1869.

Claim.—1. The circular cutter D, pivoted upon the frame A, and operating in connection with an axial pivot, or other guide, for the purpose of dividing the tin, substantially as shown and described, and for the purpose set forth.

2. The notched pin C, in combination with the frame A and cutting-edge *a*, substantially as and for the purpose shown.

3. The axial pivot E, when constructed in the

manner and for the purpose herein shown and described.

4. The within-described can-opener, consisting of the frame A, cutting-edge *a*, pin C, circular-cutter D, axial pivot E, and holes *x x x*, &c., or their equivalent, in said frame, all constructed and arranged substantially as and for the purpose herein specified.

88,537. — ROBERT BLACKLIDGE, Bridgeport, Conn., assignor to himself and CHARLES GERDENIER. —*Tonic Bitters.*—April 6, 1869.

Claim.—The bitters produced by the combination of the ingredients, substantially in the manner herein described.

88,538.—ALONZO C. BLETHEN, Lynn, Mass.—*Submerged Pump.*—April 6, 1869.

Claim.—The combination of valve-plate *g*, perforated diaphragms *f f'*, piston G, tubular piston-rod H, pump-barrel A, valves *a* and *b*, chamber D, legs D' D' D', box E, arms *d d'*, soeket-flanges *e e'*, link *l*, and arm *i*, socket *h*, and handle *k*, all arranged and operating, relatively to each other, substantially as described.

88,539.—CARL BOCKING, Philadelphia, Pa., assignor to himself and COATES WALTON, same place. —*Screw.*—April 6, 1869.

Claim.—The angular point C, with its cutting-edges *c'* in combination with a wood-screw, substantially as described.

85,540.—FRANCIS E. BOYD and P. SHELTON TYLER, Boston, Mass.—*Breech-Loading Fire-Arm.*—April 6, 1869.

Claim.—1. The barrels, with metal plates at their rear ends, in combination with the clamps, when the latter are inserted and suitably secured in grooves in the former.

2. The flanged tubular retractor *i*, containing a spring, when arranged to operate substantially as shown and described.

3. The combination of a breeeh-piece, through which the hammer acts, substantially as above described, with a barrel or barrels, arranged to turn upon a spindle, substantially as above described, and a spring-catch, all so arranged that the spring-catch will hold the barrel or barrels in their eorrect relation to the hammer, so that the latter may act, through the breech-piece, to explode the cartridge, substantially as and for the purpose specified.

88,541.—LEVI BROWN, Baltimore, Md.—*Banjo.* —April 6, 1869.

Claim.—1. The arrangement of a groove on the upper side of the slide-ring C, to whieh the parchment is attaehed, when such is used in eonnection with a corresponding tongue, formed on the under-side of the driver E, or its equivalent, (the slide-ring D,) whereby the parehment is firmly grasped between the two, and the strain of the parehment upon the tacks eonsequently materially reduced.

2. The arrangement of the bead *a* on the inside of the rim A, in combination with the head B, in the manner and for the purpose set forth.

88,542.—SAMUEL G. CABELL, Quincy, Ill., assignor to himself and ABBOTT Q. ROSS.—*Hydrant.* —April 6, 1869.

Claim.—1. In a hydrant, the drain-chamber B, placed below the water-way C, as shown, and for the purposes herein set forth.

2. In combination with a hydrant, as described, the water-tight sliding-bottom D, of the chamber B, arranged as shown, and operating in the manner and for the purposes herein set forth.

3. The arrangement of the drain-chamber B and extension-chamber *c*, so as to form, in combination with the sliding-bottom, or piston-head D, a continuation of the water-way, as herein set forth.

4. The wing-valve *a*, when constructed, arranged, and operating in connection with the chamber B and sliding-bottom, or piston-head D, in the manner and for the purposes herein set forth and described.

88,543.—ROBERT CHAMBERS, Detroit, Mich.—*Reefing Fore-and-Aft Sails.*—April 6, 1869.

Claim.—1. The guide I, cross-head K, and slides L, or their equivalents, when operating substantially for the purpose herein specified.

2. In connection with the above, the boom A, stationary shaft D, sleeved tube E, geared wheel F, and crank and worm-screw G or their equivalents, when arranged, construeted, and operating substantially as and for the purposes herein described.

88,544.—NATHAN S. CLEMENT, New Britain, Conn.—*Casting Handles of Table-Cutlery.*—April 6, 1869.

Claim.—Casting the handles of table-cutlery hollow by the process herein specified.

88,545.—FRANÇOIS COIGNET, Paris, France, assignor to L. MANGEON, New York City.—*Manufacture of Artificial Stone.*—April 6, 1869.

Claim.—1. The herein-described plastic, pulverulent, artificial stone paste, composed of sand, hydraulic lime, and, in some cases, hydraulic cement, prepared substantially in the manner and for the purpose set forth.

2. In the manufacture of artificial stones, or monolithic masonry, the herein-described mode of bringing the moleeules of the mass in close proximity, one to the other, and obtaining a hard stone, by means and with the use of a heavy and hard pounder, exerting its action in a systematic manner upon sucessive layers of artificial stone paste of the character and under the circumstances substantially as herein set forth.

3. As a new article of manufacture, the stones or monolithic masonry, when made from the substances herein set forth, treated substantially in the manner speeified.

88,546.—FRANÇOIS COIGNET, Paris, France, assignor to L. MANGEON, New York City.—*Artificial Monolithic Structure.*—April 6, 1869.

Claim.—1. In monolithic buildings, made of agglomerated artificial stone paste, the production of flues, pipes, or openings, for the purpose of heating, ventilating, conveying water, gas, or smoke, &c., by means and with the use of proper cores introduced in the thickness of the walls, and the agglomerating around said cores of a speeial composition of artifieial stone paste, in the manner and for the purpose herein set forth.

2. In monolithic structures, such as wharves, dams, abutment walls, &c., making the walls hollow, or honey-combed, and filling the said hollows or cells with pounded earth, as herein set forth, for obtaining greater inertia strength, or bulk of masonry, at a reduced expense.

88,547.—FRANÇOIS COIGNET, Paris, France, assignor to L. MANGEON, New York City.—*Making Artificial Stone and Monolithic Structures.*—April 6, 1869.

Claim.—1. The combination of agglomerated artifieial stone paste with iron seraps of irregular shape, such as nails, double-headed nails, or bolts, rings, hooks, clamps, wires, &e., substantially in the manner and for the purpose set forth.

2. The introduction, in the body of artifieial stones, or in the body of artifieial stone monolithic structures, made of agglomerated artifieial stone paste, of skeletons, or metallic frame-work, linked or arranged so as to strengthen the same, substantially as speeified.

3. The application of agglomerated artificial stone paste to the protection and isolating of telegraphic wires.

88,548.—FRANÇOIS COIGNET, Paris, France, assignor to L. MANGEON, New York City.—*Mode of Treating and Manipulating Cements in the Manufacture of Artificial Stone.*—April 6, 1869.

Claim.—1. The use of hydraulic cement, ground with a relatively small quantity of water into a thick, plastic paste, for cementing sand in the manufacture of agglomerated artifieial stones.

2. The herein-described process of retarding the erystallization or setting of hydraulic cements, by repeated and prolonged triturations, whereby the proper amount of sand may be incorporated therewith.

3. As a new article of manufacture, the artificial stones or monolithic structures, made of hydraulic cement and sand, prepared and agglomerated substantially in the manner herein specified.

88,549.—François Coignet, Paris, France, assignor to L. Mangeon, New York City.—*Process of Forming Artificial Stone.*—April 6, 1869.

Claim.—1. The application of heat in the preparation of artificial stone paste, either to the materials employed, before being mixed, or to the mixture of the same, during the process of trituration, substantially in the manner and for the purpose set forth.

2. The manufacture of artificial stones or monolithic structures, by means and with the use of hot agglomerated artificial stone paste, substantially prepared as herein set forth.

88,550.—Gage M. Cooper, Port Huron, Mich.—*Seal-Lock.*—April 6, 1869.

Claim.—The open ring A, made of one piece of metal, and having the ends D curved outward, as shown, when said ring is used in connection with rivets of soft metal, as and for the purpose described.

88,551.—Charles Coti, Marlborough, Mass., assignor to himself and John Baptiste Bebo, same place.—*Edge-Plane for Boot-Soles.*—April 6, 1869.

Claim.—1. The arrangement and combination of the parts shown in Fig. I, with the slots and screws, as described.

2. The side-guard, as constructed, with the application of the rubber strip, for the purpose substantially as described.

88,552.—John C. Crawford, Clintonville, Ill.—*Pump.*—April 6, 1869.

Claim.—The plunger K, having a water-chamber, L, in its lower end, in combination with the cylinders A B, the cylinder A being provided with a side opening, H, for conveying water into a pump-stock, I, and having a packing, N J, as and for the purpose herein set forth.

88,553.—Eliza N. Cutter, Chicago, Ill.—*Cradle or Crib.*—April 6, 1869; antedated April 2, 1869.

Claim.—1. The combination and arrangement of the hinged ends B with the sides A, side-rails F, and bottom-cloth E, substantially as specified.

2. The combination and arrangement of the rocker D, provided with the catches *d* and *f*, with the cross-legs C and C′, side-rails F, and bottom E, substantially as described.

3. The combination and arrangement of the sides A, hinged ends B, bottom E, and side-rails F with the cross-legs C and C′ and rocker D, all constructed and operating substantially as specified.

88,554.—Benjamin W. Deal, New Market, Md.—*Medicine for Cure of the Gravel.*—April 6, 1869.

Claim.—A medicine for curing the gravel, made substantially as described.

88,555.—Frank P. Dobson, New York, N. Y.—*Banjo.*—April 6, 1869.

Claim.—1. The combination, with a double-headed banjo, of a reversible handle, substantially as herein specified.

2. The combination, with such reversible handle, of a rim, provided with apertures *c*, for the escape of the sound, substantially as herein specified.

88,556.—George Draper, Hopedale, Mass.—*Spindle-Step for Spinning-Machines.*—April 6, 1869.

Claim.—The cap C, as formed, with the insulating-chamber, *c*, and extended up into the conical shoulder *e* of the spindle, and down within the step, (by means of the flange *g*,) the whole being substantially as explained.

88,557.—Mathias Eichholtz, Troy, Ohio.—*Equalizing Cultivator.*—April 6, 1869.

Claim.—The frame A and the cross-beams E, connected together at their ends, and by the brace F; the pole C, and adjustable swivel-bolt D, and the clevises H, in connection with a pair of single plow-cultivators, each drawn by one animal, and both animals guided by the pole C, substantially as described, and operating for the purposes specified.

88,558.—William P. Elliott, Cincinnati, Ohio.—*Caster.*—April 6, 1869.

Claim.—1. The catch-lever D′, in combination with the piece H′ and caster B, with its movable stem, as shown and described.

2. The jaws A′ A′, in combination with the clamps S S, screw F, and a caster, as shown and described.

88,559.—William Evans and Richard E. Hayden, Seymour, Conn.—*Mold for Casting Augers.*—April 6, 1869.

Claim.—The molds, constructed substantially as herein described, for casting twist-augers.

88,560.—Orlando V. Flora, Madison, Ind., assignor to himself and Charles Alling.—*Wrench.*—April 6, 1869; antedated March 23, 1869.

Claim.—The bar A, jaw E, jaw B, with its hollow handle, and covering *m*, screw *k*, nut C, and milled head D, constructed and arranged to operate substantially as and for the purpose herein specified.

88,561.—G. W. Fox, H. H. Coe, and I. M. Kelley, Ravenna, Ohio.—*Compound for Welding and Restoring Steel.*—April 6, 1869.

Claim.—The compound, consisting of the ingredients herein named, and prepared in about the proportions stated, for welding or restoring steel, in the manner and for the purpose set forth.

88,562.—Hiram E. Goble, Lake Mill, Mich.—*Neck-Yoke.*—April 6, 1869.

Claim.—The arrangement of the coiled springs B, or their equivalents, and yoke B, with sliding thimbles C, when constructed and operating substantially as and for the purposes herein set forth.

88,563.—George Huntress Grant, Richmond, Ind.—*School Desk and Seat.*—April 6, 1869.

Claim.—1. In combination with the leaf A, the hinged connections H H, battens W W, and stops Z Z, when constructed and arranged substantially as herein described.

2. Pivoting the seat B, near its front edge, to the hinged arms C C, for the purpose and in the manner specified.

88,564.—Eugene Grosjean, Pittsburgh, Pa., assignor to himself, Jacob Weaver, jr., and Alfred H. Jones.—*Barrel-Truck.*—April 6, 1869.

Claim.—The attached strap E, combined with the cam-clasp D, in their action with the levers A, bolt B, and flanges or jaws C C, as shown, for the purposes set forth, substantially as described.

88,565.—George A. Harris and John B. Harris, Salem County, N. J.—*Shutter Operator and Fastener.*—April 6, 1869.

Claim.—The operating lever D, boss d''', thumb-screw d^4, and the catches E and E′, the said devices being constructed and arranged to operate in combination with the frame A B and shutter C or C′ of a window, substantially as and for the purposes described.

88,566.—Elmer Hause, Tecumseh, Mich.—*Clothes-Drier.*—April 6, 1869.

Claim.—The spool C E, with gear-wheels A D, when operated as described, by means of the slide G and spring H, and used in connection with the cords M N, as and for the purpose described.

88,567.—V. S. Herzog, Baltimore, Md.—*Spring-Hinge.*—April 6, 1869.

Claim.—The combination and arrangement of the casing A and shoulders B B′, the caps C C′ and arcs D D′, with the pintle E, and spring F, when constructed and operating as herein shown and described.

88,568.—Charles Hess, Lyons, Iowa.—*Churn.*—April 6, 1869.

Claim.—The combination and arrangement of pit-

man B, arm D, curved-shaped top Z Z, dasher M, with its beveled-shaped fingers K K, gathering-bars J and N N, when constructed and arranged substantially as and for the purposes herein set forth.

88,569.—EDWARD HILL, CHARLES OSTRANDER, and HORATIO A. SPINK, Bainbridge, Mich.—*Farm-Gate.*—April 6, 1869.

Claim.—1. The vibrating panel P, chain O, and latch I, or their equivalents, when constructed and operating substantially as and for the purposes specified.

2. In combination with the above-named parts, the gate E, secured to the post A by the bail B and eye-bolt C, or their equivalents, when arranged and operating substantially as and for the purposes set forth.

88,570.—JAMES W. HOBBS, Boston, Mass., assignor to HOBBS, POPE & CO., same place.—*Process of Preparing Blue Peroxide of Manganese.*—April 6, 1869.

Claim.—1. The process for converting protoxide of iron and manganese, combined, to peroxide of manganese, herein described.

2. As a new article of manufacture, peroxide of manganese, produced from protoxide of iron and manganese, combined.

88,571.—JAMES B. HOPKINS, Dennis Port, Mass.—*Anchor-Tripper.*—April 6, 1869; antedated March 23, 1869.

Claim.—An arrangement of the catch-hook and its stop, with the tripper A and the bulwark or rail of the vessel, the stop, under such arrangement, being in and movable with the tripper, and the catch-hook being arranged in a mortise in the rail or bulwark, the whole being substantially in manner and so as to operate as set forth.

88,572.—JOSEPH JOHNSTON, Chicago, Ill.—*Weather-Strip.*—April 6, 1869.

Claim.—The construction of an adjustable threshold, in the manner and form and for the purpose substantially as herein described.

88,573.—MORTON JUDD, New Haven, Conn.—*Sash-Holder.*—April 6, 1869.

Claim.—The turning-button *g*, provided with the hooked ends, and attached to the plate *e*, so as to be let into the parting-strip, and act as a fastening to the upper and lower sashes, as specified.

88,574.—WILLIAM LINDON, New Haven, Conn.—*Velocipede.*—April 6, 1869.

Claim.—The two pawl-levers *a* and *d*, with their respective pawls combined with the toothed and ratchet-wheel D, so as to operate in the manner herein set forth.

88,575.—SAMUEL L. MARSDEN, New Haven, Conn.—*Gate.*—April 6, 1869.

Claim.—1. The employment of the screw-threaded spindle E, in combination with the shaft A or its equivalent, provided with a corresponding internal screw, when so arranged and applied that the spindle forms the axis on which the gate or door revolves, and the threads support the weight thereof, substantially in the manner and for the purposes set forth.

2. The adjustable sleeve H and thumb-screw I, in combination with the spindle E and shaft A, arranged and operating substantially as and for the purposes described.

88,576.—GEORGE MASON, Providence, R. I.—*Braiding-Machine.*—April 6, 1869.

Claim.—1. The gear B, provided with slots, as shown at *b b b b b*, and having the horns *c c c c c* extended back to and adjoining the hub C of the gear, substantially as described.

2. The combination of the reversed bobbin *f*, the pin *g*, in base of spindle, and the pin *i*, in the top of the weight E, as herein described, and for the purposes specified.

88,577.—R. MCDOWELL, Lambertville, N. J.—*Door-Lock.*—April 6, 1869.

Claim.—The two separate key-holes *a'' b''*, in the plates *a' b'*, respectively, with the corresponding projections *c'' c''* and *c' c'*, on the bolt C, and the ring *d''* of the tumbler D, the said parts being constructed and arranged to be operated and secured by the legitimate key E, substantially as and for the purpose described.

88,578.—ISAAC S. MILLER, New York, N. Y.—*Mode of Constructing Building-Fronts.*—April 6, 1869; antedated March 23, 1869.

Claim.—The use and application of brick, composition, or other stone, to the facings of buildings or dwellings, substantially as herein described.

88,579.—DANIEL MURPHY, Dubuque, Iowa.—*Hub-Boring Machine.*—April 6, 1869.

Claim.—1. The combination of the stationary shaft, or mandrel B, with the pivoted expansible tool *s* upon one end, and sliding-rod *t* arranged upon its side, substantially as and for the purpose described.

2. The stationary shaft or mandrel B, expansible cutting-tool *s*, rod *t*, pattern-bar L, guide N, and rotary wheel-holding device, combined, substantially as shown and described.

3. The slotted pattern-bar L, lever N, slide-rod *t*, pivoted cutting-tool *s*, mandrel B' rotary wheel-holder G H R, or its equivalent, and feeding-device F and *a a*, combined, substantially as described.

4. The combination of the toothed hub J and worm-screw *k*, radially-sliding clamping-blocks R, applied to arms H, and rods K, all arranged substantially as and for the purpose described.

5. The arrangement of the sliding-yokes E D, fixed mandrel, or cutter-carrying shaft B, yoking pattern-bar L, cutter *s*, rod *t*, feed-screw F, and adjustable devices R, for boring, centering, and holding wheels of different sizes, substantially as described.

6. The slotted pivoted plate *b* b^3, arranged with the half nuts *a a* and spring *a'*, substantially in the manner described.

7. The spur-wheel *j*, applied around the fixed cutter-carrying mandrel B, and connected to the hub of the wheel-holder, in combination with the spur-wheel *i*, upon the feed-screw F, sliding yokes D E, pattern-bar L, rod *t*, and expansible cutter *s*, all substantially as and for the purposes described.

8. The pivoted segmental cutter *s*, applied to a plate, B', of the mandrel B, as described, and so that it may be adjusted and set for boring holes of different diameters, and also expanded and contracted, or *vice versa*, after being thus set, all substantially as described.

9. The construction and arrangement of mechanism as herein described, for the purpose of boring a hub.

88,580.—CHARLES G. NYE, Onondaga, N. Y.—*Teasel-Trimmer.*—April 6, 1869.

Claim.—The hollow shaft A, and cutter-head *b c* D *d*, substantially as and for the purpose set forth.

88,581.—DAVID O. PAIGE, Detroit, Mich.—*Lock for Safe-Doors, &c.*—April 6, 1869.

Claim.—1. The cross-bar C', provided with the slots M, Y, and O, and the slide N, provided with stop *n'* and groove *n''*, substantially as and for the purposes set forth.

2. The double-armed tumbler G, provided with cams H, and head *g*, with an elliptic slot, J, and recess *j*, formed therein, and the crank L, with its wrist-pin *l*, in connection with a pair of lock-bolts D, or their equivalents, and operating substantially as described, and for the purposes specified.

3. The tumbler Q, provided with cam S, pin W, and slot U, when constructed and operating substantially as and for the purposes set forth,

4. In combination with the above-named parts, the crank X, having a slot, T, in the outer end of its spindle, and the lock-bolt D', the outer end of whose spindle has a slot, or recess, P, or their equivalents, when constructed, arranged, and operating substantially as described, and for the purpose specified.

88,582.—HENRY M. PAINE, Newark, N. J.—*Comb.*—April 6, 1869.

Claim.—A comb, whose teeth are composed of sil-

ver and zinc, or equivalent metal, for producing galvanic effects, substantially as herein set forth.

88,583.—William M. Parker, Boston, Mass.—*Fire-Extinguisher.*—April 6, 1869.

Claim.—1. So introducing, managing, and controlling the acid employed in charging a portable chemical fire-extinguisher, that any required portion of the carbonic-acid gas due to the union of the ingredients used may be eliminated at or about the time of charging, and the remaining portion at any time thereafter, in the manner and by the means herein described, substantially as and for the purpose set forth.

2. Introducing the acid employed in charging a portable chemical fire-extinguisher, in two separate portions, by means of two acid-vessels, or compartments, so that one portion shall be brought into chemical union with the alkaline solution contained in the main receptacle at the time of charging, automatically, or by reason of the peculiar construction of the apparatus, and the other portion brought into such union at any time thereafter, by the voluntary agency of the operator, substantially as herein described, and for the purposes set forth.

3. In a portable chemical fire-extinguisher, the use of the socket *g g*, Fig. 2, or its mechanical equivalent, to aid in sustaining in position the acid-vessel or vessels employed in the construction and use of the apparatus, and regardless of its use, as herein described, in liberating the contents of a smaller acid-vessel.

4. Controlling the pressure of gas in a portable chemical fire-extinguisher, by the means herein described, substantially as and for the purposes set forth.

88,584.—Herman Pietsch and Moritz Walter, Milwaukee, Wis.—*Beer-Cooler.*—April 6, 1869.

Claim.—Pan D, with filtering-sponges F and spouts E, all in combination, substantially as described.

88,585.—George H. Porter, of Bristol, Conn., assignor to Porter Saw Company, same place.—*Process of Hardening Steel Plates, &c.*—April 6, 1869.

Claim.—The process herein set forth, of straightening a hardened steel plate, while in the hardening-bath, after the hardening effect has been produced, and before the flexibility imparted by heat is lost by cooling.

88,586.—John Rice, Bloomington, Ind.—*Felly-Sawing Machine.*—April 6, 1869.

Claim.—The sawing-machine described, consisting of the frame A, standards B, shaft C, pitman D, saw-gate E, saws E′, levers H and I, bar J, ratchet-wheel K, shaft L, gear-wheels L^1 M, and extension-table N, the whole being combined and operated in the manner and for the purpose set forth.

88,587.—Julius Schlichting, New York, N. Y.—*Book-Binders' Head-Band.*—April 6, 1869.

Claim.—The herein-described head-band for book-binding, arranged and constructed in the manner set forth, as a new article of manufacture.

88,588.—William H. Sellers, Keokuk, Iowa.—*Peg-Cutter for Boots and Shoes.*—April 6, 1869.

Claim.—1. Crank K, bar L, and cutter R, combined as and for the purpose specified.

2. The reciprocating cutter R and the rotating cutter H, combined as and for the purpose specified.

3. The combination of a rotary cutter H, and an additional cutter, to operate in the toe of the boot or shoe, and driven from the same driving-shaft, substantially as set forth.

88,589.—John W. Slocum, Philadelphia, Pa.—*Anti-Freezing Hydrant.*—April 6, 1869.

Claim.—A hydrant, having its delivery-spout, or nozzle, protected by a bisected case, and the slot for the valve-arm, supplied with a hinged segment, the closing of which will cut off the flow, all substantially as shown and described.

88,590.—George Terry, Providence, R. I.—*Method of Making Yeast.*—April 6, 1869.

Claim.—The method of mixing yeast by using a lactic-acid solution, either wholly or in part, as the menstruum in which the other ingredients are mixed and fermented, substantially as described.

88,591.—Benjamin L. Tibbetts, South China, Me.—*Combined Hoe and Fork.*—April 6, 1869.

Claim.—A combined fork and rake, when constructed and operating as above described; that is to say, the head A being pivoted to the handle B by means of a plate C′, working on a pin, *c*, in the lower end of the handle, the plate being provided with the notches *m o r* and point *n*, while the handle is provided with the points *e e*, the recess *i*, the shoulder *v*, and the button *s*, all arranged and operating in connection with each other, substantially as and for the purposes described.

88,592.—Peter Joseph Tillmann, Trenton, N. J., assignor to himself and John Reiser, same place.—*Door-Pulley.*—April 6, 1869.

Claim.—The weight A, slide-bar C, and swivel pulley B, when constructed, arranged, and combined, substantially as and for the purposes herein set orth.

88,593.—Jacob F. Troxel, Bloomville, Ohio.—*Horse Hay-Fork.*—April 6, 1869.

Claim.—The lock-lever F, constructed as described, in combination with the tine A′, lever D, rod C, and block P, the whole constructed, arranged, and operating as set forth.

88,594.—Isaac W. Valance, Troy, N. Y.—*Quilting-Frame.*—April 6, 1869.

Claim.—A quilting-frame coupling, composed essentially of a stock, A, to slide on the fixed bar of the frame, a ratchet, D, journaled in the stock, and having a socket for holding the rolling-up bar, and a dog, G, pivoted to the stock, and having catches, *h* and *i*, for engaging with the ratchet and with the fixed bar, all constructed and arranged so as to operate substantially as herein set forth.

88,595.—Charles Ward, Detroit, Mich., assignor to himself and Corydon B. Palmer, same place.—*Propeller.*—April 6, 1869.

Claim.—The arrangement of the cradles I, on bars J, provided with rollers K, which rollers form the pivot of the cradles on shaft B, substantially as and for the purposes herein described.

88,596.—Jasper A. Woodworth, Hickory Corners, Mich.—*Stump-Extractor.*—April 6, 1869.

Claim.—1. The wheel A, with rack B, and pawl C, adjustable brace D, frame E, and anchor-chain F, the whole being combined as described, for the purpose set forth.

2. The combination of the above-named parts with the vertical rollers G and H, the pivoted lever I, and runners J, when constructed, arranged, and operating substantially as and for the purposes herein shown.

88,597.—R. H. Wright, New Bloomfield, Pa.—*Carriage-Top.*—April 6, 1869.

Claim.—The arrangement of the wires *a* and *b* upon the bows A, B, C, and D, substantially as and for the purpose specified.

88,598.—Henry B. Adams, New York, N. Y.—*Fluting-Machine.*—April 6, 1869.

Claim.—The lower movable roller *c*, hung in a sliding frame, *d*, and the double-ended lever *g* and strap *k*, arranged and operated substantially as described.

88,599.—Charles Doughty Allen, New York, N. Y.—*Throttle-Valve for Steam-Engines.*—April 6, 1869.

Claim.—The construction of the throttle-valve A and its seat B, with reference to the ingress-steam pipe D, as herein shown and described.

88,600.—Peter Allen and Benjamin Valiquette, Rutland, Vt.—*Railroad-Car Buffer.*—April 6, 1869.

Claim.—1. A draw-bar, C, which is suspended so

as to receive a vertical bodily movement at the same time it receives an endwise movement, substantially as described.

2. A vertically-swinging draw-bar, in combination with a spring, *a*, arranged to operate substantially as described.

3. A rear elastic abutment, *b*, a vertically and endwise-movable draw-rod, C, and a vertically-yielding spring, *a*, combined and operating substantially as described.

88,601.—BENNY AUERBACH, New York, N. Y.—*Attaching Sleigh-Runners to Street-Cars.*—April 6, 1869.

Claim.—1. The combination with the wheels B B, of the runners C, hanger-frame D, swiveled on the axial rod E, and adjustable thereto by means of the set-bolt F, arranged and operating substantially as and for the purposes set forth.

2. In combination with the axial rod E, connecting the boxes of the wheels B B, the sleeves *f f* of the frame-portions *d d*, operating in the manner and for the purposes shown and described.

88,602.—JOSEPH S. BARNUM, Topeka, Kans.—*Fastener for Securing Springs to Bed-Bottoms and Mattresses.*—April 6, 1869.

Claim.—The "fastener" A, with its receptacles *i i i i*, and shoulders, *a a a a*, and clamp, *b c*, and orifice *d*, in its center, as and for the purposes herein described.

88,603.—CHARLES E. BILLINGS, Hartford, Conn.—*Sewing-Machine.*—April 6, 1869.

Claim.—1. The combination with the needle-bar, of the splined or feathered slide or plug H, and screws L and I, the parts being constructed, arranged, and operating as and for the purpose shown and described.

2. The combination with the shuttle, of the headed and screw-threaded bushing, or socket, and its inclosed and headed spring-plug, substantially as shown and described.

3. The combination with the rocker-shaft lever and coiled spring, of the notched surface on said shaft, and a corresponding notched surface on the nut, upon said lever, substantially as and for the purpose set forth.

4. The combination with the presser-bar and its spline, or projection 3, of a presser-foot, constructed with its socket open at one side, and provided with ears, having holes therein, to receive a tightening-screw, substantially as shown and described.

88,604.—NATHAN BREED, Jeffersonville, Ind.—*Corn-Planter.*—April 6, 1869.

Claim.—1. The adjustable frame G, in combination with the pinion-shaft F and frame C, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the lever I, clutch H, adjustable connecting-rod K, arm L, rock-shaft M, and adjustable slotted-arms Q, with the pinion-shaft F, frame C, and sliding dropping-sliders P, substantially as herein shown and described, and for the purposes set forth.

3. Constructing the conductor-spout S in two parts, hinged to each other substantially in the manner herein shown and described, and for the purpose set forth.

4. Adjustably connecting the hoppers N, adjustable bed-plates O, and hinged conductor-spouts S, to the frame and axle of the machine, substantially in the manner herein shown and described, and for the purpose set forth.

5. The adjustable support V W, constructed substantially in the manner herein shown and described, in combination with the roller U and frame C, as and for the purpose set forth.

88,605.—WILLIAM BRIGGS, Norristown, Pa.—*Breech-Loading Fire-Arm.*—April 6, 1869.

Claim.—The arm F, hinged to the breech-piece, and the operating-lever G, jointed, near its center, to the said arm, and at its end to the barrels, the several parts being arranged so that the barrels shall be moved forward on the backward movement of the operating-lever, as set forth.

88,606.—JOHN BRYANT, Akron, Ind., assignor to himself and ALLEN L. BAILEY, same place.—*Line-Holder.*—April 6, 1869.

Claim.—The jaws A B, bars C D, cord H, plumb-lines E E, drum K, and ratchet and pawl L M, combined and arranged substantially as and for the purpose herein shown and described.

88,607.—GEORGE BURSON, East Palestine, Ohio. *Hand Corn-Planter.*—April 6, 1869.

Claim.—1. The metal strip or partition M, placed immediately beneath the opening *a'*, at the bottom of the hopper, for the purpose of relieving the slide H from the weight of the grain, substantially as shown and described.

2. In combination with said strip M, the gate N, constructed and arranged to operate substantially as shown, and for the purpose set forth.

3. The slide H, with the cavities *h h h*, and the horizontal partition F, with the vertical partition G, and passages K and L L, by means of which an equal quantity of grain is caused to pass into each of the chutes, at every operation of the device, substantially as herein specified; and I hereby disclaim all parts of the aforesaid device, except those enumerated in the above claim.

88,608.—ASA L. CARRIER, Washington, D. C.—*Toy-Pistol.*—April 6, 1869.

Claim.—The mode of constructing toy-guns, or pistols, of cast-metal, or other suitable material, by securing all of the parts together, by elastic-rubber bands, substantially in the manner herein described.

88,609.—AARON CHANDLER, Davenport, Iowa. *Folding-Desk.*—April 6, 1869.

Claim.—The combination and arrangement of the changeable desk-cover, with its receptacle G, the slots B B', in the standards A, and pins C, substantially as and for the purpose specified.

88,610.—CHARLES J. CONVERSE, Boston, assignor to himself and JAMES W. TUFTS, Medford, Mass.—*Siphon-Bottle.*—April 6, 1869.

Claim.—1. In combination with a bottle, having its neck formed substantially as shown, the elastic ring *l*, of corresponding formation, the flanged nut-threaded cup *c*, the screw-threaded piece *g*, and the tube *d*.

2. In combination with a valve-chamber, made in two parts, *g* and *i*, a valve supported by a spring resting on one part and forcing the valve against its seat, made in the other part, substantially as described.

3. The tube *m*, curved at one end, and notched at the other, so as to act upon the valve and direct the escaping current, substantially as described.

88,611.—ROBERT AVIS COPELAND, Brooklyn, N. Y.—*Ferrule for Boiler-Tubes.*—April 6, 1869.

Claim.—1. The wedging slides B B and the grooves A A A, substantially as specified.

2. The wedging slides B B and grooves A A A, in combination with the plug, or ferrule, and flange *d*, as set forth.

88,612.—LYMAN B. CRITTENDEN, Pittsburgh, Pa.—*Coffee-Roaster.*—April 6, 1869.

Claim.—A coffee-roaster, consisting of a dish or kettle *a*, close-fitting cover *e*, and oscillating stirrer *d*, one of the bearings, *d'*, of which is prolonged, so as to carry a segmental wheel, *f*, through which, by means of a rod, *g*, or equivalent devices, the stirrer is operated, the whole being constructed substantially as and for the purposes hereinbefore set forth.

88,613.—IRA CURTIS, Des Moines, Iowa.—*Potato-Digger.*—April 6, 1869.

Claim.—The whole machine herein described, in its novel arrangement of frames F C, partitions P P' P'', wheels W W, *w w*, N N, shaft B, carrying drums *b b*, riddles *r r'*, endless aprons E E', plow H, lever L, axle A, and inclines J J', all constructed and adapted to each other to operate together in the manner and for the purpose substantially as described.

88,614.—Z. Dixon, Bristol, Ill.—*Tea-Kettle Breast.*—April 6, 1869.

Claim.—1. Binding the edges of the opening through the breast of a tin tea-kettle with copper, or other non-corrosive metal binding, B, as herein described, for the purpose specified.

2. Attaching the dome C, having perforations in its outer side, to the breast of a tea-kettle, for the purpose of directing the steam away from the hand, as herein shown and described.

88,615.—Thomas J. Dobbs, Weehawken, N. J.—*Apparatus for Unspiking Guns.*—April 6, 1869.

Claim.—1. The use of a chamber charged with powder, or other explosive compound, introduced into the bore of cannon, and discharged therein, substantially as described, for the purpose specified.

2. The combination of the powder-chamber G, pulley *i*, adjustable bar K, hammer *n*, adjustable and reversible fulcrum-block E, with each other, and with the lever D, substantially as described, for the purpose specified.

88,616.—Rodolph L. Dodge, Portland, Me.—*Ladder.*—April 6, 1869.

Claim.—The ladder, composed of the parts A′ B, capable of being made straight, as described, when used in combination with the platform D, constructed and supported as described.

88,617.—Justus Doering, Philadelphia, Pa.—*Bedstead-Fastener.*—April 6, 1869; antedated March 25, 1869.

Claim.—1. A bedstead-fastener consisting of a screw, C, and a hollow cylindrical block, F′, having screw-threads on the outside, and within it a slot, *b*, and inclined shoulders *e* adapted to the head of the screw C, all substantially as and for the purpose described.

2. The combination of a side-strip, B, a detachable block *a*, passing through the side-strip, and a screw, C, passing into the end of the side-strip and into the block *a*, as and for the purpose described.

88,618.—James D. Field, Wataga, Ill.—*Rain-Water Conductor.*—April 6, 1869.

Claim.—The sliding cover D, carrying the short pipe E, in combination with the pivoted pipes G H, and the box A, divided by the partition I, and provided with the discharge-pipes B C, all arranged and operating as described, whereby the pipe flowing into the house is always protected, as herein set forth and shown.

88,619.—Louis Fliedner, Cleveland, Ohio.—*Elastic Link for Clevis.*—April 6, 1869.

Claim.—The spring D, as arranged in combination with the adjustable cross-bar E, yoke or frame C, and hook F, in the manner substantially as and for the purpose set forth.

88,620.—Alexander Friedmann, Vienna, Austria.—*Steam-Pump.*—April 6, 1869.

Claim.—1. The intermediate pipes *a b*, constructed as described, with the wings *e*, and arranged with relation to each other, and the pipe I, as herein set forth.

2. The mouth-piece *a*, formed on the steam-pipe, when arranged in combination with the intermediate pipe *b*, all substantially as herein shown and described.

3. The safety-cock *o*, applied to the end of the pump, substantially as herein shown and specified.

4. The cylinder L, suction-rose *i*, valve *l*, and pipe *m*, as specified.

5. The safety-cock *o*, connected with the suction-cock *l*, substantially as set forth.

88,621.—Edwin Froggatt, Central City, Colorado Territory.—*Wrench and Pincers.*—April 6, 1869.

Claim.—1. The combination-tool, consisting of the wrench, hammer, and pincers, with or without the screw-driver, all operating and arranged substantially as specified.

2. Connecting the movable jaw B of a wrench, by means of a bar or tube, *b*, with a parallel arm, *c*, the jaw and arm being bifurcated, so as to straddle the slotted shank A, through which screws *d* are fitted into the parts B *c*, substantially as herein shown and described, for the purpose specified.

88,622.—Edward Gallier, St. Louis, Mo.—*Marine Furniture.*—April 6, 1869.

Claim.—1. The table, or furniture, A, the jointed pedestal B B′ the cords D, and the weight W, when combined and arranged substantially as and for the purpose herein described and set forth.

2. The universal sheave *c*, when constructed with the bushing c^1 and balls c^2, as and for the purpose herein described and shown.

88,623.—George P. Ganster, New York, N. Y.—*Wrench.*—April 6, 1869.

Claim.—1. In a wrench, the construction and combination of the parts A, B, and C, arranged as shown and described, and for the purpose described.

2. The combination of shank D, sleeve-jaw B, and stop *i*, arranged as shown and described.

3. The combination of shank D, stop *l*, and handle A, arranged as shown and described.

88,624.—Joseph Gatchell, Rahway, N. J.—*Templet for Bending Springs.*—April 6, 1869.

Claim.—1. The templet described, consisting of the bed-piece M, the base N, upper templet R, the loose piece used on upper templet R, (shown in Fig. 1,) removable at pleasure, flanges O and P, and screw S, or its equivalent, for moving the base N upon the bed-piece M, as required to receive and pinch the springs when bending and cooling.

2. The blocks, or loose pieces K, in combination with and applied at the ends of the templet R, to extend its use to springs of various lengths and widths.

88,625.—William Gilfillan, Syracuse, assignor to himself and Martin T. Van Horn, New York, N. Y.—*Door-Spring.*—April 6, 1869.

Claim.—The plate C, with eccentric, D, and arm E; the chains or cords *b c*, the spring *l*, and adjustable hook *a*, and nut H; all combined and arranged to operate substantially as herein described.

88,626.—Joseph W. Gillespie, Alliance, Ohio.—*Eaves-Trough Bracket.*—April 6, 1869.

Claim.—The bracket A, provided with a recess *a*, the hook *a′*, and the screw *c*, cast solid with it, substantially as described.

88,627.—A. J. Going, Clinton, La.—*Cotton-Cultivator.*—April 6, 1869.

Claim.—1. The scrapers E, when adapted to be adjusted vertically and laterally upon the standards B and horizontal bars C, by means of the vertical slats *c*, parallel curved slots *d d*, opening *e*, bolts *b f*, and levers F, arranged and operating as herein described, for the purpose specified.

2. The cutter P, adjustably connected to the arm I, by means of the slots *s u*, in the stock O, the screw *r*, and the projection *t*, upon the bar I, as herein described, for the purpose specified.

3. The combination of the gearing L M, cam J, vibrating bar I, with its cutter-stock O, the scrapers E E, and truck-wheels *g g*, all arranged to operate in the manner substantially as and for the purpose specified.

88,628.—Thomas F. Goodwin, Edward Comted Goodwin, and Charles E. Goin, New York, N. Y.—*Ship's Rudder.*—April 6, 1869.

Claim.—The sectional blades E E, which constitute a rudder, provided with pivoted pins *e*, and with clasps *g*, and locking-devices *h*, substantially as and for the purpose herein shown and described.

88,629.—Isaac S. Goolman, Monrovia, Ind.—*Churn-Power.*—April 6, 1869.

Claim.—The arrangement of the slotted lever D, adjustable wrist-pin I, swivel-socket F, set-screw G, in combination with the clamps C C′, substantially as set forth.

88,630.—H. M. Hall, Danby, Vt.—*Attachment for Sewing-Machine.*—April 6, 1869.

Claim.—1. The combination, in a sewing-machine attachment, of a plate, A E, having a fixed standard,

C, and a movable standard, D, with a series of fingers passing through the said standards, substantially as and for the purpose herein shown and described.

2. The hollow standards, filled with cork, rubber, or other elastic matter, in combination with the guide-wires, substantially as and for the purpose herein set forth.

3. The part H, having a tongue, G, in combination with the plate A, and fixed and movable standards, C and D, substantially as and for the purpose herein shown and described.

4. The combination, in a sewing-machine attachment, of the two head and disk fingers *e f*, *e f*, as shown at Fig. 10, substantially as and for the purpose set forth.

5. The combination, in a sewing-machine, of the pencil-holder finger *j i*, and two plain fingers, as shown at Fig. 13, substantially as and for the purpose set forth.

88,631.—ASA P. HAWSE and G. R. SHIPPY, Wolcott, Vt.—*Clothes-Drier.*—April 6, 1869.

Claim.—The notched and grooved bracket or bar A, the slider B, the spring-catch C, the segmental ratchet D, the spring-latch F, and the clothes-frame E, as arranged and combined, substantially in manner and so as to operate as specified.

88,632.—JAMES HOOPER, Pittsburgh, Pa.—*Collar-Attachment for Screws.*—April 6, 1869.

Claim.—The herein-described device, included in the parts A, B, C, D, E, thus referred to in the drawings, and by which it is adapted to and made applicable as an attachment to a wood or metal base.

88,633.—JOHN W. HYATT, Jr., Albany, N. Y., assignor to the HYATT MANUFACTURING COMPANY, same place.—*Molding-Composition to Imitate Ivory and other Substances.*—April 6, 1869; antedated March 25, 1869.

Claim.—Making a dry compound, such as described, and subjecting it to heat and pressure simultaneously within a mold, which shapes or forms the billiard ball, or other article, substantially as described.

88,634.—JOHN W. HYATT, Jr., Albany, N. Y., assignor to the HYATT MANUFACTURING COMPANY, same place.—*Method of Coating Billiard-Balls, &c.*—April 6, 1869.

Claim.—A billiard, or other ball, which is coated substantially as described.

88,635.—WARREN B. INGRAM, Manchester, Conn., assignor to himself and KEENEY BROTHERS, same place.—*Grinding and Cleaning Card-Cylinders.*—April 6, 1869.

Claim.—A grinding-cylinder, arranged, in relation to the card-clothed cylinder to be ground and cleaned, to operate as set forth, and so as to be brought into action, at will, whilst the carding-machine is in the act of carding.

88,636.—THOMAS IRELAND, Negaunee, Mich.—*Combined Sink and Dish-Washer.*—April 6, 1869.

Claim.—An improved dish-washing machine, formed by the combination of the frame C, center D, spring E, lever F, disk H, shaft G, crank I, float J, and cleaners K L M, with each other, and with the sink B, or equivalent vessel, substantially as herein shown and described, and for the purpose set forth.

88,637.—SAMUEL JACKSON, Newark, N. J.—*Carriage.*—April 6, 1869.

Claim.—Connecting the movable axles F to the frame-work of the vehicle by means of crank-arms or bars G, formed solidly upon or rigidly attached to the said axles, substantially as herein shown and described, and for the purpose set forth.

88,638.—J. B. JAY, Arlington, Ill.—*Cultivator.*—April 6, 1869.

Claim.—1. The arrangement of the inner beams E, by means of the enlarged eyes *c* and pin *a*, in front, and the strap *d*, connecting the outer beams, so that they are capable of vertical adjustment, and of being rocked laterally, as set forth.

2. The combination, with the outer beams D and inner beams E, of the strap *b*, hinged straps *d*, upright bar *f*, and adjustable link *g*, arranged as described, for the purpose specified.

88,639.—JOHN JOHNSON, Brooklyn, N. Y.—*Rubber Compound.*—April 6, 1869.

Claim.—A compound, composed of the ingredients, and prepared in substantially the manner herein specified.

88,640.—JOSEPH JOHNSTON, Chicago, Ill.—*Weather-Strip for Windows.*—April 6, 1869.

Claim.—The combination of the parting-stop A A′ and lip B B′, in the manner and form substantially as herein described.

88,641.—PHILIP P. JOSEF, Buffalo, N. Y.—*Egg-Carrier.*—April 6, 1869; antedated January 11, 1869.

Claim.—Inclosing and sustaining eggs for transportation between a series of upper and lower depressions, a^1 a^2 b^1 b^2, constructed and arranged substantially as and for the purpose set forth.

88,642.—F. E. JOSEL, Freeport, Ill.—*Apparatus for the Manufacture of Vinegar.*—April 6, 1869.

Claim.—1. The sieve L L, with its slanting surfaces.

2. The pumps in each corner of the compartments.

3. The air-channel *f f*, and the application of the centrifugal ventilator G, to produce a draught through the compartment.

4. The condenser *h h*, with the two flues *o o*, to precipitate the alcohol-containing vapors.

5. The combination of compartments, to work together, as ten, twenty, or more, in one complete apparatus or machine.

88,643.—J. GEORGE JUNG, Newark, N. J.—*Chain.*—April 6, 1869.

Claim.—The herein-described double wire-link mail chain, each link of the chain consisting of two double loops, and interlooped with the succeeding pair of members, substantially as described.

88,644.—A. W. KIDDER, South Norridgewock, Me.—*Medical Compound.*—April 6, 1869.

Claim.—The medical compound, composed substantially as herein described.

88,645.—RICHARD S. LAWRENCE, Hartford, Conn., assignor to the SHARP'S RIFLE MANUFACTURING COMPANY, same place.—*Breech-Loading Fire-Arm.*—April 6, 1869.

Claim.—1. Operating the retractor, by means of the projection *o*, and the shoulder *m*, formed in the channel *j* of the breech-block, as herein shown and described.

2. The detonator H with its cam *r*, connected with the breech-block, and operating therewith, and with the receiver, substantially as and for the purpose shown and described.

88,646.—JAMES LICK, San Francisco, Cal.—*Machine for Gilding.*—April 6, 1869.

Claim.—1. The three pivoted holder-arms B, two stationary and one adjustable, provided with catches G, pivoted levers H, and set-screws I, the connecting-rod E, and pivoting-rod C, in combination with each other, and with the rack L, substantially as herein shown and described and for the purpose set forth.

2. The combination of the long adjusting-screw J with the pivoted holder-arms B, substantially as herein shown and described and for the purpose set forth.

3. The book-holder block K and spring-catches M, in combination with the grooved rack L and plate-holder B C E, substantially as herein shown and described and for the purpose set forth.

4. The combination of the arms P and springs Q with the grooved rack L, book-block K, and plate-holder B C E, substantially as herein shown and described and for the purpose set forth.

5. The combination of the pivoted board R, springs V, catches S and spring-catch bar T U, with

the spring-arms P Q, substantially as herein shown and described and for the purpose set forth.

6. The combination of the two pivoted adjustable arms W, provided with catches X, pivoted levers Y, and set-screws Z, the connecting-rod B′, and pivoting-rod C′, with each other, substantially as herein shown and described and for the purpose set forth.

88,647.—L. A. LINDSEY and J. F. O'SULLIVAN, Jackson, Miss.—*Fruit-Crate.*—April 6, 1869.

Claim.—1. The covers *e* and *d*, hinged to the same rods *a*, and arranged to fit between the side and end rails, and thereby maintain the crate in the condition for packing, substantially as and for the purpose specified.

2. The arrangement of the several parts, whereby the top and bottom may be folded and secured to the sides, and the whole folded into the form represented in Fig. 2, substantially as and for the purpose set forth.

88,648.—ROBERT H. LONG, Philadelphia, Pa.—*Fare-Box for Railroad-Cars.*—April 6, 1869; antedated March 22, 1869.

Claim.—A hollow cylinder D, having transparent ends and a single slot, *x*, when the said cylinder is weighted, and arranged to turn in a box A, having a slot, *a*, all substantially as and for the purpose described.

88,649.—J. B. MACHAMER, New Baltimore, Ohio.—*Index for Filing Circular Saws.*—April 6, 1869.

Claim.—As a new article of manufacture, a circular saw, provided with a circular index, when said index is constructed and applied to the finished saw-plate, as shown, and whether the radical index be or be not used in combination with said circular index, substantially as is herein specified.

88,650.—CHARLES D. MANSFIELD, Lynn, Mass.—*Mowing-Machine.*—April 6, 1869.

Claim.—1. The combination of the gear-wheels D and E, shaft F, gear-wheels H, K, and L, vertical shaft I, and vertical hollow shaft J, with each other and with the radial knives M and N, frame G, and wheel C, substantially as herein shown and described, and for the purpose set forth.

2. The toothed plate O, constructed and connected with the frame G, substantially as herein shown and described, in combination with the radial knives M and N, and shafts I and J, as and for the purpose set forth.

88,651.—DANIEL W. MARSHALL, Pawtucket, R. I.—*Constructing Picture-Frames.*—April 6, 1869.

Claim.—The picture-frame blank A, with the slot *b*, and edge shoulder *c*, arranged relatively to each other, as herein described.

88,652.—HENRY W. MATHER, Deep River, Conn.—*Machine for Forging Wrought-Nails.*—April 6, 1869.

Claim.—1. The arrangement of the reciproeating anvils C C and hammers D D with a device for feeding and supporting the nail-rod, substantially as shown and described.

2. The combination of the cam E, friction-rolls *f f*, toggle *g*, and springs *h h*, with the chisel F, and reciprocating anvil C, whereby the chisel is moved against the rod, and held while the nail is severed by the advancing movement of the anvil, substantially as described.

3. The falling-bar N, actuated by the cam P, in combination with the pawl arm *z*, ratchet-wheel *y*, or equivalent, and feed-rollers L L, arranged and operating substantially as and for the purpose set forth.

88,653.—NATHAN F. MATHEWSON, Barrington, assignor to himself and HENRY ARMINGTON, Providence, R. I.—*Mowing-Machine.*—April 6, 1869.

Claim.—1. The arrangement of the brace-lever *u* and the stud *v′*, with the cross H, the cutter-bar and the frame of the machine, the same being as and for the purpose or objects set forth.

2. The arrangement and combination of the pedal-catch R, with the seat, stand, and rack, the same being so as to enable a person while occupying the seat to move the pedal-catch by one of his feet.

88,654.—J. MAXHEIMER, New York, N. Y.—*Bird-Cage.*—April 6, 1869.

Claim.—Securing the bottom. A, to the top, B, of the bird-cage, by means of the eyes, or loops *a*, upon opposite sides of the bottom, and the bar C, whose ends fit within said eyes, resting upon the band *b*, and which passes transversely through the cage to form a perch for the bird, as herein shown and described.

88,655.—JOHN MAXSON and WARREN KINYON, Scott, N. Y.—*Sled-Brake.*—April 6, 1869,

Claim.—1. The combination of the dogs D, chain F, spring E, jointed bars H, or equivalent, and cross-bar, or evener I, with each other, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the hand-wheel P, shaft O, gear-wheels N and M, drum, or pulley L, chain K, and bar J, or equivalent, with each other, and with the evener I, bars H, dogs D, chains F, and spring E, substantially as herein shown and described, and for the purpose set forth.

3. The sliding lever Q and coiled spring R, in combination with the hand-wheel P and shaft O, substantially as herein shown and described, and for the purpose set forth.

88,656.—FRANZIS A. ODERMATT and FRANK ETTLIN, San Francisco, Cal.—*Fountain-Pen.*—April 6, 1869.

Claim.—The pen described, consisting of the hollow handle *a*, pivoted with the flexible parts *b b*, and guard-pieces *e e*, with tube *c*, with cock *d*, and head *f*, with cock *g′*, the whole being combined and arranged as described, for the purpose set forth.

88,657.—WILLIAM R. MEARS, Grafton, Ill.—*Portable House.*—April 6, 1869.

Claim.—1. The slats A, with hook *a*, slats A′, with hooks a^1, combined with the poles BB′, substantially as and for the purposes set forth.

2. The brace E, rest-bar E′, rest-hooks *e* and slats A, all combined and arranged substantially as and for the purpose set forth.

3. The slats A A′, and their hooks, when combined with the rods C and socket-rest *e*, for attaching to the floor of the structure, substantially as set forth.

88,658.—ADOLPH MILLOCHAU, New York, N. Y.—*Mode of Deodorizing the Spent Lime of Gas-Works.*—April 6, 1869.

Claim.—The method, herein specified, of preventing chemical reaction and decomposition in the spent lime of gas-works, as specified.

88,659.—JEROME S. MUNGER, Olean, N. Y.—*Weeding-Hoe.*—April 6, 1869.

Claim.—A weeding-hoe, constructed in the manner herein described, as a new article of manufacture.

88,660.—ANDREW O'NEILL, Portsmouth, Ohio.—*Mode of Preparing Sheet-Copper for Boilers and other Vessels.*—April 6, 1869.

Claim.—1. A bright cold-rolled tinned sheet of copper, as explained.

2. A transparent enameled, bright-tinned cold-rolled sheet of copper.

3. As a new article of manufacture, the polished and enameled tinned copper sheet, produced by the process substantially as herein described, for the manufacture of wash-boilers and other culinary vessels.

88,661.—ADOLPH OTT, New York, N. Y.—*Composition for Covering Steam-Boilers and Lining Safes.*—April 6, 1869.

Claim.—The compound, consisting of the above materials in any desirable proportion, substantially as herein described, and for the uses and purposes set forth.

88,662.—J. E. OVERACKER, Redwood, N. Y.—*Churn.*—April 6, 1869.

Claim.—The described arrangement of the air-

pipe F, with reference to the horizontal dasher, the bellows D, and churn-body A, whereby the air is conducted to the cream, independently of the dasher, as herein described, for the purpose specified.

88,663. — GEORGE N. PALMER, Green, N. Y., assignor to HEMAN CARTER, same place.—*Washing-Machine.*—April 6, 1869.

Claim.—The smooth surface roller G, covered with vulcanized India-rubber sheet, or cloth *b b*, the same being so secured at intervals to the roller as to form corrugations, and leave openings *e e e* between it and the cylinder, substantially in the manner as described, for the purposes herein set forth.

88,664.—L. E. PALMER, Le Roy, Pa.—*Device for Mowing away Hay.*—April 6, 1869.

Claim.—The arrangement and construction of the handles B B, half circle D, arms T and A, circle C, spring E, and bands H H, as shown, substantially as described.

88,665. — CHARLES PARHAM and GEORGE A. SMITH, Philadelphia, Pa.—*Needle-Holder for Sewing-Machines.*—April 6, 1869.

Claim.—1. The combination of the clamp or band B and needle-holder C, constructed, arranged, and operating as and for the purposes set forth.

2. The combination of clamp or band B, needle-holder C, and needle-bar or shaft A, constructed and arranged as and for the purposes set forth.

3. The combination of the needle-bar, having a slot, *a*, and hole C, with the needle-holder and clamp B, constructed and arranged for the purposes set forth.

4. The combination of the eyelet *b*, needle-holder C, and clamp B, arranged as and for the purposes set forth.

88,666. — JOHN G. PERRY, Kingston, R. I.—*Meat-Cutter.*—April 6, 1869.

Claim.—The combination and arrangement of the knives *a a a*, cast solid in the block S, the shafts or cylinders A A′, each having one or more rows of studs thereon, the gear-wheels *o o′*, with the double cylinder-case, substantially as and for the purpose specified.

88,667. — JOHN G. PERRY, Kingston, R. I.—*Meat-Cutter.*—April 6, 1869.

Claim.—The combination and arrangement of the knives, feed-screws, gear-wheels, studs, and case, all constructed and operating as herein set forth, and for the purpose specified.

88,668. — P. PHILIPPI, Beardstown, Ill.—*Nut-Locking Device.*—April 6, 1869.

Claim.—The notched plate A, when secured to the fish-plate by means of the bolt C, the spring-key, and the dowel-pins *d*, as herein described, for the purpose specified.

88,669.—J. R. ROSS and W. D. MITCHELL, Centralia, Ill.—*Combined Harrow and Cultivator.*—April 6, 1869.

Claim. —1. The alternate arrangement of the fluke-shaped teeth, with the faces in opposite directions.

2. The curved arms C, in which are screwed, or otherwise secured, the teeth G.

3. The curved section, Fig. 2, for the purpose of enlarging the implement.

4. The beam D, substantially as shown and described.

5. A harrow and cultivator combined, when constructed substantially as herein set forth and described.

88,670.—D. H. A. SANDERS, Senatobia, Miss.—*Cotton-Seed Planter.*—April 6, 1869.

Claim.—The cylinder A, constructed as described, having seed-discharge openings C at its angles, between the raised rims E, when mounted upon the runners and journaled in the vertical slots B, as herein described, for the purpose specified.

88,671.—HERMANN SCHULTE, Milwaukee, Wis.—*Window-Shade Fixture.*—April 6, 1869.

Claim.—A window-shade fixture, consisting o, crank A, lever-latch B, spring C, reel D E, cord H and reel K, with frame G and shaft L, combined and arranged substantially as described.

88,672.—C. F. AUGUSTUS SEITZ, Philadelphia, Pa., assignor to himself and LOUIS WAGNER, same place.—*Egg-Beater.*—April 6, 1869.

Claim.—The horizontal and inclined shafts A B, frames or housings C D, gear-wheels E F, fly-wheel K, screw-end *a*, beater or whip I, and the movable pan G, when constructed and arranged substantially as shown and described.

88,673.—SAMUEL B. SHOUP, Dayton, Ohio.—*Flood-Gate.*—April 6, 1869.

Claim.—The combination of the pieces A, hung on rod C, which have pieces B bolted to them, with the posts F, and base D, when strengthened by the brace E, all constructed and arranged as described, as and for the purpose specified.

88,674.—WILLIAM SILVER, Bloomsburgh, Pa.—*Machine for Making Blasting and other Powder.*—April 6, 1869.

Claim.—The combination, with the barrel A, of the valves C, arranged to be opened at each revolution of the barrel, substantially as specified.

88,675.—JOSEPH F. STOKES, Philadelphia, Pa.—*Car-Starter.*—April 6, 1869.

Claim.—1. The arrangement of the axle A, pinion P, tubes T and T′, spur-wheels S and S^1, pawls *l* and *l′*, coiled springs C and C′, barrels, or disks B and B′, straps I and I′, on the front and rear of the car, and constructed to be operated by devices, substantially in the manner and for the purpose specified.

2. In combination with the above, the arrangement of the shaft H, spur-wheel S^2, shifting-pinions N and N′, levers L and L′, lever R, and crank K, substantially as and for the purpose set forth.

3. The within-described self-propelling railway-car, arranged and operating in the manner as herein shown and described.

88,676.—Z. T. SWEET, Eugene City, Oregon.—*Clip for Neck-Yoke and Whiffle-Tree.*—April 6, 1869.

Claim.—The clip A, formed by the combination of the arm a^1, lock-bar a^2, and catch-spring a^3, with the perforated body of said clip, substantially as herein shown and described, and for the purposes set forth.

88,677.—JOHN L. TALLMAN and JAMES V. DE PUY, Tecumseh, Mich.—*Apparatus for Cooling Milk.*—April 6, 1869.

Claim.—A machine for cooling milk or other liquids, by the combination of a vessel or vessels causing a current of milk to run in one direction immersed in a vessel or vessels filled with water or other fluid, the water coming in contact with the milk-vessel on the bottom and sides, and causing the current of water or other fluid to run in a direction opposite to the milk-current, both vessels being placed in a horizontal position, with the milk and water currents running in a horizontal direction, and with the upper surface of the milk-vessel open, so as to expose the milk to the action of the atmosphere, by means of the particular combination and devices fully set forth in the specifications and drawings.

88,678.—N. SPENCER THOMAS, Painted Post, N. Y.—*Preparing Tan-Bark.*—April 6, 1869.

Claim.—1. Separating the dust from ground tan-bark by screening, substantially as and for the purposes described.

2. Sizing or granulating ground tan-bark by screening, substantially as described.

3. The revolving screen A, when used for granulating ground tan-bark, or removing the dust therefrom, substantially as shown and described.

88,679.—H. K. TRASK, Beaver Dam, Wis.—*Device for Grinding Edged Tools.*—April 6, 1869.

Claim.—The combination of the swinging-bars B, having the adjustable pins, with the pieces E and frame A, arranged and applied to a grindstone, in the manner described for the purposes specified.

88,680.—Thomas S. Tuggle, Columbus, Ga.—*Medical Compound.*—April 6, 1869.

Claim.—The compound sirup globe-flower, substantially as herein described.

88,681.—Thomas S. Tuggle, Columbus, Ga.—*Medical Compound.*—April 6 1869.

Claim.—A compound extract. *Xanthox. frax.*, as a new article of trade and use, prepared and put up in bottles, for the purposes herein set forth.

88,682.—Henry Twitchell, Pulaski, N. Y.—*Dental Plate.*—April 6, 1869.

Claim.—Dental plates, whether constructed of hard rubber or other material, provided with soft rubber lining, extending wholly or partly over the entire interior surface of the same, substantially as and for the purpose described.

88,683.—Thomas W. Ward, New York, N. Y.—*Velocipede.*—April 6, 1869.

Claim.—The weights E E, suspended from the lower ends of the frame C of a one-wheeled velocipede, for the purpose of balancing the frame, substantially as herein shown and described.

88,684.—W. C. Wendell, Albany, N.Y.—*Book-Cover.*—April 6, 1869.

Claim.—As an improved new article of manufacture, the within-described book-cover, made of one piece of paper, shaped, folded, and stayed with cloth or leather strips *c c'*, all in the manner shown and described.

88,685.—G. W. Williamson, Goldsborough, Pa.—*Railway-Car Coach.*—April 6, 1869.

Claim.—The stretcher A, applied as described, to the seats of railway-cars, whereby a longer or shorter bed is formed, substantially as herein set forth and shown.

88,686.—Jacob W. Wilson, Somerford, Ohio.—*Rotary Road-Scraper.*—April 6, 1869.

Claim.—1. The peculiar arrangement and combination of the scraper A, standards E E, tongue-pieces I I, and handles F F, the several parts being arranged substantially in the manner and for the purpose specified.

2. The ⌊-shaped irons K K, when used in combination with the handles F F and the pins L L, on the scraper A, substantially as and for the purpose specified.

3. The pins M M, when used in combination with the handles F F, pivoted to the tongue-pieces I I, and pins L L, and the scraper A, substantially as and for the purpose herein specified.

4. The peculiar arrangement and combination of the scraper A with standards E E and pins L L, the tongue-pieces I I and handles F F, with pins M M, and ⌊-shaped irons K K, the several parts being arranged substantially in the manner and for the purpose herein specified.

5. The rotary road-scraper, herein described, composed essentially of the scraper A, with standards E E, pins L L, and spikes H H, screwed thereto, the tongue-pieces I I, with tongue J, the pivot-bolts *c c*, with separating washers *b b*; handles F F, with pins M M, and ⌊-shaped irons K K, and cross-bar G, with braces *f f*, the several parts being constructed and arranged substantially in the manner and for the purposes herein specified.

88,687.—John C. Wilson, Coalburg, W. Va.—*Tuyere.*—April 6, 1869.

Claim.—The improved apparatus herein described, consisting of the water-chambers I and M, blast-pipes B and E, in chamber G, fire-grate H, and three-way cock F, all substantially as described.

88,688.—Thomas H. Withers and Jacob Dolfinger, Louisville, Ky.—*Churn-Dasher.*—April 6, 1869; antedated April 1, 1869.

Claim.—1. The single perforated screw B, revolving loosely upon and detachably secured to the dasher-handle A, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the detachable ferrules C with the dasher-handle A, and with the hub of the screw B, substantially as herein shown and described, and for the purpose set forth.

88,689.—John Absterdam, New York, N.Y.—*Projectile.*—April 6, 1869.

Claim.—The cup *x*, having sides parallel to the major axis of the projectile, and immovably secured and retained thereon by the interlocking dovetail B, substantially as herein described and shown.

88,690.—Peleg Barker, Battle Creek, Mich., assignor to himself and the Joliet Manufacturing Company, Joliet, Ill.—*Grain-Separator.*—April 6, 1869.

Claim.—1. The two open raddles *c* and *i* and the grain-floor or trunk, combined together, and arranged in relation to the thrasher and cleaner, as set forth and shown.

2. The elevator A, Fig. 3, for the purpose of elevating unthrashed heads of grain, &c., back to the thrasher, substantially as described.

3. The agitator *r*, when constructed and operating as described, for the purposes set forth.

88,691.—George S. Barton, Worcester, Mass., assignor to Rice, Barton, and Fales Machine and Iron Company, same place.—*Device for Adjusting Gearing.*—April 6, 1869.

Claim.—1. The combination, with the double gear B C, of cam H and shaft I, substantially as and for the purposes set forth.

2. The combination, with the double gear B C, of cam H, shaft I, with its head J, and holding-bolts K K, substantially as and for the purposes set forth.

3. The combination, with sleeve A and double or "split" gear B C, of nut G, hub D, with its teeth *a*, shaft E, with its worm *b*, adjusting-cam H, with its operating-shaft I J, and holding-bolts K K, substantially as and for the purposes set forth.

88,692.—James Bond, Norfolk, Va.—*Life-Preserving Apparatus.*—April 6, 1869.

Claim.—1. A float, adapted to be attached to the person, in combination with a screw-propeller, substantially as and for the purpose specified.

2. The combination and arrangement of the float A, bevel gear-wheels F *f*, cranks G G, shaft D, propeller E, and rudder I H, substantially as and for the purpose specified.

3. In connection with said parts A D E H F *f*, the arrangement of the floats J B B, and cords C C, as and for the purposes shown and described.

88,693.—Nicholas H. Borgfeldt, New York, N. Y.—*Apparatus for Melting Snow.*—April 6, 1869.

Claim.—1. The combination of a sieve with a heated surface, substantially as described, so that the mass of snow, before being permitted to come in contact with the heated surface, is subdivided into flakes, and the melting process is thereby facilitated.

2. The movable heated surfaee D, in combination with the oscillating sieve C, substantially as and for the purpose described.

3. The combination of the hopper B, sieve C, heated surface D, and tank G, substantially as and for the purpose set forth.

88,694.—Henry J. Brunner, Nazareth, Pa.—*Steam-Generator.*—April 6, 1869.

Claim.—The arrangement of the two series of boxes A A and B B, and the series of connecting-tubes C C, so that the boxes A A, at one end of the boiler, are vertical, or upright, and the boxes B B, at the other end, horizontal, substantially as herein specified.

88,695.—William J. Davidson, Staunton, Va.—*Syringe.*—April 6, 1869.

Claim.—1. The tip of a syringe-nozzle, constructed with a transverse slit, substantially as and for the purpose set forth.

2. The slotted tube *b b'*, in combination with the tube *a* and its tip *a'*, when so constructed that its ribs *b'* are capable of expansion and contraction, in the manner substantially as described.

3. The concavo-convex hollow eye-tip E, perfor-

ated, or slit around its upper edge, substantially as and for the purpose set forth.

4. The nozzle, Fig. 4, curved to correspond with the channel through the nares to the pharynx, and provided with a suitably-formed tip, G, for its guidance and discharge of the fluid, substantially as and for the purpose specified.

5. The nozzle, Fig. 5, adapted for injecting the ear, male urethra, and anus of infants, substantially as shown and described.

88,696.—CHARLES H. DAVIS, Troy, N. Y.—*Rock-Drill.*—April 6, 1869.

Claim.—1. In combination with the drill-shaft G and spring *h*, when arranged to operate in horizontal position at the under side of the carriage B B, as set forth, the arrangement, respectively, of said drill-shaft's draw-back arm *b* and pawl-arm *a*, in such relative position to each other, and to the hollow or grooved cam E, in manner as described, that the said cam, in its rotations, actuates, respectively and alternately, the said arms *b* and *a*, and thereby successively draws back and then rotates said drill-shaft G, in manner as set forth.

2. In combination with the supporting-frame A A, and its horizontally-movable carriage B B, with the drill's actuating-machinery, the arrangement of the endwise-reciprocating and rotating drill-shaft G, at the under or bottom side thereof, so as to be operated thereat in a horizontal position or close to the rock, in the manner substantially as herein shown and set forth.

3. The combination and arrangement of the driving-wheel H, pinion N, hollow or grooved cam E, draw-back arm *b*, pawl-arm *a*, ratchet-wheel *e*, driving-spring *h*, with the movable carriage B B, frame A A, and the rock-drill shaft G, as arranged in horizontal position thereunder, in manner substantially as described and shown, so as to operate or rotate and move reciprocally the said rock-drill, in manner as and for the purposes set forth.

88,697.—HUGH DAWSON, Baltimore, Md.—*Pole for Stretching Leather.*—April 6, 1869.

Claim.—The blocks B, provided with the hooks C, in combination with the pole A, when constructed and arranged as described, for the purpose of stretching, holding, and suspending hides of leather, as set forth.

88,698.—CHARLES DION, New York, N. Y.—*Fire-Alarm.*—April 6, 1869.

Claim.—The combination, with the dial, index, and bell, or its equivalent, of any desired number of separate weights, F, made to operate the index and bell-hammer, or either of them, through the lever-frame E, in the manner substantially as and for the purpose set forth.

88,699.—H. WILLIAM DOPP, Buffalo, N. Y.—*Needle-Threader for Sewing-Machines.*—April 6, 1869.

Claim.—The combination with the blocks A A′, or equivalent, having a conical opening, B, of the grooved holding-plate D and pointed plate E *e*, substantially as and for the purpose set forth.

88,700.—EDWARD P. EASTWICK, Baltimore, Md.—*Bone-Black Kiln.*—April 6, 1869.

Claim.—The method of supporting upper and lower retorts in the bone-black kiln, or kiln for similar purposes, so that both upper and lower retorts are sustained on a central support, and at the same time allowing the lower retort to be suspended over and enter into the mouth-piece of the cooler below, which cooler is independently supported, as herein substantially set forth and described.

88,701.—EDWARD P. EASTWICK, Baltimore, Md.—*Kiln for Burning Bone-Black.*—April 6, 1869.

Claim.—The method of supporting one, two, or more vertical retorts, which, with the cooler below, form, on the inside, the continuous chamber in the bone-black kiln, or kiln for similar purposes, so that the retort above, being independently supported, shall hang over and enter into or overlap the mouth of the retort, or cooler immediately below it, where it is allowed a separate and independent expansion, as herein substantially set forth and described.

88,702.—EDWARD P. EASTWICK, Baltimore, Md.—*Kiln for Bone-Black.*—April 6, 1869.

Claim.—The mode of supporting two or more vertical retorts, which, with the cooler below, form, on the inside, a continuous chamber in the bone-black kiln, or kiln for similar purposes, in such manner that each retort in the continuous chamber is independently supported from below, and is allowed a separate and independent expansion, as is herein substantially described and set forth.

88,703.—HENRY J. FERGUSON, Whiting, N. J.—*Velocipede.*—April 6, 1869.

Claim.—1. The frictional button *b*, frictional helical cup C′, and helical and axled cap Cp, for the purposes and in the manner described.

2. The crank C, shaft S, and button *b*, in combination as and for the purposes named.

3. The helical friction-clutch, formed by the button *b*, helical friction-cup C′, and the helical and axled cap Cp.

4. The combination of the spring Sp′ with the coordinate helical ends of cup C′ and cap Cp.

88,704.—JAMES B. FOOTE, Hamden, assignor to ANDREW BUCKHAM, Delhi, N. Y.—*Sled-Way Attachment for Covered Roadways.*—April 6, 1869.

Claim.—In combination with the floors of covered bridges and other covered structures, rollers arranged as shown, and for the purposes set forth in the above specification.

88,705.—CHARLES M. FOULKE, Philadelphia, Pa.—*Carriage-Wheel.*—April 6, 1869.

Claim.—The arrangement of the mortises *a′ a″ a‴* in the spiral groups around the hub A, for the insertion of the spokes B–B, substantially as described and set forth, for the purpose specified.

88,706.—J. ASHTON GREENE, Brooklyn, N. Y., assignor to himself and JOHN H. YOUNG, Beverly, Mass.—*Manufacture of Vulcanized Rubber Boots and Shoes.*—April 6, 1869.

Claim.—1. As a new article of manufacture, a molded vulcanized rubber boot or shoe.

2. The method herein described, of making boots or shoes of a vulcanizable composition, by the process, and substantially in the manner above described.

88,707.—ALFRED GUTHRIE, and CARLILE MASON, Chicago, Ill.—*Steam-Generator.*—April 6, 1869.

Claim.—The arrangement of the furnace N in connection with the tank H and its connecting-pipe M, for the passage of the heat and gases to the water in H, together with the air-feed pipe E, substantially as set forth, and described.

88,708.—HENRY L. HALL, Woodbridge, Iowa.—*Corn-Husker.*—April 6, 1869.

Claim.—The protecting-glove and cot herein described, in combination with the claws *s*, when the same are constructed in the form, and combined and arranged in the manner herein specified.

88,709.—ABRAM HEATON, Bridgeport, Conn., assignor to himself and BRADBURY & GOODSELL, same place.—*Fluid-Meter.*—April 6, 1869.

Claim.—The inner, fixed, divided shaft B, combined with the outer shaft E, arranged within the cylinder A, and combined with one or more pistons, and arranged with corresponding openings through the two shafts, so as to operate substantially in the manner herein set forth.

88,710.—P. F. HODGES, St. Paul, Minn.—*Grain-Drill.*—April 6, 1869.

Claim.—1. The agitator B, constructed and to operate substantially in the manner described.

2. In combination with the described agitator B, the within-described arrangement of slides E and F, substantially as shown and described.

3. The slides E, F, and G, when constructed as shown, and arranged to operate in connection with screw D, substantially in the manner set forth.

88,711.—Isaac Hodgson, Indianapolis, Ind.—*Roller-Skate.*—April 6, 1869.

Claim—1. The wheel frame B, provided with the forward projecting arm, and furnished with the friction-rollers E, interposed between the frame and the sole, and attached by the arm to the forward part, or toe of the sole, in the manner and for the purpose substantially as set forth.

2. The spring J, in combination with the wheel-frame B, constructed and arranged substantially as and for the purpose set forth.

88,712.—Patrick J. Hogan, Cincinnati, Ohio.—*Plastering-Trowel.*—April 6, 1869.

Claim.—The combination of the blade A, when riveted to the rib B, with the dovetailed foot C, secured to and adjustable upon said rib by means of the set-screw *b*, substantially as described, as and for the purpose specified.

88,713.—Thomas Houghton, Philadelphia, Pa.—*Lantern.*—April 6, 1869.

Claim.—1. The cage *i i, j k c'*, when so constructed as to contain the lamp, globe, and mountings, without being in any manner attached to them; also permitting the vertical movement of the globe and upper mounting, to allow the insertion of a match, all substantially as herein described.

2. A lantern in which the upper and lower mountings, the lamp, and globe, are entirely separate from each other, and contained in an open wire cage, so constructed as to hold all the parts together without being attached thereto; as well as to allow the vertical movement of the globe, as and for the purpose herein set forth.

3. The lantern composed of the upper and lower mountings, E C, the lamp A, the wire guard, holder, or cage, and a globe, when the mountings or globe are provided with channels for the admission of air, and all the parts are constructed and arranged as and for the purposes herein set forth.

88,714.—John Howe, Jr., Boston, Mass.—*Steam-Enginery for Steam-Vessels.*—April 6, 1869.

Claim.—The disposition and arrangement of the steam-conduits *c* c^1 c^2 c^3, with respect to the hull of the vessel and the steam-generator, substantially as before explained.

88,715.—William H. Hubbard, West Meriden, Conn., assignor to himself and John Hill, same place.—*Material for Paint.*—April 6, 1869.

Claim.—The herein-described paint, prepared by the process, substantially as set forth, as a new article of manufacture.

88,716.—S. D. Huffman, New Germantown, N. J.—*Thrashing-Machine.*—April 6, 1869.

Claim.—1. Providing the mouth or chimney of a "duster" with a partition, so as to form an inner and an outer channel, substantially as and for the purposes herein set forth.

2. The arrangement of the shell A, partition E, channels F and F', perforated plate H, and hinged door G, all substantially as shown and described.

88,717.—Alexander Hunter, Buffalo, N. Y.—*Needle-Threader.*—April 6, 1869.

Claim.—A needle-threading apparatus, for attachment to thimbles, made of sheet-metal, constructed and operated in the manner as shown and described

88,718.—Charles Kallmann, Newburgh, N Y.—*Combined Clock and Fly-Trap.*—April 6, 1869.

Claim.—The combination of the clock and the fly-trap, driven by the same moving-power, spring or weight, and by the same gearing, substantially, and the whole arranged as specified.

88,719.—Caleb P. Kelly, Phelps, N. Y.—*Horse-Rake.*—April 6, 1869.

Claim.—The standard F, lever H, the connecting-rod E, and horizontal arm I, in combination with the rake-head D, and the standard G, in connection with the cross-bar C.

88,720.—George Kenny, Nashua, N. H.—*Carriage-Hub.*—April 6, 1869.

Claim.—The taper-bored metallic ring A, provided with sockets *a a b b*, around the periphery of the ring, in alternate parallel order, corresponding with the mortises in the wood part of the hub, the spokes fitting into the sockets and tenoned into the wood, substantially as and for the purposes herein set forth.

88,721.—August Kessberger, Springfield, Ill.—*Wagon-Brake.*—April 6, 1869.

Claim.—1. The self-acting brake D, constructed and arranged substantially as herein described, and for the purposes set forth.

2. The combination of the self-acting brake D, pin *d*, and slotted flanges F, substantially as herein described, and for the purposes set forth.

88,722.—Alexander A. C. Klaucke, Washington, D. C., and Jefferson Fraser, New York, N. Y.—*Envelope.*—April 6, 1869.

Claim.—1. An envelope, provided with a space, B, punched, or otherwise made detachable, whether gummed on the inside or not, substantially as and for the purpose set forth.

2. An envelope, with the address of the sender printed or inscribed on a portion thereof, the boundary of which is perforated, or otherwise prepared, so as to be readily detachable, whether made adhesive or not, substantially as and for the purpose set forth.

88,723.—Eli Knepper, Columbus, Ohio.—*Shovel-Plow.*—April 6, 1869.

Claim.—1. The two slit bars I I, and rollers K K K, in combination with the beams B B and C, constructed and arranged as described.

2. The two springs H H fastened between the middle beam C, and outer beams B B, which bring the outer shovels always back to their normal distance from the middle shovel, when contracted as herein described.

88,724.—William H. Locke, Canton, Pa.—*Grain-Cradle.*—April 6, 1869.

Claim.—1. The semicircular bar B, employed substantially in the manner and for the purpose described.

2. The semicircular bar B, rods *g g g g* and *e*, in combination with fingers *h h h h*, all arranged substantially as and for the purpose set forth.

88,725.—Clark Marsh, Bridgeport, Conn., assignor to the New York Belting and Packing Company.—*Mode of Finishing and Truing Emery-Wheels, &c.*—April 6, 1869.

Claim.—The method of finishing and truing emery vulcanite-wheels, or other wheels and grindstones of artificial composition, substantially as and by the means aforesaid.

88,726.—Henry Matthes, Cambridge, Mass.—*Pie Cutter and Crimper.*—April 6, 1869.

Claim.—As a new article of manufacture, the tool herein described, consisting of a cutting-blade, crimping-roller, and prongs for puncturing, when constructed substantially as described, and for the purpose specified.

88,727.—William M. Morris, Washington County, Miss.—*Cotton-Bale Tie.*—April 6, 1869.

Claim.—The buckle A, when provided with the slot B, the triangular lug D, and the projections *i* and *j*, and otherwise constructed, substantially as herein described.

88,728.—George Nearstheimer, Cincinnati, Ohio.—*Metallic Coffin.*—April 6, 1869.

Claim.—1. The arrangement of the bottom A *a*, sides B, hollow rim C, angular and screw-threaded plugs D E, and frame C', for the purpose set forth.

2. In combination with the elements A *a*, B, C, D E, and C', the short plugs F.

3. The described combination of the parts A *a*, B, C, D E, F, and C', with the ribs I and nuts J, formed and secured as set forth.

4. The screw-threaded stem O, the nut P, spiral spring Q, the tongue R, slot *s*, in the chamber S, and the graduated scale T, constructed and arranged to act as and for the purposes set forth.

88,729.—GEORGE W. NEILL, Boston, Mass., assignor to CHICKERING & SONS, same place.—*Piano-Forte Frame.*—April 6, 1869.

Claim.—1. The combination and arrangement of the projections *b b*, the arch-bar F, the auxiliary brace-bar, and its abutments on the same, and the central post G, with each of the oblique brace-bars *e*, of the metallic string-frame, the whole being united by screw-bolts and nuts, as set forth.

2. Fastening each of the auxiliary brace-bars to the back frame, when such bar is provided with abutments, and combined with the two projections *b b*, an arch-bar, F, and the string-frame brace-bar *c*, connected together, and arranged as specified.

88,730.—J. D. S. NEWELL, Tensas Parish, assignor to himself, N. G. BRICE, E. TOMATIS, and THOMAS PICKLE, New Orleans, La.—*Breech-Loading Fire-Arm.*—April 6, 1869.

Claim.—1. The breech-piece A, in combination with the needle bar D, when these parts are constructed as herein described, and are united and operate conjointly, by means of the vertical face, or section *f*, in the longitudinal recess in the former, and the spring *h*, secured over the front end of said recess, substantially as herein specified.

2. The above combination, in combination with the projecting knob or pin *b*, for throwing out the cartridge-case, substantially as herein set forth.

3. The breech-piece A and bar D, in combination with the hammer C, when these several parts are constructed, joined together, and conjointly operate, substantially as set forth.

88,731.—GEORGE HARDING PALMER, Lewisham Parish, England, assignor to himself and SAMUEL NICHOLS, New Haven, Conn.—*Suspender.*—April 6, 1869.

Claim.—The attachment for suspenders, consisting of a spring support, for the button-hole tags, or ends, formed from a single piece of wire, bent so as to form loops D and E, and so that the two ends B and C will play within the said loops, substantially as described, and for the purpose specified.

88,732.—WILBUR F. PARKER, Meriden, Conn.—*Power-Press.*—April 6, 1869.

Claim.—The combination of the many-sided pin D, placed eccentrically on the end of the shaft B, the disk E, with recess F and wrist-pin L, and pitman P, as and for the purpose set forth.

88,733.—RUSSELL B. PERKINS, Meriden, Conn., assignor to CHARLES PARKER, same place.—*Mechanical Adjustment.*—April 6, 1869.

Claim.—The plate C, arranged so as to have a reciprocating movement imparted thereto, combined with the eccentric D, arranged so as to adjust the plate C to vary the point of starting and stopping of the said reciprocating movement.

88,734.—RUSSELL B. PERKINS, Meriden, Conn., assignor to CHARLES PARKER, same place.—*Mechanical Adjustment.*—April 6, 1869.

Claim.—The two parts, A and B, of a connecting-rod, combined with the eccentric D, so that by the turning of the said eccentric the said two parts may be adjusted to lengthen or shorten their extremes, substantially as and for the purpose herein set forth.

88,735.—JOHN E. PLUMMER, Binghamton, N.Y.—*Shoe-Jack for Finishing Shoes.*—April 6, 1869.

Claim.—The vise, or clamp B, ratchet N, double pawl P, in combination with the spiral spring G, in the thumb-nut F, curved arm J, toe-piece K, stop R, and projection from the hub S, all being constructed as herein described and represented, for the purpose set forth.

88,736.—A. RAY, Granville, Mo.—*Car-Coupling.*—April 6, 1869.

Claim.—The combination and arrangement of the spring-jaws *c c* with the stop, or cheek-block *m*, the lever *h*, the arrow-head tongue L, the regulating screw-rod *f*, and the springs D D′, all arranged and operated substantially as and for the purposes hereinbefore described.

88,737.—FRANÇOIS RAYMOND, Woodhaven, N. Y.—*Combined Knob-Latch and Lock.*—April 6, 1869.

Claim.—The combination, with the knob-shank and bolt of a lock, of the cogged sector F, double rack D, shooting-tumbler C, and slotted lifting-tumblers E, arranged for operation substantially as herein described.

88,738.—J. B. READ, Tusealoosa, Ala.—*Velocipede.*—April 6, 1869.

Claim.—1. The attachment, to two-wheeled velocipedes, of levers, to be fastened to the frame, or to projections inclosing the driving-wheel, and to the axle of the same, and connected by a cord and pulley beneath the driver's seat, to extend from one lever to the other, substantially as described.

2. A disk or hoop, attached to the steering-shaft, to be operated by the knees, when the hands are used for propulsion.

88,739.—WILLIAM REICHENBACH, Chicago, Ill., assignor to himself and HENRY NASS, same place.—*Combined Clothes-Drier and Ironing-Table.*—April 6, 1869.

Claim.—The combined ironing-table and clothes-rack, all constructed and arranged to operate as herein shown and described.

88,740.—E. S. RICE, Paw Paw, Mich.—*Harrow and Cultivator.*—April 6, 1869.

Claim.—1. The lever F, the rods G, the frame A, and draught-chain E, arranged and combined substantially as and for the purposes specified.

2. The guide-bars H, in combination with the axle B, pole D, and bars 1 and 1, substantially as and to operate for the purpose set forth.

3. The rods I and J, in combination with the frame A, and the axle B, and pole D, and arranged in relation to the operator's or driver's seat, substantially as illustrated and described.

88,741.—JAMES M. ROHRER, Pine Grove, Pa.—*Apparatus for Desulphurizing and Oxidizing Ores.*—April 6, 1869.

Claim.—1. The application of air and water, or air and steam, separately or combined, to the hot stock of a blast-furnace above the smelting point, during the smelting operation, substantially as herein described.

2. The vertically-arranged tube *a*, applied to a blast-furnace, substantially as and for the purpose herein set forth.

3. The arrangement in the upper part of a blast-furnace, of air-tuyeres *b*, substantially as and for the purpose herein set forth.

4. The arrangement, relatively to the air-tuyeres *b*, of the pipes *c*, *d*, and *e*, substantially as and for the purpose specified.

5. The combination and arrangement of the sprinkler *h* and perforated pipe *m*, as applied to a blast-furnace, substantially as and for the purpose herein set forth.

88,742.—CHARLES G. SARGENT, Westford, Mass.—*Burring-Cylinder for Wool, &c.*—April 6, 1869.

Claim.—A cylinder, for opening and cleaning fibrous materials, &c., having a surface composed of alternate rows of hard teeth and soft packing-wire, the teeth being constructed substantially as shown, and the surface of the soft wire lying above the bases of the teeth and packing closely against the sides of the teeth, all substantially as and for the purposes described.

88,743.—JOHN K. SAX and GEORGE W. KEAR, Kingston, Pa.—*Railway-Car Wheel.*—April 6, 1869.

Claim.—The circumferential steel band *a*, dovetailed and welded into a groove in the cast-iron wheel A, substantially as set forth.

88,744.—H. J. SAYERS, Salina, Pa.—*Stove-Pipe Damper.*—April 6, 1869.

Claim.—The combination of the sleeve H, with its handle *h* and aperture, as described, with a stove-pipe having flanches *d* and aperture C, arranged in such manner that the flanches of the stove-pipe shall form guides to regulate the movements of said sleeve in the manner and for the purposes herein specified.

88,745.—Samuel R. Scharf, Baltimore, assignor to himself, James Spicer, and James N. Burnham, Baltimore County, Md.—*Fire and Water Proof Cement.*—April 6, 1869.

Claim.—The above-described composition or roofing-cement, made and used substantially in the manner and for the purposes set forth.

88,746.—Samuel R. Scharf, Baltimore, assignor to himself, James Spicer, and James N. Burnham, Baltimore County, Md.—*Asphaltic Pavement.*—April 6, 1869.

Claim.—The above-described pavement, made with the composition, substantially in the manner set forth.

88,747.—John J. Schillinger, New York, N. Y.—*Manufacture of Artificial Stone.*—April 6, 1869.

Claim.—The manufacture of artificial stones of two different compositions, a coarser, and a finer, or facing-material, when the latter consists of very fine sand, cement, and pulverized metallic paint, with or without coloring-matter, mixed with lime-water, and applied to the coarser mass, in the manner and for the purpose substantially as herein set forth and described.

88,748.—Caleb S. Stearns, Marlborough, Mass.—*Carriage-Wheel.*—April 6, 1869.

Claim.—The ring A, with its abutments *a*, bearing *f*, with its abutments *g*, elastic material *h*, and covering-plates B C, in combination with the axle D, provided with the groove *i*, key E, and screw-nut G, substantially as and for the purpose described.

88,749.—C. F. Th. Steinway, New York, N. Y.—*Sound-Board for Piano-Fortes.*—April 6, 1869.

Claim.—The dowels or posts E, arranged to connect the suspended portions of the bridge and sounding-board at one or more points, substantially as described.

88,750.—Charles W. Stickney, Albany, N. Y.—*Velocipede.*—April 6, 1869.

Claim.—In a three-wheeled velocipede, the combination of the cranks *b*, pivoted to the rods *n*, having foot-rests *o* attached thereto, pendent rods *m*, pivoted to the bifurcated reach *k*, and to the cranks *b*, in connection with the wheel *a*, running in the forked bar *c*.

88,751.—Thomas B. Stout, Keyport, N. J.—*Wood-Pulley Bush.*—April 6, 1869.

Claim.—A bush, *a*, for a wooden pulley, formed of sheet-metal, or a strip of metal, of uniform thickness, and held in place by a flange, *b*, formed by bending one edge of the strip, substantially as herein specified.

88,752.—Ferdinand Strauss, New York, N. Y.—*Corset-Clasp.*—April 6, 1869.

Claim.—The clasps *a a*, constructed with open ends, in combination with the springs A B, said springs being secured together at or near their centers, so as to allow the ends of the outside spring to slide freely in the clasps, thus avoiding the danger of breaking, substantially as described.

88,753.—John Taggart, Boston, assignor to David Whiton, Boston, and Benjamin F. Wing, West Roxbury, Mass.—*Machine for Making Wrought-Nails.*—April 6, 1869.

Claim.—1. The combination of the vibrator F, as described, with the die-plate E, its cutters *d d*, and the cutter-wheel C, and its cutters, arranged as explained.

2. The combination of each or both the spring-rests G H, and the operative cam or cams *k* thereof, with the cutter-wheel C, and the reciprocating die-plate E, provided with cutters and operative mechanism, as set forth.

3. The combination and arrangement of the cutter-wheel C, the die-plate E, the elastic or spring-rests G H, the cams *k k*, the pairs of griping-rollers I I′, K K′, and the duplex header R.

4. The combination and arrangement of the carriers N N′, the pairs of griping-rollers I I′, K K′, the spring-rests G H, the die-plate E, and the cutter-wheel C, the whole being provided with operative mechanism, substantially as described.

5. The combination applied to the driving-shaft and the carriers, and employed for operating the latter, such consisting of the eccentric *w*, its yoke *v* and arms *u u*, the links *t t*, the concentric shafts P Q, and their arms O O′, *r s*.

88,754.—Alban G. Thomas, Sandy Spring, Md.—*Horse Hay-Fork.*—April 6, 1869.

Claim.—1. The combination of the tines A A and toggle-braces C D, when constructed, arranged, and operating substantially as shown and described.

2. In combination with the tines A A and toggle-braces C D, the adjustable stop J and lip K, as shown and described.

88,755.—Nathaniel Thomas, Dixfield, Me.—*Apple Slicer and Corer.*—April 6, 1869.

Claim.—An apple slicer and corer, having frames A, E, and G, bar C, wheel and crank D, pinion *c*, spindle *d*, apple-holder *i*, and knives *u*, constructed and arranged substantially as specified.

88,756.—Eugene Trump, Cincinnati, Ohio, assignor to himself and Leander Detwiler.—*Parlor Game.*—April 6, 1869.

Claim.—The arm D, faced with rubber *d″″*, and provided with spring *d‴*, in the described combination with the hub *c* of the revolving plate C, operating in the manner and for the purpose described.

88,757.—William H. Watson, Brooklyn, N.Y., assignor to A. Sidney Doane, New York City.—*Machine for Sheeting and Pressing Tobacco.*—April 6, 1869.

Claim.—1. Giving to the chain or feeding surface N a period of rest during the operation of the cutting mechanism, substantially as shown, for the purposes indicated.

2. The combination of the cam D, rod I, spiral spring K, and toggles P^2 and P^3 with the movable knife-frame Q, for the purpose set forth.

3. The combination with either of the chains N and N^2 of the friction-rollers *a*, for the purposes fully described.

88,758.—H. J. Wattles, Rockford, Ill.—*Cultivator.*—April 6, 1869.

Claim.—The construction, arrangement, and combination of the frame B B B′, J′ D′ D′, swinging plow-supports C C *c*, plows *a a*, driver's seat F, foot-rests I I, levers H H, and draught devices J K L *o o′*, the whole constructed and operating substantially as and for the purpose specified.

88,759.—James W. Weston, New York, N. Y.—*Velocipede.*—April 6, 1869.

Claim.—1. The endless chain or belt applied to the chain-wheel of the driving-wheels, in combination with the slider *o*, levers *q*, clamping-pawls *s t*, and spring-seat *u*, substantially as and for the purposes set forth.

2. The clamping-pawls *s t* and slider *o*, in combination with the endless chain and wheels of a velocipede, substantially as and for the purposes set forth.

88,760.—Cornelius Whitehouse, Bridgtown-near-Cannock, England.—*Bit and Auger.*—April 6, 1869.

Claim.—1. A boring-bit or auger, having a hollow or open barrel, formed of a forked frame, or rectilinear limbs, united at the tang, and provided with a helical blade or blades, or other cutting edge or edges, either with or without a central worm or leading-point, substantially as herein set forth.

2. A boring-bit or auger, formed, as within described, when the barrel thereof consists of a single bar or member, *b*, of the frame, and is provided with a square or helical blade or cutting-edge at the nose, and either with or without a central worm or point, substantially as shown and described.

88,761.—Cornelius L. Willis, Washington, D. C., assignor to himself and George P. Goff, same place.—*Capstan.*—April 6, 1869.

Claim.—The collar or collars, having a helical

flange or flanges, as applied to the drum A, for the purpose described.

88,762.—Benjamin O. Woods, Boston, Mass.—*Type-Case.*—April 6, 1869.

Claim.—Forming in one and the same piece of stock a series of grooves, having both angles or sides curved, and traversing or intersecting the said grooves with partitions, substantially as described.

88,763.—A. F. Hines, Washington, D. C.—*Sash-Pulley.*—April 6, 1869.

Claim.—The combination of the single-grooved pulleys *a b e*, applied to the window-frame, and having the cord applied upon them, and attached to the window-sash, substantially in the manner shown and described.

88,764.—Edward Lynch, Georgetown, D. C.—*Process and Apparatus for Tanning.*—April 6, 1869.

Claim.—1. Extracting the liquor from bark by grinding it to a powder, and subjecting it, when so ground and mixed with water, to the action of steam while it is being violently agitated, substantially as and for the purposes herein set forth.

2. The tub A, constructed as described, with a screen, *a*, made in sections, and provided with a revolving rake, C D, and steam-pipe *b*, all substantially as and for the purposes herein set forth.

3. Passing the liquor, extracted from bark, through a filter, for the purpose of removing all dirt and sediment from the same, substantially as herein set forth.

4. The filter E, constructed as described, of a box, having inlet-pipe *e*, outlet-pipe *e*, and steam inlet and outlet, and inclosing a series of filtering frames, substantially as and for the purposes herein set forth.

5. The frames *d d*, constructed as described, with grooves and apertures in their bottom bars, and each frame inclosed or covered with cloth or other suitable filtering material, said frames being so arranged that, when placed close together, the apertures in their bottom bars will form a continuous tube, through which the filtered liquor may pass, substantially as herein set forth.

6. Fermenting the liquor extracted from bark, preparatory to using it, for the purpose of tanning hides, substantially as herein set forth.

7. The vat F, constructed as described, with outlet pipe, *i*, steam or hot-air pipe *m*, and cold air or water-pipe *n*, substantially as and for the purposes herein set forth.

8. Regulating the temperature of the tanning-liquor by means of steam or water, hot or cold air, admitted into pipes running through the tanning-vat, substantially as herein set forth.

9. The double-revolving frame G, constructed as described, and provided with lattices H H, between which the hides are placed, substantially as and for the purposes herein set forth.

10. Placing hides between lattices, or their equivalents, in a revolving frame, submerged in tanning-fluid, substantially as and for the purposes herein set forth.

11. Tanning hides by placing them in a frame, submerged in liquor extracted from bark, and revolving said frame and hides in the liquor, substantially as herein set forth.

12. Spreading tanned hides between lattices, or their equivalents, in a revolving frame, exposed to the air, for the purpose of drying them, substantially as herein set forth.

13. The above-described process for tanning hides, substantially as set forth.

88,765.—David L. De Golyer, Chicago, Ill.—*Laying Wooden-Block Pavement.*—April 6, 1869.

Claim.—The method herein described of constructing a wooden pavement, consisting of wooden blocks set in rows, with spaces or channels between, filled with gravel, broken stone, or other suitable material, and tar, which method consists in the use of an auxiliary removable strip or board, to determine the parallelism of the rows and the width of the channels, but forming no part of the completed pavement, substantially as herein described.

88,766.—John H. Morris, Philadelphia, Pa.—*Weather-Strip.*—April 6, 1869.

Claim.—A weather-strip, formed of a dovetailed groove, holding in place a rubber strip, or equivalent, with or without glue or cement, as and for the purposes specified.

88,767.—John B. Atwater, Chicago, Ill.—*Motive-Power.*—April 13, 1869.

Claim.—1. The application of the force generated by the explosion of gases through mechanism, substantially as described.

2. A vacuum-chest, S′, communicating with the cylinder H of an air-compressing piston, through mechanism which is operated substantially as described.

3. A pipe, or pipes, C, leading from cylinder H to cylinder A, and provided with valves, which will allow air from the said cylinder H to enter the combustion-chamber during the descent of the piston G, combined and arranged substantially as described.

4. The combination of chambers A, H, and P, the connected pistons D G and their auxiliaries, adapted to operate substantially as described.

5. The arrangement of the slide-valve E, and perforated hollow piston-rod D′, substantially as described.

6. The combination of an air-compresser with a vacuum-chest, J, and the ignition engine, operating substantially as described and set forth.

7. The manner, substantially as described, of expelling the products of combustion from the explosion-chamber, after every explosion therein, substantially as specified.

8. The combination of independent air and gas-inlet pipes with the cylinder A, an electrical igniter, *c*, and an air-compresser, substantially as described.

88,768.—Addison D. Barrett, Cambridgeport, Mass.—*Feeding-Trough for Horses.*—April 13, 1869.

Claim.—1. The combination of the hopper D, the toggles G H, their shaft F, the arm I, and the latch K, the same being for application to and use with an alarm apparatus, or clock, and with a conduit leading to a manger, or feeding-trough, as set forth.

2. The combination of the tub L, its valve *e*, valve-rod *d*, and operative arm *e*, with the shaft B, the hopper D, or a weight, the toggles G H, their shaft F, the arm I, and the latch K, the said latch being to operate with an alarm-clock applied to it, as and for the purpose as specified.

88,769.—W. K. Baylor and Conrad Rapp, Batesville, Ind.—*Krout-Cutting Machine.*—April 13, 1869.

Claim.—The arrangement of the wheels B D with cogs *c* and *c′*, rack C, board E, and knife F, with the frame A, and pressing-box G, in combination with each other, all substantially as set forth.

88,770.—Jacob Behel, Rockford, Ill.—*Gate.*—April 13, 1869.

Claim.—1. The brace-rod *f* and truss-rod *c*, when constructed and applied as and for the purpose set forth.

2. Hinge *j j*, lever-hinge D, studs *l l′*, and *m*, or their equivalents, when applied as and for the purpose set forth, and operated by means of wires *n n′* and pulls *o*, or their equivalents, substantially in the manner and for the purpose set forth.

88,771.—Riley Bowers, Chillicothe, Ohio.—*Steam-Engine Valve-Gear.*—April 13, 1869.

Claim.—1. The single eccentric, fixed stationary upon the driving-shaft, in combination with a link-bar, oscillating on a fixed center, and connecting-mechanism, substantially as herein described, to work and reverse the steam-valve, all constructed to operate substantially as set forth.

2. The link-bar A, oscillating upon a fixed center, in combination with the eccentric and eccentric-rod, connecting-rod K, and sliding-sleeve P, arranged to operate substantially as set forth.

3. The link-bar A, oscillating upon a fixed center, in combination with the eccentric and eccentric-rod, and the sliding sleeve P, all arranged to operate substantially as herein set forth.

4. In combination with the sliding sleeve P the link-bar A, made in two detachable sections, substantially as and for the purpose set forth.

88,772.—Charles A. Brigham, Cleveland, Ohio.—*Bed-Bottom.*—April 13, 1869.

Claim.—The sectional slats A, jointed together so as to form alternate joints and slat-sections transversely, in combination with the springs C and slots *a*, as and for the purpose substantially as set forth.

88,773.—Lorenzo D. Brooks, Syene, Wis.—*Gate.*—April 13, 1869.

Claim.—1. The parts C, D, F, G, 10, J, P, 12, K, and 13, when combined and arranged as set forth.

2. In combination with the elements of the first clause of claim, the levers T and W, and spring X.

3. In combination with the features of said first claim, the cord S, for the purpose specified.

88,774.—Daniel L. F. Chase, Boston, Mass.—*Automatic Boiler-Feeder.*—April 13, 1869.

Claim.—1. The combination of the vessel A, and its lever B and weight C, with the pitman F, the slotted and double-racked sector K, the vibratory shaft I, and pinion *d*, and the gears for revolving such shaft.

2. The combination and arrangement of the flange *n* and tongue *c'* with the duplex-rack sector K, vibratory pinion *d*, its shaft I, shaft-supporter and gears *e* and *f*, substantially as specified.

88,775.—Peter K. Dederick, Greenbush, N. Y.—*Baling-Press.*—April 13, 1869; antedated April 8, 1869.

Claim.—The arrangement herein described, of the levers L L, rods R R, follower F, and rope B, constructed and arranged substantially as shown.

88,776.—Carl Dieterich, Roslindale, (West Roxbury,) Mass.—*Folding-Chair.*—April 13, 1869.

Claim.—The arrangement and combination of the ears *b b*, and the connection-bars G G, with the seat and the two sets of levers, the said bars and ears being connected with the said seat and levers in manner substantially as described.

88,777.—Lindley M. Doudna, Washington, D. C.—*Holder for Stove-Lids.*—April 13, 1869.

Claim.—The frame A, with its removable bottom B, cross-bars *a a*, plate *c*, and bolt *m*, all constructed and arranged substantially as and for the purpose set forth.

88,778.—Josiah W. Ells, Pittsburgh, Pa.—*Animal-Trap.*—April 13 1869.

Claim.—A trap for catching animals, so constructed as that the outside or shell of the trap will resemble in appearance the animal it is designed to catch, and providing the interior of said shell with a spring and trigger, or other setting and releasing mechanism that will operate to catch the animal that may attempt to take the bait.

88,779.—Arthur Field, Upper Marsh, Lambeth, and William Bryer Nation, No. 394 Old Kent Road, England; (said Nation assigns his right to said Field.)—*Mode of Ornamenting Candles.*—April 13, 1869.

Claim.—1. Ornamenting candles, by first forming grooves, or recesses, of any desired form, upon the surfaces of candles, and then filling in such grooves with wax, stearine, paraffine, or other suitable substance, of a different color from that of the candle.

2. Forming grooves, or recessed designs upon candles, substantially as hereinbefore set forth.

88,780.—H. W. Fuller, Brooklyn, N. Y.—*Tuck-Creasing Attachment for Sewing-Machines.*—April 13, 1869.

Claim.—1. The combination of the nipping-finger and the inclined thrust-plate.

2. The combination of the nipping and presser-fingers, and the shoe H, or their equivalents.

3. The combination of the nipping-finger, presser-finger, shoe, and thrust-plate.

4. The base-plate, having the fixed scale of divisions in combination with a tucking-device and gauge, that are adjustable respectively from opposite ends of said scale, substantially as specified.

5. The combination with the post 1, of the lever and yielding-arm, and as made adjustable thereto, for the purposes set forth.

6. The combination with the arm K, of the slotted tie-piece O, as and for the purpose described.

88,781.—J. Durell Greene, Cambridge, assignor to himself and Charles H. P. Plympton, Boston, Mass.—*Anchor.*—April 13, 1869.

Claim.—The anchor, substantially as made, with the palms and arms of the flukes in the same plane, united by the yoke, as shown, with the shank extending through the yoke, and pivoted thereunto, as set forth.

88,782.—Frank W. Groff, Indianapolis, Ind.—*Portable Fence.*—April 13, 1869.

Claim.—1. The combination of the key C D and the mortise F G, when constructed and used substantially as herein set forth.

2. The base K, when constructed with the mortise L, and combined with the tenon L, and otherwise made and used substantially as herein set forth.

88,783.—Moore Hardaway, St. Louis, Mo.—*Bolt-Machine.*—April 13, 1869.

Claim.—The combination of the divided die *c*, divided die-box *b*, inclined surfaces *p r*, and header *k*, arranged and operating substantially as described, with the clamp dies *d d'*, for the purposes set forth.

88,784.—Mary E. Hatch, Beloit, Wis.—*Lamp for Cooking Purposes.*—April 13, 1869; antedated March 1, 1869.

Claim.—1. The radiator or non-conducting shield B, substantially as and for the purpose described.

2. The ventilating-tubes C C, substantially as and for the purpose set forth.

3. The combination of the shield B, ventilators C C, cones D, and lamp, of non-conducting metal, all arranged, constructed, and operating substantially as described.

88,785.—John Y. Herston, Warrick County, Ind.—*Earth-Scraper.*—April 13, 1869.

Claim.—The bent axle H, with its arm C and the catch B, provided with the foot-lever or trigger D, when these parts are constructed and arranged to operate substantially as and for the purposes described.

88,786.—Charles Hewitt, Hamilton Township, N. J.—*Manufacture of Rails for Railroads.*—April 13, 1869.

Claim.—The formation and use for and in the manufacture of railroad-bars, with steel heads, of a pile, having, on one of its sides, a bar of combined iron and steel, said bar having been made by welding steel and iron together, prior to placing the same in the rail-pile, the whole being done as herein described, or otherwise substantially the same.

88,787.—E. W. Hewitt and George Gorham, Pecatonica, Ill.—*Seeder and Cultivator.*—April 13, 1869.

Claim.—1. A seeder, G, composed of a cylinder, I, outer case D E, slide I', arranged to operate as and for the purpose set forth.

2. The combination of the seeder with the standards V, and frame C, as described.

3. The combination of the seeder with standards V, frames C and S, beams *n*, rods *m*, and shovel-standards *f*, as and for the purpose set forth.

88,788.—William M. Johnston, Pittsburgh, Pa., assignor to himself and David P. Este, same place.—*Casting Tuyeres.*—April 13, 1869.

Claim.—A cast-metal shell tuyere, having two or more pipes or air passages through it from end to end, when such pipes, or air-passages, and the tuyere-shell are cast at a single casting, substantially as described.

88,789.—A. W. Keeler, and Jacob Eckert, Lafayette, N. Y.—*Carriage-Jack.*—April 13, 1869.

Claim.—The double guide *c c*, standard B A, loop-pawl F, and serrated lever D, all constructed and operating as herein shown and described, and for the purpose set forth.

88,790.—Elisha Kelley, Locust Grove, Ohio.—*Corn-Sheller.*—April 13, 1869.

Claim.—The elastic rollers A A and D D, in combination with the fingers or shellers K K, substantially in the manner and for the purpose as described.

88,791.—J. B. Kelley, Brandon, Vt.—*Combined Knob-Latch and Lock.*—April 13, 1869.

Claim.—The combination and arrangement of the latch-bolt A, lever L, tumblers *t t′ t″*, pins *a b c*, and box C, substantially as and for the purposes set forth.

88,792.—Ira B. Ketchum, Rochester, Minn.—*Flour-Bolt.*—April 13, 1869.

Claim.—The combination of the blocks E E, rods F F, balls G G, and elastic rings I I, when constructed and arranged as described, and placed on the outside of a mill-bolt, substantially as and for the purposes herein set forth.

88,793.—Joseph Lory, Memphis, Tenn.—*Hair-Dye.*—April 13, 1869.

Claim.—The compound and mode of preparing, for dyeing hair, as herein described, using for that purpose the aforesaid chemical compound and mode of preparing, as described above for the purposes as are herein set forth.

88,794.—Benjamin F. Masters, Middleport, Ill.—*Plow.*—April 13, 1869.

Claim.—The arrangement and combination of the cutter M, key W, colter C, brace B, and clamps *h h′*, substantially as shown and described.

88,795.—Charles Messenger, Cleveland, Ohio.—*Machine for Manufacturing Roofing-Tile.*—April 13, 1869.

Claim.—The pivoted molds E* and carrier D, in combination with the press G, lever L, and rag-wheel J, constructed and arranged substantially as and for the purpose herein set forth.

88,796.—C. H. Mills, Ravenna, Ohio.—*Wagon-Brake.*—April 13, 1869.

Claim.—The cams K, and cross-bar I, in combination with the sliding link E and pivoted axle-tree C, arranged in relation to each other, substantially as and for the purpose set forth.

88,797.—S. A. Mitchell, Alstead Center, N. H.—*Sled-Brake.*—April 13, 1869.

Claim.—In combination with the slide E and guides H, the bar F, link I′, and pivoted lever I, when applied to a sled substantially as shown and herein described.

88,798.—George Morrison, Lockport, Ill.—*Plate for Artificial Teeth.*—April 13, 1869.

Claim.—1. The annular projection, or wall *a* surrounding the air-chamber *c*, constructed and arranged as and for the purposes set forth.

2. Preventing the air from without from entering the air-chamber *c*, by means of an elevated projection, or wall surrounding the same, substantially as described.

88,799.—John Murdock, Jersey City, N. J., assignor to John Savery's Sons, New York City.—*Metal Bird-House.*—April 13, 1869.

Claim.—The flange *f* and movable shield *g*, constructed as specified, and applied to the opening of the bird-house, for the purposes set forth.

88,800.—Francis W. Murray, Cincinnati, Ohio.—*Composing-Stick.*—April 13, 1869.

Claim.—The slide D, provided with the parts *d d′ d″*, E F, substantially as described, for the purpose stated.

88,801.—John W. Newton, Geneva, Wis.—*Bog-Cutter and Drag.*—April 13, 1869.

Claim.—1. The L-shaped hangers, B B, provided with sharpened edges, substantially as and for the purpose herein described.

2. The cutters E E, converging from the rear of the plate C, in V-shape, substantially as and for the purpose set forth.

3. The steadying-teeth *f f*, in combination with the V-shaped cutters E E, as and for the purpose herein described.

4. The braces F F, provided with sharpened edges, and connecting the V-shaped cutters E E with the stock A, substantially as and for the purpose herein described.

5. The combination of the toothed plate C, cutters E E, hangers B B, braces F F, and stock A, with a tongue, D, all constructed and arranged substantially as herein shown and described.

88,802.—James O'Connor, Jackson, Mo.—*Wheelwright-Machine.*—April 13, 1869.

Claim.—1. The frame Q, having the top R *f*, and the adjustable bottom, and moved by means of the screw W, all constructed, arranged, and operating as herein set forth, for holding the hub.

2. The described arrangement upon the frame A B B′ C of the carriage E, with the boring and tenoning-machinery, the ways F, springs L, treadle-lever H, connecting-cord I, and pulley J, the removable adjustable platform, with the holding-devices *c d*, and the frame Q, with its top R *f*, adjustable bottom T and swiveled screw W, all operating substantially as herein set forth for the purpose specified.

88,803.—Charles Page and George W. Miller, Meriden, Conn.—*Stilt.*—April 13, 1869.

Claim.—An adjustable stilt, upon which the step is secured at any desired height upon the staff, by means of a portion of said step having its bearing between said staff and a band, said band having a projection thereon, all constructed and operating substantially as herein described, and in the manner herein set forth.

88,804.—James A. Park, Lansing, Mich., assignor to himself and William Woodhouse, same place.—*Horse Hay-Fork.*—April 13, 1869.

Claim.—1. The piece H, having hole L, and an opening in which the elevating-rope is secured, substantially as and for the purpose herein specified.

2. The prong B, in combination with the prong A, when the latter has secured thereto the parts D and 2 and the piece H, so as to be centrally attached to the top of the fork, all made to operate substantially as and for the purpose set forth.

88,805.—E. G. Paull, Fair Haven, Mass., assignor to American Tool Company, same place.—*Furnace for Annealing Tacks, Nails, &c.*—April 13, 1869.

Claim.—1. Constructing a furnace, with a bottom so adjusted that it may be turned down, for the purpose of removing articles from the same, substantially as herein set forth.

2. The arrangement of the furnace A, with a bridge, D, dividing the fire-box B, from the pan C, and said pan provided with an adjustable bottom, substantially as and for the purposes herein set forth.

88,806.—Spencer B. Peugh, Salem, Ind.—*Washing-Machine.*—April 13, 1869.

Claim.—1. The arrangement of the vertical rubbers F and F′, pivoted on the vibrating arms or links G, so as to allow them to be traversed horizontally edgewise, substantially as described.

2. In combination with the rubbers, arranged as described, the platforms I and I′, for holding and guiding the links G, substantially as described.

3. The combination, with the rubber F′ and platform I′, of the crank-shaft K, links J, spring L, rag-wheel N, and pawl O, for maintaining an adjustable pressure upon the wash between the rubbers, substantially as set forth.

4. In combination with the crank-shaft K, arranged as described, the arm P, cord Q, pulley R, and foot-piece S, substantially as described.

88,807.—John Pickles, Wigan, England.—*Process and Apparatus for the Manufacture of Extract of Bark, &c.*—April 13, 1869.

Claim.—1. The rotary and self-discharging leach, constructed and operating substantially as described.

2. The vat or receptacle *p*, made and employed.

substantially as described, in connection with the rotary self-discharging leach, as set forth.

3. The roller 2 and scraper 3, in the tank 1, substantially as described.

4. The rotary heated cylinder 4, in conjunction with roller 2, scraper 3, scraper 8, and the two tanks or receptacles 1 and 9, substantially as described.

5. The process of washing or leaching the bark, prepared as herein described, and taking from it the liquid extract, and then converting the liquid or semi-liquid into a solid or powdered form, or dry state, substantially as herein described.

6. The preparation of the extract of bark, &c., for the purposes of transportation, substantially as described.

7. Protecting the liquid or semi-liquid extract from the effect of exposure to the atmosphere, substantially as described.

8. The ring-heated drum, with its tubes, and inner and outer circulating-casings, or without one or both of them, or the various forms of annular heaters, whole or in segments, with or without circulating-casings, or their substitutes of flat heaters and plates, for the purposes of evaporation or concentration of liquid tannin-extracts, cane or saccharine juices, or other products, as herein described.

88,808. — HEINRICH POLLACK and EDWIN SCHMIDT, Hamburg, Germany.—*Sewing-Machine.*—April 13, 1869.

Claim.—1. The bobbin-filling apparatus Q R, constructed as described, and arranged within and in combination with the flanged driving-wheel B *b*.

2. Further, the arrangement of the driving-wheel B, flange *b*, and rim T, to inclose and protect the gearing A E F, as herein represented and described.

88,809.—I. R. RICHARDSON, New Castle, Pa.—*Nail-Plate Feeder.*—April 13, 1869.

Claim.—1. The combination of the adjustable frame B′, hollow cylinder C′, nipper-rod D′, cross-head E′, and bar F′, all constructed as described, and operating substantially as and for the purposes herein set forth.

2. The nipper-rod D′, constructed as described, with a portion of its length of elliptical shape, in combination with the cross-head E′, swivel *f*, slotted bent bar *e* and hollow cylinder C′, substantially as and for the purposes herein set forth.

3. The combination of the cam N, lever M, and rod *o*, with gauge *p* and spring *r*, as and for the purposes herein set forth.

4. The combination of the hollow cylinder C′, belts *g g*, levers G′ G′, and cams H′ H′, for the purpose of turning the nipper-rod D′, substantially as herein set forth.

5. The arrangement of the belt *g*, spiral springs *k*, stirrups *i*, and notched spring *m*, with the cylinder C′ and levers G G, all substantially as and for the purposes herein set forth.

6. The combination of the two-armed lever P, rod *s*, cam-shaped lever R, reciprocating rod F, sleeve S, spring *v*, and lever U, all constructed as described, and operating substantially as and for the purposes herein set forth.

88,810.—CHARLES L. ROBERTSON, Providence, R. I.—*Table-Cutlery.*—April 13, 1869.

Claim.—Handles for table-cutlery and other articles made wholly or principally of paper or paper-stock as a foundation, and surfaced, for a protection and finish, with a japanning, an enameling, or equivalent composition, the same being a new manufacture, substantially of the character described.

88,811.— CHARLES L. ROBERTSON, Providence, R. I.—*Comb.*—April 13, 1869.

Claim.—A comb, made by applying and developing a japanning or enameling composition upon a foundation made principally from paper or paper-stock, the whole article being substantially as specified.

88,812.—ANDREW RUNSTETLER, Peoria, Ill.—*Corn-Planter.*—April 13, 1869.

Claim.—1. The adjustable slide D, combined with movable or reciprocating cut-off, the latter made in two parts, one A above, with teeth *a a*, the other below the slide D, and having the holes for dropping corn into runner opposite and under the teeth, substantially as described.

2. The valve G, as arranged in combination with the oblique slot *i i*, substantially in the manner and for the purpose as herein set forth.

88,813.—ERASTUS W. SCOTT, Wauregan, Conn.—*Milking-Stool.*—April 13, 1869.

Claim.—1. The combination of a milker's stool, and mechanism applied to it for supporting a milk-pail with reference to it, substantially as described.

2. The combination and arrangement of the lever D, and its wedge *b*, with the two curved levers C C, such levers being provided with the projections *a a*, or their equivalents, to operate with the wedge.

3. The combination and arrangement of the spring *b′* with the bolt or standard B, and their levers D C C, applied and arranged together, substantially as and for the purpose specified.

88,814.—WILLIAM FRANK SEAVEY, Portland, Me.—*Blind-Catch.*—April 13, 1869.

Claim.—A blind-catch, constructed and arranged as herein set forth and described.

88,815.—SAMUEL M. SKIDMORE, Brooklyn, N. Y.—*Velocipede.*—April 13, 1869.

Claim.—1. The arrangement and combination of the hand-driving rods *g*, the two crank-axles *e e′*, rods *a a*, levers *b b′*, for operating the velocipede by both the hands and feet, substantially in the manner and for the purposes set forth.

2. The combination of the friction-rollers *d*, in the studs *f f*, with the crank or driving-axle, substantially as set forth.

88,816.—HAMILTON E. SMITH, New York, N.Y.—*Washing-Machine.*—April 13, 1869.

Claim.—In a washing-machine, the coil springs *a a*, in combination with the box A suspended thereon, arranged and operating substantially as and for the purpose herein described.

88,817.—JOHN SMITH, Brockport, N. Y.—*Handle for Drawers.*—April 13, 1869.

Claim.—As a new article of manufacture, a handle, constructed as herein described.

88,818.—W. WILLARD SOWLES, Manlius, N.Y., assignor to himself and A. D. WILCOX, same place.—*Gate.*—April 13, 1869; antedated January 18, 1869.

Claim.—The combination of the hinge B, link F *f*, and connection D *e* with gate A, constructed and operating substantially as herein set forth.

88,819.—THOMAS STANFORD, Noblesville, Ind.—*Fence.*—April 13, 1869.

Claim.—1. The combination of the fence panels A A with the cap C and clamp D, substantially as specified.

2. The metal cap C, constructed as described, for the purpose of securing the upper ends of the fence-posts B B together, substantially as herein set forth.

3. The metal clamp D, constructed as described, for the purpose of fastening the lower ends of the fence-posts B B together, substantially as herein set forth.

88,820.—F. STITH, Memphis, Tenn.—*Fire-Tongs.*—April 13, 1869.

Claim.—The combination of the handle B, the prolongation A, and its slotted arms C C′, with the legs pivoted in the cross-arms F, when all these parts are constructed and arranged as described for joint operation.

88,821.—MILES SWEET, Troy, N. Y.—*Boring-Machine.*—April 13, 1869.

Claim.—The arrangement of the base C, inverted arches B, and graduated index-plate L, in connection with index M and adjustable frame A, carrying the auger-carriage F, with boring apparatus, all constructed and operated as shown and described, for the purpose set forth.

88,822.—Benjamin F. Taft, Groton Junction, Mass., assignor to himself and David Needham, same place.—*Hay-Spreader.*—April 13, 1869.

Claim.—The cams D and L, the revolving fork-bar holders E E, the stationary bars F F, or equivalents, the revolving fork-bars G G, the forks I I, as attached by the fork-holders J J, and the tilting-arms K K, constructed and operating in the manner and for the purposes herein described.

88,823.—William Thompson, No. 85 Lower Gardiner Street, Dublin, Ireland.—*Machine for Mixing Tea.*—April 13, 1869.

Claim.—Constructing apparatus for mixing teas and other granular substances, in which a series of sieves or gratings, G, is caused to travel upward, one above the other, inside a casing, A, so that the tea, in being raised thereby, falls through the meshes or spaces of the one sieve or grating on to the next one below, and so on in succession, substantially as and for the purposes hereinbefore set forth.

88,824.—William H. Towers, Boston, Mass.—*Boot and Shoe.*—April 13, 1869.

Claim.—1. Providing a boot or shoe with an entire water-proof or impervious lining, applied so as to underlap between the inner and outer soles and avoid a seam at or near the joining of the sole and upper of the boot or shoe, substantially as set forth.

2. A boot or shoe made with a continuous lining, so as to envelop the body of the foot, substantially as described.

88,825.—William B. Watkins, Jersey City, N. J.—*Tooth-Brush.*—April 13, 1869.

Claim.—The combination of the India-rubber brush with the handle, by means of the rib C, having a stiffener, D, in it, and dovetail channel E, in the lower side of the handle, as hereinbefore set forth.

88,826.—William W. Wells, Freehold, N. J.—*Liniment.*—April 13, 1869.

Claim.—The improved liniment herein described.

88,827.—Seth Wheeler and Edgar Jerome, Albany, N. Y.—*Manufacture of Paper Boxes from Pulp.*—April 13, 1869.

Claim.—A seamless paper box, colored or dyed, and polished, substantially as described.

88,828.—A. D. Wilcox, Manlius, N. Y.—*Gate.*—April 13, 1869.

Claim.—The hinges D *d*, F *f*, and C *c* E F, constructed as shown in Fig. 2, and in connection therewith the balancing roller H, as and for the purpose set forth.

88,829.—Homer Wright, Pittsburgh, Pa., assignor to himself, Henry H. Collins, and Benjamin F. Collins, same place.—*Jug-Top.*—April 13, 1869.

Claim.—The yielding-flange B, when used as and for the purpose described.

88,830.—J. W. Andrews and N. J. Ogden, Dryden, N. Y.—*Manufacture of Cheese.*—April 13, 1869.

Claim.—The combination of the wood hoop B, circumferential-flanged metal hoop E, bandage D, and press-cloth C, all as and for the purposes set forth.

88,831.—Edwin R. Austin, Elmira, N. Y.—*Step-Ladder.*—April 13, 1869.

Claim.—A step-ladder, constructed with a detachable joint, B, and socket A, combined with extension-legs J J, and secured by the eccentrics H H, all constructed, arranged, and operating in the manner described, and for the purpose set forth.

88,832.—Samuel W. Barber, Heath, Mass.—*Sled-Brake.*—April 13, 1869.

Claim.—1. The combination and arrangement of the roller E, tongue F, hounds G, guide-loop H, and arms, or prongs I, with each other, and with the runners, or frame of the sled, substantially as herein shown and described, and for the purpose set forth.

2. Pivoting the tongue to the forward parts of the hounds, and leaving its rear end free to move upward, substantially as herein shown and described, and for the purpose set forth.

88,833.—T. E. Barrow, Mansfield, Ohio.—*Carpenters' Gauge.*—April 13, 1869.

Claim.—The gauge, consisting of the cylinder C, screw-shaft D, head B, plate E, set-screw *d*, screws *f*, nuts *h*, and slotted bar A, when all the parts are constructed and arranged substantially as herein described, and for the purpose set forth.

88,834.—J. D. Beck, Liberty, Pa.—*Vise.*—April 13, 1869.

Claim.—1. The construction and arrangement together, in the manner specified, of the vertically-adjustable plate M, pin m^1, bar O, screw Q, pin P, and stationary jaw C, as and for the purpose set forth.

2. The construction and arrangement together, in the manner specified, of plate R, slides S, levers T, spring-plate U, pin r^2, and movable jaw H, as and for the purpose specified.

3. The arrangement, on the jaws, of the face-plates L L, pins r^2, m^1, and rubber blocks N N, all constructed as described, to hold the plates R and M in position.

88,835.—Henry Betts, Norwalk, Conn., assignor to himself and Hart Z. Norton, same place.—*Printing-Press.*—April 13, 1869; antedated April 3, 1869.

Claim.—1. The application of a series of forms to the roller D, and a series of stands E, carrying the paper and pressure-rollers, whereby impressions of different matter are taken from one cylinder in regular succession and delivered to separate stands, as herein described, for the purpose specified.

2. The heads F, adjustable upon the radial rods E, and provided with the guides *b*, having spring bearings *c* for the pressure-roller G, as herein shown and described.

3. The described arrangement of the radial shafts E, yielding pressure-roller G, arms H, paper-rollers I J, and guide-roller K, with relation to the form-cylinder D and perforated portion B, as herein described, for the purpose specified.

88,836.—John S. Birch, New York, N. Y.—*Self-Adjusting Watch-Key.*—April 13, 1869.

Claim.—The self-adjusting jaws B B, formed or hinged upon the outer end of the shank C and adapted to be distended by the pin D, when the tube E is slid back upon the shank C and spring F, substantially as herein set forth.

88,837.—James P. Blake, Rockville, Mass.—*Die for Making Awls.*—April 13, 1869.

Claim.—The dies A and A′, constructed as shown, and for the purpose set forth.

88,838.—George W. Blaksley, Rockford, Ill.—*Breast-Collar.*—April 13, 1869.

Claim.—The metallic tree C, when constructed as described, jointed, at *c*, to the straps A^2, and working through the loops C′, upon the pads A^1, whereby the collar is adapted to conform to the motion of the horse's shoulders, as herein set forth and shown.

88,839.—Charles A. Bogert, Bay City, Mich.—*Knife-Sharpener.*—April 13, 1869.

Claim.—The knife-sharpener, constructed as herein described, and for the purpose specified.

88,840.—John Booth, Smithfield, R. I., assignor to Orville Peckham, trustee, and said trustee assigns to John Booth, and Fales, Jenks & Sons, same place.—*Ring for Spinning-Machines.*—April 13, 1869.

Claim.—A spinning-ring, constructed substantially as herein described.

88,841.—William Brocklesby, Jr., Caledonia, Ohio.—*Hand-Truck for Sacking Grain, and Moving the Same.*—April 13, 1869.

Claim.—The adjustable hopper A, adjustable braces C, and foot-board E, in combination with a hand-truck, substantially as shown and described.

88,842.—Moses T. Burbank, Lawrence, Mass.—*Extension-Ladder.*—April 13, 1869.

Claim.—The ladder A, composed of parts *b c*, framed and connected, as described, and supported by braces *g g*, of similar construction.

88,843.—John Butterworth and William H. Butterworth, Trenton, N. J.—*Grain-Fan Blast.*—April 13, 1869.

Claim.—1. Providing the fan-box of a grain-separator, near its throat, with a hinged door, connected with a wind-indicator, for the purpose of regulating the blast of the fan, substantially as herein set forth.

2. In combination with the fan-box A, the hinged door D, inside arm E, rod F, wind-indicator G H, outside arm I, and movable weight J, all constructed and arranged to operate substantially as and for the purposes herein set forth.

88,844.—Dawson Miles, Cambridge, Mass., administrator of Philippe François Carlier, deceased, and Alphonse A. C. Vignon, Paris, France.—*Process and Apparatus for Extinguishing Fire by Means of Water Charged with Carbonic Acid.*—April 13, 1869.

Claim.—1. The employment of a solution of carbonic-acid gas in water, either at a high or at a low pressure, for extinguishing fires on land, or on board vessels.

2. The construction and employment of apparatus either portable or fixed, for extinguishing fires, in which a solution of carbonic-acid gas in water is prepared and stored up, and whence such solution is ejected with the requisite force, without the aid of pumps.

88,845.—A. H. Carroll, Baltimore, Md.—*Picker for Looms*—April 13, 1869.

Claim.—The picker herein described, composed of layers of raw hide and cloth, felt, or equivalent material, and having an oil-hole, C, substantially as set forth.

88,846.—Nathan Chapman, Milford, Mass.—*Baling-Press.*—April 13, 1869.

Claim.—1. The combination and arrangement of the straps *b*, stands *a*, hooks *g*, and pawls *c*, held by the links *d*, substantially as described.

2. In combination with the racks *e*, the traversing-bars *l*, provided with projections or perforated lugs *n*, for the racks to traverse in, and with depending ends or journals to fit the seats *k k'*, in the working-levers *i'*, substantially as described.

3. In combination with the racks *e* and traversing-bars *l*, the locking-pawls *m*, hung or hinged upon said bars, substantially as described.

4. In combination with the racks *e*, and traversing-bars *l*, the levers *i* and *i'* hinged together and connected to the stand *a* by the links *h h'*, substantially as and for the purpose set forth.

6. In combination with the slides J, for closing the openings in the press-box, the inclined planes *t*, on the follower beam, for pressing back said slides as the beam rises, substantially as described.

88,847.—Nathan Chapman, Milford, Mass.—*Churn.*—April 13, 1869.

Claim.—1. Making the hole or opening in the shaft to extend entirely through the journal, at the end where the gear, pulley, or crank is applied, so as to supply the paddles, or a part of them, with air through the journal at the end where the motive power is applied, substantially as described.

2. Making the driving-wheel with a flange across the spaces at the ends of the teeth, with an opening to admit the teeth of the pinion driven by the wheel, substantially as described.

88,848.—John Charlton, Newark, N. J.—*Wrench.*—April 13, 1869.

Claim.—The longitudinally-grooved plate A, enlarged at its center, and forming one half of a jaw, B, at each end, in combination with the inner-moving plate C, with its half-jaw B, at each end, and diagonal grooves near said ends, acting as guides for the inner tongues on the plate A, when operated by the screw D, substantially as herein shown and described.

88,849.—Daniel C. Chester, Ogdensburg, N. Y.—*Grain-Conveyer for Elevators.*—April 13, 1889.

Claim.—1. A screw-conveyer, for grain-elevators, having its spiral flange set at a forward inclination, or angle, whereby grain or other granulated material may be conveyed without the aid of a trough, substantially as herein described.

2. The combination, with the screw-conveyer C, of the universal joint *a* and the movable bearing-hub H, substantially as and for the purpose herein set forth.

3. The combination, with the movale hub, of the radial arms *h*, serving as supports for the hub while below it, and as levers for moving the same while above it, substantially as specified.

88,850.—R. M. Cole, Burlington, Vt.—*Cigar-Machine.*—April 13, 1869.

Claim.—1. So shaping the stationary or revolving formers of a cigar-machine that cigars pointed at both ends may be formed therein, to allow the use of right and left handed wrappers, substantially as herein shown and described.

2. The combination of the mold H and cap I with the roller C and endless apron M, substantially as described, for the purpose specified.

3. The combination of the roller G with the endless apron M, whereby the proper tension of the latter is preserved during its operation, as herein shown and described.

4. The combination of the non-revolving cap I with the sliding spring-frame J, substantially as described, for the purpose specified.

5. The cross-bar or roller L, when so arranged, close above the roller C, as to keep the apron closed in rear of the forming apparatus, substantially as set forth, to prevent the loss of tobacco from the mold, as specified.

6. A cigar-machine, consisting of the mold H, sliding cap I, roller C, apron M, and rollers B, D, E, F, G, and K, all combined, arranged, and operating substantially as herein shown and described.

88,851.—William S. Colwell, Allegheny City, Pa.—*Plow.*—April 13, 1869.

Claim.—Providing a plow with a mold-board, the surface of which is, from its point A to its heel B, convexed, and also convexed on the lines X, and straight on the lines Z, and curved from point A to heel B, as herein described, and for the purpose set forth.

88,852.—Archibald C. Crary, Utica, N. Y.—*Mode of Warming Railway-Cars.*—April 13, 1869.

Claim.—1. The application of the drip, or water condensed from steam, for the purpose of supplying pure water to the boiler or steam-generator, and of warming railway-cars, when the locomotive is temporarily detached from a train of cars, substantially as herein shown.

2. The float-valve, in connection with the return-pipe E, when used for the purpose set forth.

3. The foot-rest B, made as shown, when used as a register and foot-rest.

4. The combination of the double floor, constructed as set forth, the induction and eduction pipes, and valve, and foot-rest, substantially as described.

88,853.—Thomas Cullen, San Francisco, Cal.—*Magazine Fire-Arm.*—April 13, 1869.

Claim.—1. The revolving magazine B, in combination with the outer cylinder A, all constructed and operating substantially as and for the purpose set forth.

2. The slide E, with the cap *r*, slots *s s*, *g*, and finger *t*, in combination with the pin *d*, and the extractor-arm *e f*, when constructed substantially as and operating in the manner and for the purposes described.

88,854.—Joseph R. de Mahy and James P. Cross, New Orleans, La.—*Vapor-Burner.*—April 13, 1869.

Claim.—The improved burner, herein described, consisting of the two tube-sections, A and B, when the latter is provided with the reduced heat-conductors C and C', and an aperture, *e*, that is increased or diminished by means of the sliding sleeve E, and

all these enumerated parts are constructed and combined substantially in the manner herein described.

88,855.—DANIEL M. DONEHOO, Beaver Court-House, Pa.—*Sash-Holder.*—April 13, 1869.

Claim.—The segmental catch D, provided with a downward-projecting point at its outer end, and pivoted in the window-sash, under the slotted plate F, in combination with the stationary rack-bar upon the frame B, all as herein shown and described.

88,856.—PATRICK V. DUNN, Calamus, Wis.—*Device for Holding Edge-Tools while being Ground.*—April 13, 1869; antedated April 5, 1869.

Claim.—The combination and arrangement of the frame *a a a a*, the handles *b b*, the adjustable standard *c c*, the thumb-screws *d d d*, the adjustable head and arms *e e e e*, the rollers F F, substantially as described, for the purposes specified.

88,857.—CHARLES N. EARL, Elk River, Minn.—*Mode of Hanging and Fastening Doors.*—April 13, 1869.

Claim.—The arrangement, upon a sliding-door, of two or more levers, with rollers, latch, and connections, all operating in such a manner that the door is unlatched, raised, and slid back by the same movement of the longer lever, substantially as set forth

88,858.—WILLIAM EMMONS, Sandwich, Ill.—*Horse-Rake.*—April 13, 1869.

Claim.—1. The arrangement of the rake-head E, dogs or pawls *c c*, and springs *d d*, with the notched plates or bars *b b* on the axle A, for the purpose of holding the rake in any position desired, substantially as herein set forth.

2. The arrangement of the rake-head E, handle F, thumb-piece *h*, rod *g*, three-armed lever *f*, and connecting-rods *e e*, for the purpose of withdrawing the dogs or pawls *c c* from the notched bars *b b*, substantially as herein set forth.

88,859.—O. F. EVANS, Guilford, N. Y.—*Wagon-Brake.*—April 13, 1869.

Claim.—1. The combination of the frame A, brakes *b b*, and friction-rollers *a*, as applied to the running-gear of vehicles, substantially as and for the purpose herein set forth.

2. The inclined planes *c*, on the upper side of the bolsters F F, in combination with the rollers *a*, for operating, substantially as herein set forth.

3. The sliding reach B, swinging bar *d*, and levers *e e*, in combination with the frame A, for relieving the brakes when the draught is applied, substantially as herein described.

4. The tongue C, and hounds D, constructed and arranged as described, in combination with the sliding reach B and levers *e*, for operating the frame A, substantially as specified.

88,860.—REESE EVANS, Milltown, N. J.—*Felt-Shoe.*—April 13, 1869.

Claim.—The mode of fastening together the quarter and vamp of shoes composed of felt and rubber, by cementing parts D, as shown in Fig. 1 and Fig. 2, to the vamp A, the whole being arranged as and for the purpose set forth.

88,861.—WILLIAM EVANS, Pittsburgh, assignor to JOHN EVANS, Philadelphia, Pa.—*Ear-Blank for Elliptic Springs.*—April 13, 1869.

Claim.—1. Forming the ears from a bar of metal, having a rib on one or both sides thereof, substantially as and for the purpose set forth.

2. Forming the studs *f* on the spring, and the perforations *d* in the ear, as and for the purpose described.

88,862.—FRANCIS FALLS and JOHN P. HAYES, Philadelphia, Pa., assignors to FRANCIS FALLS.—*Cooking-Range.*—April 13, 1869; antedated October 13, 1868.

Claim.—The combination of the converging plates E with the spaces C and C′, the said plates being arranged and operating in relation to the fire-chamber A, vertical spaces C and C′, and hot-air space B, substantially in the manner above described and for the purpose specified.

88,863.—J. R. FINLEY, Delphi, Ind.—*Harvester-Pitman.*—April 13, 1869.

Claim.—1. The spring-pawl E, attached to the gib D, in combination with the ratchet-cotter F, substantially as described.

2. The pitman-end L and axis-plug *m*, when fitted together as herein described, in combination with the sickle-head H, substantially as described.

88,864.—LORENZO FULTON, Cincinnati, Ohio.—*Smoke-Stack for Locomotive-Engines.*—April 13, 1869.

Claim.—1. The combination of the elbow-pipe D with the smoke-stack of a locomotive-engine, whereby to conduct steam in and through chambers E, thereby extinguishing the fire connected with the draught, as herein described.

2. The combination of the water-circulating pipes K with the condensing chambers E, for extinguishing fire and heating the feed-water, as herein described.

3. The construction and arrangement of the partition J, whereby to separate an artificial draught from a natural draught, as herein described.

88,865.—GEORGE W. GALLAGIERE and ELI W. RUBY, New Milford, Conn.—*Machine for Shaping Hats.*—April 13, 1869.

Claim.—1. The springs D, and holders E, for holding the collar F, in combination with the revolving table B, substantially as herein shown and described.

2. The adjustable collar F, made in two parts, and provided with springs G and plates H, substantially as herein shown and described, and for the purposes set forth.

3. The adjustable flange, or collar-band J, made in two parts, and provided with springs K, and plates L, substantially as herein shown and described, and for the purpose set forth.

4. The combination of the bail M, spring O, and feet Q^1, with the adjustable collar-band J, and rod N, substantially as herein shown and described, and for the purposes set forth.

5. The combination of the followers Q^2, adjustable screws R, with their adjusting nuts and blocks, rod N, followers P, sliding-beam a^2, connecting-bar S, crank or crank-wheel T, shaft U, cross-bar W, and sliding pulley V, with the adjustable collar-band J, collar F, and block I, substantially as herein shown and described, and for the purpose set forth.

6. The arrangement of the fans G′, with the revolving table B, adjustable collar-band J, and collar F, substantially as herein shown and described, and for the purpose set forth.

7. The knife H, constructed as described, and whether used with or without the socket I′, in combination with the revolving table B, adjustable collar F, and adjustable collar-band J, substantially as herein shown and described, and for the purpose set forth.

88,866.—EZEKIEL S. GOODRICH, Oakland, Wis.—*Fence-Post.*—April 13, 1869.

Claim.—The combination of the stone base A, wooden post B, wire base C, and wooden base-braces D, as herein described, for the purpose specified.

88,867.—WILLIAM P. HALL, Piqua, Ohio.—*Stove and Furnace.*—April 13, 1869.

Claim.—1. In combination with a double stove, having a combustion and a hot-air chamber, an exterior fuel-chamber, or feeder, to automatically feed the fuel, and prepare the same for combustion, substantially as specified.

2. In combination with the cylinder D, of a double stove, supplying its interior with a fire-brick, or equivalent lining, from the grate to the top, and forming a contracted throat under an elevated hot-air chimney, J, which is encased in a surrounding cap K, all substantially for the purposes set forth.

3. The bottom plate A, provided with apertures *b b*, regulated by a slide *c*, on the under side, and provided with flanges *a a′* on its upper side to receive and secure the cylinders C D, substantially as specified.

4. In combination with the base plate A, as constructed, and the brick-lined cylinder D, as speci-

fied, the vertical pipes *e e*, with openings *i i*, substantially as specified.

5. The arrangement of the grate *f*, flange *g*, plate *h*, and supports *k k*, all substantially as described.

6. The conducting-chamber L, constructed as described, with damper *x*, so that the heat, &c., may be conducted at will, either into the chimney-flue or into a heating-drum, substantially as shown and described.

7. In combination with the cylinder D, chimney J, cap K, and conducting-chamber L, the pipe M, cap K′, and drum C, or their equivalents, all constructed and operating substantially as specified.

88,868.—John R. Hand, Billingsville, Ind.—*Cultivator.*—April 13, 1869.

Claim.—1. The provision, in a cultivator, of the slotted side-beams C C′, *c c′*, adjustable pivots *s s′*, swinging arms S S′, support T, and seat U, for the object explained.

2. The combination, as herein described, of the cross-beam E, hangers F F′, coupling-devices I I′, *k k′*, beams K K′, standards L L′, handles N N′, bar O, and spring R, for permitting of the elevation of the shares *l l′*, for the purpose set forth.

3. The general combination and arrangement of the slotted cross-beam E *e e′*, hangers F F′, *f f′*, screw-threaded tie-rods G G′, *g g′*, slotted plates H H′, *h h′*, I I′, shiftable braces J J′, beams K K′, *k k′*, standards L L′, shares *l l′*, rods M, handles N N′, perforated bars, O O′, *o o′*, and set-screws P P′, for the purpose of producing an improved adjustable cultivator.

88,869.—Adolph Henkel, New York, N. Y.—*Carving-Machine.*—April 13, 1869.

Claim.—The combination, with the horizontally and vertically adjustable, or swinging arm E, carrying the tracer and carving-tool, of the head-stocks J J′, the screw L, the rod M, the graduated lever N, the rod O, and the graduated plate P, essentially as described.

88,870.—I. F. Herrin, San Antonio, Texas.—*Seed-Planter.*—April 13, 1869.

Claim.—The combination of the lock-lever Q, bars O, and set-screw R, with each other, the tongue P and frame A, arranged substantially as described, for the purpose specified.

88,871.—William Cleveland Hicks, New York, N. Y.—*Steam-Engine.*—April 13, 1869; antedated April 1, 1869.

Claim.—1. The arrangement of the two pitmen E E′, cranks F *d* and F′ *d′*, shaft G, and drum H relatively to each other, and to the two cylinders A A′, wrists *a a′*, slides C C′, and guides D D′, substantially as herein described.

2. The arrangement of the valve, rock-shafts *r r′*, and their valve-connections, and the pitmen *n n′*, connecting said rock-shafts with the slides of the pistons, substantially as herein described, whereby the main valve is operated by the piston of the other cylinder.

3. In combination with two adjacent main valves, controlling separate cylinders, as specified, the cut-off valves operated, each cut-off to the one cylinder, by the main valve of the adjacent cylinder, essentially as described.

88,872.—W. S. Hill, Manchester, N. H.—*Velocipede.*—April 13, 1869.

Claim.—1. The combination of the cross-bar L and spring *l*, with the axle A and swiveled reach C, substantially as described for the purpose specified.

2. The cross-bar L, formed on the swinging reach C, and acted upon by springs *l*, as set forth for the purpose specified.

3. The combination of the slides I, foot-supports K, connecting-rods *j*, and slotted vertical frames J, with the cranks *i* of the front axle D, all arranged and operating as described, for the purpose specified.

88,873.—Jacob Hinds, Hindsburg, N. Y.—*Compound for Destroying Insects.*—April 13, 1869.

Claim.—A compound for destroying insects, composed of the above-mentioned ingredients, used in about the proportions named, substantially as described.

88,874.—Lysander Holmes, Newton, Mass.—*Adjusting Feed-Rollers for Carding-Engines.*—April 13, 1869.

Claim.—The combination, with the series of adjustable rolls *c c e e* and their guides *b b d d*, of the plate *f* and sliding bar *g*, having inclined planes *i i h h*, all arranged substantially in the manner and for the purpose set forth.

88,875.—Stephen Hughes, Hamilton, Ohio.—*Bran-Duster.*—April 13, 1869.

Claim.—The combination of the concave adjustable burr C, on shaft K, with the adjustable brushes D, bolt B, and adjustable oil-cup *m*, for regulating the machine while in motion, substantially as described, and operating as and for the purposes set forth.

88,876.—Charles Cornelius Hull, Williamsburgh, N. Y.—*Mechanism for Transmitting Motion.*—April 13, 1869.

Claim.—The combination of the pendulums A and O with the working-beam S, and the gear-wheels, cranks, and rods connected therewith, substantially as herein shown and described, and for the purpose set forth.

88,877.—Carleton B. Hutchins, Ann Arbor, Mich.—*Composition for Artificial Stone.*—April 13, 1869.

Claim.—The compounding of ingredients before named, to make a water-proof rock, to be used in the various arts before named.

88,878.—Benjamin F. Jewett, North Bangor, N. Y.—*Milk-Pan.*—April 13, 1869.

Claim.—1. A milk-pan, constructed with double top, sides, and bottom, and having an open space, or chamber between said double portions, for reception of a cooling or a warming medium, substantially as herein described.

2. The combination, with the above, of the compartments, or channels *b*, communicating with each other, as described, and with inlet and outlet passages, whereby air, water, or steam admitted therein, is caused to traverse consecutively each compartment or channel, before reaching the outlet.

3. The combination, with the double sides of the pan, of the partition *g*, arranged relatively to the lower and the upper discharge pipes *d′* and *f f′*, substantially as and for the purpose herein set forth.

88,879.—Vincent E. Keegan, Boston, (Southern District,) Mass.—*Treating Wood for the Manufacture of Paper-Pulp.*—April 13, 1869.

Claim.—The process for reducing wood and woody fibers for the manufacture of paper-pulp by the oxidizing action of hypochlorite of lime in the manner substantially as set forth.

88,880.—J. W. M. Kirkpatrick, Hamburg, Ark.—*Threshing and Separating Machine.*—April 13, 1869.

Claim.—1. The horse-power B, when its arms *b* are provided with a series of adjustable pins, *c*, whereby the tension of the belt D is regulated, while the latter is in motion, as herein shown and described.

2. The threshing-machine, consisting of the box *g*, having the metal bars *h*, the beater arms *d* upon the shaft *e*, and the feed-board Gx, in combination with the pinion *f*, gear-wheel F, pulley *i*, and tension-pulleys *j*, all arranged and operating as described, for the purpose specified.

88,881.—Jeremiah Larkin, Unionville, S. C.—*Nursing-Table.*—April 13, 1869.

Claim.—The nursing-table A, provided with the drawers B, bottle-caster D, suction-tube E, discharge-tube F, and opening G, all constructed and arranged substantially as herein shown and described.

88,882.—William J. Lewis, Pittsburgh, Pa.—*Screw-Threading Machine.*—April 13, 1869.

Claim.—1. The arrangement of the rod *n*, screw

o, cone 4, and the hollow shaft *f*, with the die-holders *g*, as herein described.

2. The improved feed-head consisting of the rotating and notched disk *i*, adjustable gauge *m*, and sliding head *k*, all constructed, arranged and operating substantially as herein described, and for the purpose set forth.

3. The arrangement of rod *x* with ring, or rings *s*, and connecting-piece *x'*, the rod *n* with screw *o*, and cone 4, and the guide l^1 of the feed-head, as herein described, and for the purpose set forth.

88,883.—WALLACE R. MARIE, Boston, Mass., assignor to THOMAS A. MITCHELL, Washington, D. C.—*Pastry Cutter and Crimper.*—April 13, 1869.

Claim.—The rods A *c* and cutter B, in combination with the rolling-crimper E, handle *f*, and holder *g*, the whole arranged substantially as and for the purposes herein specified.

88,884.—JAMES A. MARINE, Mooresville, Ind., assignor to himself and ALLEN T. MANKER, same place.—*Attaching Hoes to their Handles.*—April 13, 1869.

Claim.—1. The combination of the screw-bolt *a*, washer *c*, nut *b*, loose ferrule B, having lugs *d' d'* and handle C, with the hoe-blade A, when constructed and arranged in the manner substantially as described.

2. The nut, or block D, when constructed to operate in the manner and for the purpose described.

3. The combination of the screw-bolt *a*, washer *c*, loose ferrule B, without *d' d'* and handle C, with the blade A, all constructed and arranged in the manner substantially as described.

88,885.—JOHN L. MASON, New York, N. Y.—*Machine for Making Sheet-Metal Screw-Caps.*—April 13, 1869.

Claim.—1. The face-plate G, with an opening entirely through it, in combination with the devices which hold the finished caps, form the thread thereon, release the caps from the threading-devices, and then discharge them, free from the machine, on the side of the face-plate opposite to that which they had entered, substantially as and for the purpose described.

2. The arrangement, on one side of the perforated face-plate G, of a clamp or stripper, R', operated by a wedged-rod, P, and spring R', substantially as and for the purposes described.

3. The trough H, in combination with the machine herein described.

4. In combination with the sheet-metal cap-threading-devices, the use of the gauge *s t t*, for receiving, holding, and centering the cap blanks preparatory to being threaded, substantially as described.

5. The dies or chasers *g*, or their equivalents, applied within recesses formed in the face-plate G, and made radially adjustable therein, as described, in combination with the mandrel-chuck D, as and for the purposes described.

88,886.—JOHN L. MASON, New York, N. Y.—*Manufacture of Sheet-Metal Screw-Caps.*—April 13, 1869.

Claim.—1. A machine-made sheet-metal screw-swaged cap *g*, having its closed end circularly scored or cut, substantially as described.

2. In combination with devices adapted for swaging or pressing screw-threads in sheet-metal caps, the cutting-tool *s*, applied, substantially as described, to partially cut through the ends of said caps during the threading-operation, substantially as described.

88,887.—THOMAS J. MAYALL, Roxbury, Mass.—*Rubber Hose or Tubing.*—April 13, 1869.

Claim.—1. A hose or tubing, in which longitudinal binders of thread, wire, twine, &c., or their equivalents, are inserted between the different layers or plies composing the same, substantially as described, for the purpose of preventing strains upon the hose or tubing, in a lengthwise direction, as set forth.

2. Hose or tubing in which longitudinal binders of thread, wire, twine, &c., or their equivalents, are inserted between the different layers or plies composing the same, and strands of the said materials wound, twisted, or braided around the said longitudinal binders and layer or layers of the hose or tubing, as set forth.

88,888.—THOMAS J. MAYALL, Roxbury, Mass.—*Manufacture of Rubber Hose or Tubing.*—April 13, 1869.

Claim.—1. Forming a hose or tube by the combination of such devices as will first cause a sheet or sheets of rubber, gutta-percha, &c., or of cloth coated with either or both, to be fed to and lapped, or partially lapped, around a mandrel, and one or more sets of braiding or weaving devices, so operating as to braid or weave cords, threads, wire, &c., around said sheet or sheets, as set forth.

2. In combination with the above arrangement of devices for feeding to and placing upon the different plies of the hose or tube a series of longitudinal-binding threads, wires, &c., substantially as described.

3. The arrangement of devices for winding upon the hose or tube, when finished, strips of cloth, tinfoil, or suitable flexible material, the same consisting of the spool *h'* and arm *k'*, attached to gear-wheel *m'*, receiving motion from the driving-shaft of the machine through intermediate gearing, substantially as herein above described.

88,889.—FREDERICK WILLIAM MCCLEAVE, New Bedford, Mass.—*Velocipede.*—April 13, 1869.

Claim.—1. The frame A, in combination with steering-stem B, spring C, nuts D and J, and double crank-shaft E, constructed in the manner and for the purpose as above described.

2. The detachable handle M, in combination with detachable link O and single crank on rear shaft.

3. The two-seated frame A, in combination with the steering and adjusting apparatus and the hand-lever and link, applied to a four-wheeled velocipede, to be propelled in the manner as set forth.

88,890.—JOHN MCGOVEREN, New York, N. Y.—*Breech-Loading Fire-Arm.*—April 13, 1869.

Claim.—The combination, with the barrel and the stock, of the spring C, when arranged to act upon the lip B of the lug A, all substantially as and for the purpose described.

88,891.—A. A. MCMAHEN, Oxford, Miss.—*Well-Auger.*—April 13, 1869.

Claim.—1. The employment, in connection with a well-auger, of the squaring-box A, operating substantially as and for the purpose herein shown and described.

2. Forming the helical part of a well-auger in separate sections, H I, substantially as and for the purpose herein shown and described.

3. The combination, in a well-auger, of the squaring-box A, with the helix, made in separable sections, H I, substantially as and for the purpose herein shown and described.

88,892.—E. MEARS, Battle Ground, Ind.—*Weather-Strip.*—April 13, 1869.

Claim.—1. The application of the S-shaped plate E, between the bar C and the pivoted weather-strip, substantially as described, so that it will always form a tight joint, substantially as herein shown and described.

2. The spring F, fastened to the weather-strip, and held with its upper end against the face of the door by an eye or loop *c*, as set forth, so that it can slide in said loop, as specified.

3. A weather-strip attachment to doors, when composed of the bar C, S-shaped plate E, hinged strip D, and sliding spring F, all combined, arranged, and operating substantially as herein shown and described.

88,893.—C. G. MILLER, Brattleborough, Vt.—*Saw-Filing Machine.*—April 13, 1869.

Claim.—1. The extension arm *o*, fitted on the sliding-bar G, which has the fixed arm *n*, in combination with the tube-sockets *r* on the arms *n o*, and with the swivel-pins H, for holding the file, all arranged so that a file of suitable length can be secured, and that the same can be turned on the axis of the

pins H and locked by the screw *w*, substantially as specified.

2. The spring E, when arranged as described, to keep the frame D elevated, so that it will hold the file against the tooth to be sharpened, as specified.

3. Providing a slot in the spring E, so that it may, by a screw, *i*, or its equivalent, be locked to the pivoted frame D, substantially as and for the purpose herein shown and described.

4. The jointed sliding frame B, carrying the arms *d* and clamping devices *e*, when arranged longitudinally-adjustable on the fixed bed A, to be adapted to hold saws of all sizes and in suitable positions, as set forth.

5. The sliding-frame C, carrying the pivoted frame D, that supports the sliding file-holder, when arranged so that it can be longitudinally adjusted on the bed-plate A, substantially as and for the purpose herein shown and described.

6. The screw *j*, fitted through the slotted extension *k* of the carriage C, to lock the file-frame D in any desired position, as specified, for the purpose set forth.

7. The file I, secured by the swivel-pins H to the sliding bar G, which works on the swiveled bar F, that is pivoted to the swinging frame D, all arranged as described, to allow the file to be adjusted in every direction, as set forth.

8. The swiveled file-holders H H, when arranged on the arms *n o*, as described, so that the file can be swung on one fastening-pin, *s*, while the other, *t*, travels in the slot of the arm *n*, as specified.

88,894.—THOMAS H. MOTT, New York, N. Y.—*Velocipede.*—April 13, 1869.

Claim.—1. The tube C, fitted loosely around the crank-axle A of a velocipede, to support the seat and the driving mechanism of the same, substantially as herein shown and described.

2. The oscillating propelling-lever D, pivoted to a pendent rod, *b*, of the tube C, and connected by the pitmen E E with the cranks of the axle, upon which the tube C is placed, substantially as herein shown and described.

3. The spring-rods F F, projecting from the tube C, that is fitted loosely upon the axle A, substantially as herein shown and described.

4. The cross-bar H, connected by a tubular socket with one of the supporting-rods F, and resting with a hook-shaped end upon the other rod F, it being longitudinally adjustable on said rods, substantially as herein shown and described.

5. The seat G, when provided with a shank that carries a tube, *d*, and pivoted to a pin, *e*, of the cross-bar H, so that it can be locked by ears *g*, as described, to be reversible, as specified.

6. The arm-support *i*, connected by rods *h h* with the tube C, which is fitted loose upon the axle A, substantially as herein shown and described.

7. A velocipede, consisting of the crank-axle A, wheels B B, tube C, rod *b*, lever D, pitmen E E, spring-rods F F, reversible seat G, sliding cross-bar H, and arm-support *i*, all combined and operating substantially as herein shown and described.

88,895.—ALBERT MURDOCK, North Bridgewater, Mass., assignor to himself and HERBERT E. SNOW, same place.—*Scissors.*—April 13, 1869.

Claim.—As a new article of manufacture, spring-scissors, provided with one shank, having one ring, *a*, and with the spring D, substantially as described, to operate as specified.

88,896.—HORACE W. PALMER, Kingsville, Ohio.—*Double-Tree.*—April 13, 1869.

Claim.—The caps or thimbles B, in combination with the brace-rod D, tension-nuts E, and sway-bar A, in the manner and for the purpose substantially as specified.

88,897.—CHARLES H. PARMENTER, Lowell, Mass., assignor to GEORGE W. RAYNES and AMOS S. GEORGE, same place. *Shuttle-Holder.*—April 13, 1869; antedated April 3, 1869.

Claim.—1. The self-adjusting front-piece *d*, with catch-hook *g*, for the purpose substantially as described and set forth.

2. A shuttle-holder, composed of three pieces, *b*, *c*, and *d*, when arranged substantially as and for the purpose described.

88,898.—F. P. PERDUE, Atlanta, Ga.—*Railway-Switch.*—April 13, 1869.

Claim.—The arrangement of the lever E, hinged rod F, bent levers O and M, and rods G and N, with the rails C C′, and pivoted rail J, in combination with the rod H, and signal I, all substantially as and for the purposes set forth.

88,899.—JOHN G. PERRY, Kingston, R. I.—*Combined Mowing-Machine and Hay-Spreader.*—April 13, 1869.

Claim.—1. Running the open wheel C on gear-rolls, substantially as and for the purpose set forth.

2. Running-wheel B on pivoted gear-wheels, substantially as and for the purpose set forth.

3. Combining a hay-tedder with a mowing-machine.

88,900.—ELIJAH S. PIERCE, Hartford, Conn., assignor to NATIONAL SCREW COMPANY, same place.—*Apparatus for Arranging and Conveying Screw-Blanks.*—April 13, 1869.

Claim.—1. The arrangement of the revolving drum A, with its slot *b*, arms *d*, and the shield B, substantially as described.

2. The revolving drum A, with its slot *b*, arms *d*, and shield B, in combination with the conducting-ways D, substantially as described.

88,901.—ELIJAH S. PIERCE, Hartford, Conn. assignor to NATIONAL SCREW COMPANY, same place—*Apparatus for Arranging and Conveying Screw-Blanks.*—April 13, 1869.

Claim.—1. An improved mechanism for arranging and conveying screw-blanks, or other similar articles, consisting of a hopper having a groove in its bottom, through which pass one or more arms or sweeps, to push forward the arranged blanks along the groove to the conveying ways, and also to cause them to fall into the groove, substantially as herein described.

2. The combination of the hopper A, the arm C, the conducting-ways E, and the shield F, arranged substantially as herein described.

88,902.—ELIJAH S. PIERCE, Hartford, Conn., assignor to NATIONAL SCREW COMPANY, same place—*Device for Connecting the Parts of Machinery*—April 13, 1869.

Claim.—The device substantially as described, for preventing the breaking of moving or stationary parts of machinery.

88,903.—WILLIAM POLYBLANK, Cleveland, Ohio.—*Oil-Can.*—April 13, 1869.

Claim.—1. The perforated bung-tube or thimble D′, in combination with the can A, substantially as and for the purpose described.

2. The combination of the discharging-tube F and supplementary thimble E, in the manner as and for the purpose set forth.

88,904.—HENRY J. PRINGLE and WILLIAM PRINGLE, Columbus, Ohio.—*Carriage-Coupling,*—April 23, 1869.

Claim.—The combination of the socket H and king-bolt G, with the reach E, reach-plate F, and axle A, substantially as herein shown and described, and for the purpose set forth.

88,905.—H. O. REDDISH, Linden, N. Y.—*Washing and Wringing Machine.*—April 13, 1869.

Claim.—The arrangement of the frame C, longitudinally-corrugated roller B, hung in yielding bearings, the spirally-corrugated rubbing-rollers E, the wringing-roll G, also hung in yielding bearings, the rubber wringing-roll F, and the board M, all operating as herein described, for the purpose specified.

88,906.—RENSSELAER REYNOLDS, Stockport, N. Y.—*Let-Off Mechanism for Looms.*—April 13, 1869.

Claim.—1. The let-off mechanism arranged to wind on the surplus yarn let-off, and to govern the tension of the warp by the winding-on devices, con-

structed substantially as and for the purpose described.

2. The combination, with the vibrating shaft actuating the yarn-beam, of the disks G and G′, or their equivalent, arranged to actuate it alternately in either direction, substantially as and for the purpose set forth.

3. The combination of the curved adjustable arm I^1 and friction-roll I^2 with the arm I of the whip-roll and the arm I^3 of the let-off mechanism, whereby relief is afforded the warp under an undue tension of the same, substantially as and for the purpose described.

4. The combination, with the whip-roll and the oscillating frame E, of the arm I, adjustable arms I^1 and I^3, and weighted bell-crank I^4, substantially as and for the purpose set forth.

5. The combination, with the bell-crank I^4 and the arm K, of the oscillating frame E of the spring L, substantially as and for the purpose set forth.

88,907.—Rensselaer Reynolds, Stockport, N. Y.—*Sash Stop and Lock.*—April 13, 1869.

Claim.—The wedge-shaped sash-stop C, constructed with a projection, *d*, on the inner edge of its butt end, whereby it is made to lock automatically when the sash is closed, substantially as shown and described.

88,908.—Almon Roff, Southport, Conn.—*Lock-Nut.*—April 13, 1869.

Claim.—1. Providing a shaft C, with double thread, *a* and *b*, crossing each other, as shown in Fig. 1, to allow a right-hand nut to pass over a thread adapted to a left-hand nut, and *vice versa*, as specified.

2. The combination of the screws *c*, with the nuts A B and screw-shaft C, substantially as described, for the purpose specified.

88,909.—Hilborne L. Roosevelt, New York, N. Y.—*Electric Organ-Action.*—April 13, 1869.

Claim.—1. The application of a separate battery to each separate octave of an organ, substantially as described, for the purpose specified.

2. Covering the mercury in the cups B and K, or in either, with glycerine, substantially as and for the purpose herein shown and described.

3. The wire S and the sliding-wedge T, or its equivalent, when arranged substantially as described, for the purpose of connecting the mercury-cups of key and pedal, to allow the pallets of both to be worked by the pedal alone, as specified.

4. The pallet C, constructed as described, in combination with the armature D, as herein set forth for the purpose specified.

5. The sliding pallet Q, when arranged and operating substantially as and for the purpose herein shown and described.

88,910.—Warren H. Sadler, and James M. Drysdale, Baltimore, Md.—*Advertising-Frame.*—April 13, 1869.

Claim.—The picture and advertising-frame herein described, consisting of the border A, the back-board D, having the detachable and removable part D′, the flanges *d* d^1, the raised parts d^2, and the depressions d^3 d^3, with their outer edges open, and the sliding-strip *s*, working in grooves in the back-board and borders, when the several parts are constructed and arranged in the manner and for the purpose set forth.

88,911.—Andrew B. Searles, Providence, R. I.—*Table-Caster.*—April 13, 1869.

Claim.—A table-caster, constructed of twisted wire, consisting of the handles, braces, legs, and feet A, rings B, and ornamented braces C, bound together with fine wire, and constructed as and for the purposes described and specified.

88,912.—Andrew B. Searles, Providence, R. I.—*Table-Caster.*—April 13, 1869.

Claim.—The combination of the handles A B, with the revolving spindle D, and as frame-braces *a* and A′, with the rings E, and ornamental braces H, the standard C′, with the tube *d′*, constructed as and for the purpose specified.

88,913.—Harvey F. Seibert, Brady's Bend, Pa.—*Fanning-Mill.*—April 13, 1869.

Claim.—1. The combination of the slotted and pivoted upright, J, rock-shaft K, adjustable shaft H, short cylinder L, long interior screen O, tube R, partition Q, and inner bearing I, all arranged as described, for the purpose specified.

2. The combination of the standard J, and rock-shaft K, with the shaft H, and case, or frame, of the mill, substantially as herein shown and described, and for the purpose set forth.

3. The arrangement of the pulleys U W, band V, shaft X, and beveled gear-wheels Y Z, with relation to the cylinder-shaft H and fan-shaft C, as herein described, for the purpose specified.

88,914.—William G. Semple, Cincinnati, Ohio.—*Cooking-Stove.*—April 13, 1869.

Claim.—1. The ash-chute F, ash-pan G, hearth-plate H, and gate I, arranged and adapted to operate as set forth.

2. The fender J, upon the front plate D, as and for the purposes stated.

88,915.—James B. Sexton, Pella, Iowa, assignor to himself and J. L. Andrew, same place.—*Cultivator.*—April 13, 1869.

Claim.—1. The slotted draught-bars M, constructed and operating in connection with the frame D E, plow-beams I, and draught-device N O P Q, substantially as herein shown and described, and for the purpose set forth.

2. The bars N, having one or more holes formed in them, hooks Q, and loops O, in combination with the draught-bars M, and double-tree P, substantially as herein shown and described, and for the purpose set forth.

88,916.—Isaiah Shaw, Four Corners, Md.—*Potato-Digger.*—April 13, 1869; antedated March 15, 1869.

Claim.—1. The combination of the two sets of rollers, operating in opposite directions, the upper set being armed with brushes, as and for the purpose set forth.

2. The dished wheel *a″*, constructed and operated substantially as set forth.

3. The combination of the plow A, endless apron *d*, rollers, moving in opposite directions, and dished wheel, substantially as described.

88,917.—Emile Sirret and Emile George Sirret, Buffalo, N. Y.—*Mop-Head.*—April 13, 1869.

Claim.—1. Operating the movable jaw or cross-head by means of screw on projecting part of frame, in combination with a thumb-screw nut working on said screw, and connected with the movable jaw for the purpose as set forth.

2. The bridle G and arms F F, as a means to connect and operate the movable jaw to and by screw B and thumb-screw nut L, substantially in the manner described.

88,918.—Thomas J. Sloan, New York, N. Y.—*Securing Knobs to their Shanks.*—April 13, 1869.

Claim.—Forming the cavity in the knob with lateral grooves or recesses, to receive and hold the ends of the locking-plate, in combination with the said locking-plate, screw held by the locking-plate and the hollow shank, substantially as and for the purpose described.

88,919.—Thomas J. Sloan, New York, N. Y.—*Securing Knobs to their Shanks.*—April 13, 1869.

Claim.—In combination with the knob having a cavity substantially such as described, the metal shank, with projecting spurs, and the anchor-pieces, held in place by soft metal, run in, in the molten state, substantially as and for the purpose specified.

88,920.—Thomas Smiley, Albia, Iowa.—*Tool for Shaving the Edges of the Soles of Boots and Shoes.*—April 13, 1869.

Claim.—The front section D, constructed as described, and slotted, to receive the adjustable right-angular gauge E, and its adjusting-screw, and adapted to be applied to the shaving-knife stock, in the manner herein described, for the purpose specified.

88,921.—Selden Snow, Somers, Conn.—*Folding Milking-Seat.*—April 13, 1869.

Claim.—A milking-seat, provided with a shelf, arranged in combination with the stand, or support, so as to fold up, substantially as shown and described.

88,922.—W. C. Spellman, Baltimore, Md.—*Broom-Head.*—April 13, 1869.

Claim.—The head C, pierced with holes D D, arranged in rows, as described, in combination with pins, which pass through the heads of the corn, in the manner and for the purpose specified.

88,923.—Timothy Stebins, San Francisco, Cal.—*Lifting-Jack.*—April 13, 1869.

Claim.—In a lifting-jack, the weighted arm E, on the lever C, and the spring *c*, together with the pawl, having the curved end *h*, substantially as herein described.

88,924.—Robert W. Stough, Griffin, Ga.—*Cotton-Gin.*—April 13, 1869.

Claim.—The bar C, carrying the rigid arms A, and operated by the arm F, cam D, and spring E, in combination with the inclined seed-board B, and the saws, as herein described, for the purpose specified.

88,925.—A. L. Swan, Cherry Valley, N. Y.—*Valve and Valve-Spring for Melodeons, &c.*—April 13, 1869.

Claim.—1. Packing the valves for organs, melodeons, &c., with the cloth strips *a*, India rubber, oiled silk, or other substance, *c*, impervious to air, and the thin leather layer *b*, all arranged as specified.

2. The springs G, constructed and combined with the valves, substantially as specified.

88,926.—Horace Thayer, Johnsonsburgh, N. Y.—*Compound for Filling the Pores and Coating Wood.*—April 13, 1869.

Claim.—The compound, consisting of the ingredients herein set forth, substantially as specified.

88,927.—J. L. Treat, New York, N. Y.—*Apparatus for Raising Beer.*—April 13, 1869.

Claim.—1. The combination of the two-way cock H, provided with a supply and discharge-pipe, rod L, coiled spring M, adjusting-nut O, float R, air-pipe E, stop-cock F, and air-chamber B, provided with a valve, C, and pipes D, with each other, and with the air and water-reservoir A, substantially as herein shown and described, and for the purpose set forth.

2. Forming an air-passage, *l'*, through the lower part of the rod L, substantially as herein shown and described, in connection with the spring M and adjusting-nut O, as and for the purpose set forth.

88,928.—J. Weimar, New York, N. Y.—*Construction of Burglar-Proof Safes.*—April 13, 1869.

Claim.—1. Making the body of the case of a series of drill-proof rings, shrunk into an inner cylinder, substantially as and for the purpose specified.

2. The cover, composed of a series of drill-proof rings, shrunk upon one another, substantially as and for the purpose specified.

3. The combination of the cover, constructed as described, with the body, constructed as described, when the outer ring of the cover and the upper ring of the body of the safe are both formed, substantially as described, to prevent wedging.

4. In combination, the inner case, the body of the safe, the cover, and the center screw, and its socket, substantially as and for the purpose described.

88,929.—George Westinghouse, Jr., Schenectady, N. Y.—*Steam-Power Brake-Device.*—April 13, 1869.

Claim.—1. The auxiliary engine with connections to and in combination with the air-pump, air-reservoir, and brake-cylinder, substantially as hereinbefore set forth.

2. The auxiliary engine, arranged to operate in connection with a railroad locomotive, feed and water-pumps, substantially in the manner hereinbefore set forth.

3. The reservoir *d*, with pipes *i* leading to one or more brake-cylinders on or attached to each car, with a valve or cock in each pipe, for turning on or off the supply of air, arranged substantially as above set forth.

4. The brake-cylinder *m*, in combination with the pipe *i'* and piston-stem, connecting with the brake-lever, substantially as hereinbefore set forth.

5. The adjustable head *n*, on the piston-stem *m'*, in connection with the brake-lever *n'*, substantially as hereinbefore set forth.

6. The valves *p*, arranged in the adjacent ends of the couplings *f*, and so guided by stems and guides, or diaphragms, as to operate to open each other when the couplings *f* are united, and automatically to close, when forcibly uncoupled, substantially as above set forth.

88,930.—John J. White, Philadelphia, Pa.—*Velocipede.*—April 13, 1869.

Claim.—1. The arrangement of the frame C, which connects the two axles B of the wheels A, said frame consisting of the upright bars *a a*, horizontal bar *b*, and frame D, all arranged substantially as set forth, the parts *b* and D being up and down adjustable, as set forth.

2. In a two-wheeled velocipede, the hinged seat E, in the frame D, as set forth, all arranged so that the seat can be swung out of the way, as set forth.

3. The hand-levers G, pivoted to the frame C, and connected with the cranks *c*, as specified.

4. The wheels *f*, mounted on the axles B, when combined with the levers *g*, in the manner specified.

88,931.—B. B. Williams, Laclede, Mo.—*Harrow.*—April 13, 1869.

Claim.—The harrow herein described, consisting of the hinged parts A and C, in combination with the rod G, hinged standards E, and chain F, substantially as and for the purpose set forth.

88,932.—Benjamin F. Wilson, Geddes, N. Y—*Sash-Holder.*—April 13, 1869.

Claim.—The retaining notch E and semicircular notch F, in combination with the knob D, shank C, wheel B, double inclines A A, and inclined slots G G, all arranged to operate substantially as herein shown and described.

88,933.—Benjamin F. Wilson, Geddes, N. Y.—*Stop-Valve for Steam and other Enginery.*—April 13, 1869.

Claim.—The adjusting-screw B, when combined and arranged with reference to the valve-plates and seats, substantially as herein set forth.

88,934.—Benjamin F. Wilson, Syracuse, N. Y.—*Stop-Valve for Steam and other Enginery.*—April 13, 1869.

Claim.—The stop-valve, composed of the parts D D, constructed as herein described.

88,935.—William W. Wilson, Geneva, Wis.—*Washing-Machine.*—April 13, 1869.

Claim.—1. The combination, in a washing-machine, of the semicircular tub A, shafts H, eccentric-pulley M, working-beams I, rods J, squeezing-frames C D, each working in a separate compartment, substantially as and for the purpose herein shown and described.

2. The combination, with the above-claimed parts, of the jointed rods J J', and pin-spring *e*, substantially as and for the purpose herein shown and described.

3. The hand-lever O L N, segment pieces *b*, and belt or band K, in combination with the pulley M, for imparting a vibrating motion to the squeezing-frames C D, as herein shown and described.

4. The combination, in a machine for household use, of the churn P, having double-dasher staves *g g*, connected by means of rods *h h* with the eccentric-pulley M of the washing-mechanism, substantially as and for the purpose herein shown and described.

5. The churn-mechanism Q Q, R, *l l*, *o*, S, *q*, *p*, *n n*, substantially as described, in combination with the double churn-staves *g g* and churn P, substantially as and for the purpose herein shown and described.

88,936.—WILLIAM WINTER, Leeds, England.—*Sewing-Machine.*—April 13, 1869.

Claim.—The combination of the needle-working arm D, needle-bar E, shuttle-lever G, and shuttle-carrier I, operating together, and when the said needle-arm D and shuttle-lever G are constructed so as to connect, respectively, with the needle-bar and shuttle-carrier by a divided end, such division being made so as to form a spring upon the end of the respective levers, substantially in the manner and for the purpose herein set forth.

88,937.—LOUIS WINTERHALDER and DAVID WILSON, New York, N. Y.—*Clothes-Drier.*—April 13, 1869.

Claim.—1. The application of the rods E to the bars D of a clothes-drier, when secured in the slots *k*, and by the eyes *i*, to secure the clothes to the bars, in place of clothes-pins, as set forth.

2. The springs *g h*, arranged on the plate A, to lock the bars D to the desired side, by means of the pins *f*, substantially as described.

3. The bars D, when provided with the grooves *d* and pins *e*, substantially as described, so that they can swing to both sides, and be arrested when swung far enough to either side, as specified.

4. A clothes-drier, consisting of the plate A, pivot C, bars D, rods E, springs *g h*, and pins *e* and *f*, all combined and operating substantially as herein shown and described.

88,938.—WALTER A. WOOD, Hoosick Falls, N. Y.—*Drive-Wheel for Harvesters.*—April 13, 1869.

Claim.—A main drive-wheel, for harvesting and other similar machines, composed of the three parts A B C, united and held together, as and for the purpose herein described and represented.

88,939.—HENRY AITKEN, Falkirk, Scotland.—*Mode of Roasting Iron-Ores.*—April 13, 1869.

Claim.—1. The treatment of iron-ores, or iron-stones, by coking or carbonizing, in closed or air-tight heaps, or in closed retorts, kilns, ovens, or chambers, so as to retain in them the fixed carbon, and prevent them absorbing too much oxygen, in contradistinction to calcining, or roasting the iron-ores, or iron-stones, in heaps in the open air, or in chambers to which the air has free access.

2. The collecting and utilizing of the volatile matter contained in the iron-ores, or iron-stones, thrown or drawn off in the process of coking or carbonizing, as above described, and which have hitherto been lost.

3. The purification of the coked or carbonized iron-stones by means of salt.

4. The application, in the process above described, directly to the iron-ores, or iron-stones, of a neutral flame, to effect their coking or carbonizing.

5. The coking or carbonizing of iron-ores, or iron-stones, by passing the gases evolved from iron-ores, or iron-stones, being coked or carbonized, in a retort, kiln, chamber, or oven, or set of such, through the iron-ores, or iron-stones, in others.

88,940.—JAMES ARMSTRONG, Jr., Elmira, Ill.—*Guard-Attachment for Cultivators.*—April 13, 1869.

Claim.—1. The vertically-movable standard J of the plant-fender, attached to the cross-beam C^1 by means of a sliding joint formed by the slot *n*, pivot-pin *s*, and adjustable bearing-pin *t*, substantially as described.

2. The vertically self-adjustable fender-standard J, pivoted to the shovel-carrying frame of a cultivator, and connected to laterally-vibrating shovel-standards, L L, substantially as described.

3. The slotted extension *k* on the rear end of a plant-fender, K, which is connected by rod K^1 to the shovel-carrying frame, in combination with the lower extension *k'* of the standard J, passed loosely through said extension *k*, and adapted for allowing the fender to rise and descend, but keeping it in place centrally between the laterally-movable shovel-standards L L, substantially as described.

4. The laterally-vibrating and laterally-adjustable standards L L, in combination with the centrally-arranged fender-carrying standard J, the extensible brace P P', and the adjustable connecting-rod R, substantially as and for the purpose described.

5. A plant-fender K, attached to a cultivator-frame by means of a front laterally and vertically vibrating suspension-rod K', and a rear laterally and vertically vibrating connection, in such manner that while the fender will swing laterally with the shovels L' L', it is at the same time allowed to rise freely over obstructions in its path, substantially as described.

88,941.—EDWARD BRADY, Philadelphia, Pa.—*Mode of Purifying Iron.*—April 13, 1869.

Claim.—Mingling and manipulating, by common mechanical processes, sulphurous acid, at a high degree of temperature, and roasted pulverized lime, with iron, in a heated or molten state, at a similar temperature, as nearly as may be; and also mixing and manipulating crude iron-ore, ground or reduced to a powder, with sulphate of lime, sulphate of soda, sulphate of alumina, or with any alkaline sulphate, pulverized, and both having been roasted or otherwise assimilated to about equal degrees of temperature, and then a fusion or melting of the metal to be made by the usual methods, in an ordinary furnace, the chemical changes, or results consequent thereupon, separating, dissipating, and combining, and depositing the impurities of silica, sulphur, &c., and leaving the molten iron pure, and converting it into steel or malleable iron, substantially as set forth.

88,942.—CHARLES N. BRAINERD, Hartford, Conn.—*Finger-Shield for Pennen.*—April 13, 1869.

Claim.—The finger-pad, constructed with the plate *a* and elevation *c*, substantially as and for the purpose described.

88,943.—MERRILL CHASE, Jr., and HORACE J. MORTON, South Paris, Me., assignors to themselves and FREEMAN C. MERRILL, same place.—*Shingle-Machine.*—April 13, 1869.

Claim.—1. The combination of the fixed and movable block-clamping arms G G and I I with the feed-rollers M N, and the polygonal block-carrier *g*, substantially as herein specified.

2. The arrangement of the feed-rollers M M with the saw and planer, all operating as described, for the purpose set forth.

3. The combination of the double cam-lever K, standards H H, and movable clamping-arms I I, with their cam-projections *n n* and springs *p p*, substantially as and for the purpose herein specified.

4. The stationary circular cam V, in combination with the revolving block-carrier and the vibratory pawl-levers T T, substantially as set forth.

5. The finger-guard plates W W, in combination with the feed-rollers M M, substantially as and for the purposes herein specified.

88,944.—JOHN D. COLE, Phelps, N. Y.—*Device for Adjusting and Hanging Carriage-Bodies.*—April 13, 1869.

Claim.—The instrument for hanging carriage-bodies, constructed and operating substantially as herein specified.

88,945.—EMMETT COOPER, Theresa, N. Y.—*Hay-Loader.*—April 13, 1869.

Claim.—1. The derrick, having the rigid arms *i* and *i'*, with the pulleys *h* and *h'*, and removable stop *s* attached, and the swinging-arm C, with the pulley *g*, and having the cords *a* and *l*, with weight O, all constructed and arranged to operate substantially as described.

2. The combination of the shaft G with the wheels T and R, with clutch Q and shaft F, with the wheels *f e* and S and drum E, arranged to operate as herein set forth.

3. The reversing-device, consisting of the shaft M, operated by the wheel J, engaging with the pinion *d*, on shaft G, and the cam K, rod L, and lever N, connected to clutch Q, all constructed and arranged to operate substantially as and for the purpose described.

88,946.—DAVID B. COX, Troy, N. Y.—*Base-Burning Stove.*—April 13, 1869.

Claim.—The annular flue H, surrounding or outside of the fire-pot, and separated therefrom by an open space, through which the air circulates, substantially as and for the purpose herein specified.

88,947.—Henry V. Edmond, Norwich, Conn.—*Apparatus for Exhibiting Hymns, &c.*—April 13, 1869.

Claim.—1. The combination, with the primary apron B, of one or more detachable aprons, C, adapted to be readily connected to or disconnected from the former, substantially as and for the objects stated.

2. In combination with the above, the bracket E E^1, inclined slots *e*, and pivoted catch E^2, for the purpose of applying new rolls, in the manner described.

88,948.—Alfred B. Ely, Newton, Mass.—*Material for Cartridge-Cases.*—April 13, 1869.

Claim.—1. The use of pyroxyline, and its compounds, substantially as described, in the manufacture of cartridge-cases.

2. As articles of manufacture, cartridge-cases, made of pyroxyline, and its compounds, substantially as described.

88,949.—James E. Emerson, Trenton, N. J.—*Circular Saw.*—April 13, 1869.

Claim.—A circular saw, when provided with apertures C C C and insertible teeth B, constructed and arranged to operate in the manner and for the purposes substantially as described.

88,950.—Peter Faber and Henry Martin, Canandaigua, N. Y.—*Fastening for Wagon-Seats.*—April 13, 1869.

Claim.—The seat-fastening herein described, consisting of the weighted lever C, provided with the curved hook-end *k*, when the same is employed with the right-angled plate B, provided with the headed bolt *d f*, the whole arranged as described, and operating in the manner and for the purpose specified.

88,951.—Amasa Foot, Earlville, Ill., assignor to Charles R. Cook, Buffalo, N. Y.—*Harvester.*—April 13, 1869.

Claim.—1. Two driving-gears, of unequal size, in combination with two pinions for varying the speed of vibration of the cutters.

2. Rotating the crank-shaft, by either one of two independent concentric bevel driving-gears, of unequal size.

3. Two bevel pinions, on the crank-shaft, arranged outside of the journal-bearing of said shaft.

88,952.—Kasson Frazer, Syracuse, N. Y.—*Trace-Buckle.*—April 13, 1869.

Claim.—1. The frame A, formed with inclined surfaces *f f*, *f' f'*, and adapted to receive the slide D, having projections *i i*, all operating substantially as herein described.

2. The tongue E, made substantially as herein set forth, hung in the slide D, and pressed down by the flat spring F, substantially as set forth.

3. The frame A, with loops *a a b d*, top C, with recess *e*, and inclined sides *f f*, *f' f'*, adapted to receive a slide, D, having projections *i i*, and carrying the tongue E, substantially as specified.

4. The slide D, having projections *i i*, and provided with a tongue, E, and the spring F, when fitted in a frame, A, having inclined surfaces *f f'*, substantially as set forth.

5. A trace-buckle, composed of a slide, D, carrying a tongue, E, and a spring, F, and a frame, A, the slide D moving in the frame on inclined surfaces *i i*, substantially as herein described.

6. The mode of locking and unlocking the tongue, by means of two sets of inclined guides, which support both ends of the tongue-slide in the operation of locking and unlocking, substantially as described.

88,953.—William J. Fryer, Jr., New York, N. Y.—*Building.*—April 13, 1869.

Claim.—The within-described system of constructing buildings, consisting of a combination of iron columns, iron girders, and iron bars and sheathing-plates, substantially as shown in the drawings, and for the purpose specified.

88,954.—Gustav Fuchs, Milwaukee, Wis., assignor to himself and J. E. Weir, same place.—*Buggy and Wagon Top.*—April 13, 1869.

Claim.—A frame for tops of buggies, wagons, and similar vehicles, consisting of the uprights *b* and *c*, shaped so as to form the entire sides of the frame, or jointed, in combination with the supports D, so as to be adjustable and removable, all constructed and arranged substantially as shown and described.

88,955.—Thomas H. Gary, Bristol, Md.—*Dumping-Wagon.*—April 13, 1869.

Claim.—The combination and arrangement of the frame A, having the slots *a' a'*, with the body C, the rollers B B', the pin D, the rod E and the catch or pin *m*, all constructed to operate together in the manner and for the purposes described.

88,956.—Thomas Greenhalgh, Raritan, N. J., assignor to himself and Alexander L. Holgaté, same place.—*Let-Off Mechanism for Carriers for Braiding-Machine.*—April 13, 1869; antedated April 5, 1869.

Claim.—The arm *g*, with an inclined side and an eye at one end sliding upon the bar *d*, and the other end resting against the side of the spindle *b*, in combination with the weight *e* and spool-ratchet *f*, as and for the purposes specified.

88,957.—William J. Hale, Ashley, Ill.—*Churn-Dasher.*—April 13, 1869.

Claim.—A churn, having jar A, dasher-staff B, dasher C, and removable perforated cylinder H, constructed and arranged substantially as specified.

88,958.—Frederick Henderson, Marietta, Ohio, assignor to himself and Isaac Atkinson.—*Lasting-Tool.*—April 13, 1869,

Claim.—The tool described, consisting, essentially, of the handles A B, and jaws C D, when constructed and combined as described, for the purpose set forth.

88,959.—Charles H. Hopkins, Lyndonville, Vt., assignor by mesne assignments to himself and H. A. Alden, same place.—*Bolt.*—April 13, 1869.

Claim.—The lock-bolt A, having the locking-pins *a* (one or more) arranged therein, with a transverse mortise, for the insertion of the keys B, C, or D, all constructed and arranged to operate substantially as and for the purpose set forth.

88,960.—John Houpt, Springfield, Pa.—*Surface-Condenser.*—April 13, 1869.

Claim.—1. The arrangement, in a surface-condenser, of vertical tubes F, open at their lower ends, but closed at the top, substantially as herein described.

2. The vertical tubes F, closed at the top, in combination with chambers B, B^1, B^2, and B^3, arranged in respect to each other and to the tubes, and communicating as set forth.

88,961.—William G. Hull, Sing Sing, N. Y.—*Harness-Saddle.*—April 13, 1869.

Claim.—The loop E, constructed and arranged upon a harness-saddle in conjunction with the terret B, substantially as described.

88,962.—Abram C. Jaques, Leavenworth, Kansas.—*Wagon-Brake and Tongue-Support.*—April 13, 1869.

Claim.—The supporting-plate A and brake-bar B, so constructed and arranged as to allow the brake-bar to be shifted laterally, for the purpose herein shown and described.

88,963.—Solomon Johnson, San Francisco, Cal.—*Amalgamator.*—April 13, 1869.

Claim.—Making slotted openings D D', with dovetailing ends, to receive a crank-connection, or segmental rack, substantially as described.

88,964.—Joseph C. Kent, Phillipsburg, N. J.—*Blast-Heating Apparatus for Smelting-Furnaces.*—April 13, 1869.

Claim.—1. Dividing the bed-pipe A into cells or divisions by transverse partitions or diaphragms, substantially as and for the purpose shown and described.

2. The cellular bed-pipe A, in combination with

the siphon-pipes B, placed longitudinally on the said bed-pipe, substantially as and for the purpose specified and described.

88,965.—Emmaus Knowlton, Stockbridge, and Stillman F. Smith, Royalton, Vt.—*Ox-Yoke.*—April 13, 1869.

Claim.—1. The arrangement and combination of the cramps *c c*, bolts *h h*, vibratory lever E, shifting pivot-bolt H, and connecting-rods G G, substantially as and for the purpose herein specified.

2. The stop-block or blocks L, for the purpose set forth.

3. The construction of the draught-staple I, with its inwardly-turned flanches *l l* secured to the yoke-beam by bolts *m m m m*, for the purpose herein specified.

88,966.—Moritz Krickl, New York, N. Y., assignor to H. Uhry, same place.—*Stair-Rod.*—April 13, 1869.

Claim.—The slotted sleeves or caps B, in combination with the slotted stair-rod A, and the screw *b*, constructed and arranged as shown and described.

88,967.—La Fayette Louis, New York, N. Y.—*Melodeon Attachment for Piano-Fortes.*—April 13, 1869.

Claim.—1. The combiuation, with a piano-forte, of an adjustable and removable musical wind-instrument, provided with melodeon-reeds, key-board, and bellows, complete in itself, when placed in front of the piano-keys in such position as to enable one and the same performer to play upon both instruments either separately, alternately, or simultaneously, substantially as set forth.

2. A separate and distinct musical instrument, complete in itself, when so constructed as to admit of its being attached to any style of piano-forte without the necessity of cutting or altering either instrument.

3. The adjustable standard for supporting the pedal H, arranged substantially as and for the purpose set forth.

4. The attaching of a wind-instrument, provided with melodeon-reeds and separate key-board and bellows, to a piano-forte, by inserting or fitting the melodeon and its bellows between suitable cleats attached to the under side or bottom of the body of the piano-forte, substantially as shown and described.

5. The flat tubes F, when applied to the melodeon and arranged substantially as shown and described, to admit of the melodeon being firmly secured to the piano-forte, and also admit of a communication being formed between the bellows G and the melodeon D, substantially as shown and described.

88,968.—Louis Mangeon, New York, N. Y.—*Lamp.*—April 13, 1869.

Claim.—1. The safety-chamber N, around and below the reservoir D, constructed substantially as described, and for the purposes set forth.

2. The head, P, of the conductor H, so arranged as to prevent the fluid from flowing into the chamber N while the lamp is filling, substantially as described.

3. The arrangement of the filling-tube E, on the side of the reservoir, in combination with the supplying-tube H, substantially as described.

4. The tubes *g* and *g′*, for holding and furnishing a supply of wick, substantially as described.

5. In combination with the wick-tubes *g* and *g′*, the plate *h*, with a curved or rounded end, for holding the wick in the cistern, substantially as described.

6. A weight, arranged in the foot or base of the lamp, on the opposite side from the filling-tube, through which the lamp is filled, so that if the lamp falls over, the weight will roll the lamp, and hold the filling-tube upward, substantially as described.

88,969.—William J. Manker and Allen T. Manker, Indianapolis, Ind.—*Sash-Stop.*—April 13, 1869.

Claim.—The combination and arrangement of the spring G, drum F, and cord D, with the spring-lever cam L, all constructed and arranged as and for the purposes set forth.

88,970.—Theodore Marschall, New York, N. Y.—*Piano-Forte.*—April 13, 1869.

Claim.—The radial flange *a* on the metal frame B of a piano-forte, forming the support for and combined with the plate *c*, and provided with holes *b* for the strings, substantially as herein shown and described.

88,971.—E. G. Matthews, Newton, assignor to F. F. Holbrook, Dorchester, Mass.—*Seed Sower and Planter.*—April 13, 1869.

Claim.—1. The metal frame, for supporting the wheel B, hopper or seed-box D, and hand-bars C, substantially as and for the purposes set forth.

2. The combination, with the seed-box or hopper D and cam M, of the connecting-rod or arm L and stirrer or agitator I, substantially as and for the purposes set forth.

3. The combination, with the forward ends of the side-pieces A, of the peculiarly constructed eye-bolt bearings *a*, substantially as shown and described.

4. The combination, with the sides of the frame or hand-bars C, of the holding-pins or hooks *p*, substantially as and for the purposes set forth.

5. The combination of the enameled open conductor and the frame, the whole being constructed and arranged substantially as and for the purposes set forth.

6. The combination, with the bottom of the hopper D, of the peculiarly constructed dial-holding plate E, having the projections *y* and *x*, substantially as shown and described.

7. The arrangement of the dial-plate E and dial F, and the device for holding the latter in place, substantially as described, whereby the dial can be adjusted without tipping or turning over the machine, as set forth.

8. The combination and arrangement, with the dial F, of the gate or cut-off G, pivoted or mounted upon the axis of the said rotating-dial, and applied to the under side of the same, substantially as shown and set forth.

88,972.—Edwin May, Indianapolis, Ind.—*Sheet-Metal-Lath Machine.*—April 13, 1869.

Claim.—1. The jaws A B, furnished with the molding projections and recesses C D, for giving the laths, substantially, the form shown, and arranged to operate substantially as herein set forth.

2. In combination with the jaws furnished with the molding projections and recesses C D, the piercing and setting punch G, for attaching the furring-studs to the laths, substantially as set forth.

3. The combination of the puuch G with the recess F, arranged to operate in the manner substantially as set forth.

88,973.—John McDowell, Buffalo Township, Pa.—*Salve for Cure of Foot-Rot in Sheep.*—April 13, 1869.

Claim.—The ointment, or salve compound, as hereiu described, aud for the purposes set forth.

88,974.—John McLeod, San Francisco, Cal.—*Combined Knob-Latch and Lock.*—April 13, 1869.

Claim.—The bar K and tumbler M, when arranged in relation to each other and to the key O, and the lug C, on the bolt B, substantially as hereiu set forth.

88,975.—George V. Metzel, Baltimore, Md.—*Stencil Impress.*—April 13, 1869.

Claim.—A stencil impress, consisting of a roller, covered with plush velvet, carpeting, or other similar material, constructed in the manner described and shown, aud applied to the purpose specified.

88,976.—Thomas Moore and Patrick H. Day, Bloomington, Ill.—*Inking-Apparatus for Color-Printing.*—April 13, 1869.

Claim.—1. The construction of a distributing-strip, cut to type-standard, a lifting-spring, and color-box, as herein described.

2. Securing the strips in the table as herein specified, by means of the clamp C and flange P.

88,977.—John Müller, Philadelphia, Pa.—*Folding-Bedstead.*—April 13, 1869.

Claim.—The combination of the detachable head and foot-boards, the legs C, and the folding-frame A A′, braced by a removable cross-bar, B, hung in pivoted eyes *c*, and provided with slats for supporting the mattress, all substantially as herein described.

88,978.—Charles C. Parsons, New York, N. Y.—*Process of Purifying Petroleum.*—April 13, 1869.

Claim.—The process of purifying hydrocarbons, by passing their vapors through purifying materials, arranged and composed substantially as described, while the said hydrocarbons are being distilled in a vacuum, and by superheated steam.

88,979.—E. C. Penfield, Philadelphia, Pa.—*Truss-Pad.*—April 13, 1869.

Claim.—The combination, hereinabove described, consisting of a ball-and-socket (or universal) joint, and the lever-tongue, (or bar,) having an acute angular edge, for the purpose of securely binding and holding, substantially as and for the purpose herein set forth.

88,980.—Treat T. Prosser, Chicago, Ill.—*Power-Hammer.*—April 13, 1869.

Claim.—1. The combination and arrangement of the two pairs of arms, I I′, springs J, and hammer W, with the fulcrum D, or its equivalent, substantially as shown and described, as a consequence of which arrangement the hammer is carried from the anvil by one pair of the springs, and returned thereto by means of the other pair.

2. In combination with the vibrating arms of a power-hammer, the eccentric O, with its connecting-straps and rods, the friction-wheels S S, and levers *q q*, for the purpose of regulating the blows of the hammer W, substantially in the manner described and shown.

88,981.—Treat T. Prosser, Chicago, Ill.—*Machine for Heading Bolts.*—April 13, 1869.

Claim.—1. As an improvement in bolt-heading machines, the hammer H, the pressing-dies P, and the rotating anvil or table T, when said parts are constructed and arranged to operate substantially as and for the purpose set forth.

2. The rotating-table T, with the clamping-jaws *i* and *i′*, arranged to operate in connection with the adjustable eccentric *g*, substantially as and for the purpose described.

3. The curved dies P, in combination with the rotating-table T, when said parts are constructed and arranged as described, to permit the blanks to be carried around under the dies, and brought to the required position for being operated upon, and then moved to the point of discharge, as set forth.

4. The combination of the table T, ring Q, and the spring-arm *u*, with the bolts *s*, *r*, and *e* attached thereto, with the gear-wheels *d*, *c*, *h*, and *b*, all arranged to operate substantially as described.

5. The arrangement of the spring-arm W with its pin *n′*, operating in connection with the inclined grooves *v* in the under side of the table T, for ejecting the finished bolts, substantially as described.

6. The arrangement of the shaft J with its crank and bevel-gear *p*, the shafts I, with the wheels *l* and I′, and the shafts *b*, with the wheels L and eccentrics M, all substantially as herein described, for the purpose of operating the hammer H and the dies P, as and for the purpose set forth.

88,982.—Alonzo C. Rand, New York, N. Y.—*Manufacture of Illuminating-Gas.*—April 13, 1869.

Claim.—The automatic method of regulating the fire under the still, substantially as set forth.

88,983.—Edward Reynolds, Winneconne, Wis.—*Churn-Lid Screen.*—April 13, 1869.

Claim.—The ring C, constructed and arranged in relation to the lid and dasher of a churn, substantially as herein described.

88,984.—Joseph A. Robbins, Boston, Mass.—*Stocking-Supporter.*—April 13, 1869.

Claim.—As an improved article of manufacture, a stocking-fastener, composed of an elastic band extending partly around the leg, and provided at its end with a series of claws, or hooked teeth, adapted to penetrate and catch in the fabric of which the stocking is formed, as and for the purposes specified.

88,985.—William Ross, Baltimore, Md.—*Door-Spring.*—April 13, 1869.

Claim.—The notched wheel D, and two-part stem D′, cast together, in combination with the pin *g*, socket-plate E, and spring A, said stem having a rounded part for entering the socket-plate, and an angular part protruding therethrough, all as and for the purpose described.

88,986.—Elihu Smith, Albany, N. Y.—*Base-Burning Stove.*—April 13, 1869.

Claim.—1. The annular horizontal flues *a a* and E E, and their connecting flue (perpendicular) *d*, in combination with a coal-supply heating-stove, or furnace, having a reservoir, *h h*, substantially in the manner and for the purpose above described.

2. The perpendicular flue *o* and lateral flue *c*, in combination with the valve or damper *s*, for the purposes herein set forth.

88,987.—Elihu Smith, Albany, N. Y.—*Base-Burning Stove.*—April 13, 1869.

Claim.—1. The flues *r r r* and *o o o*, in combination, constructed substantially in the manner and for the purposes above described.

2. The said flues, in combination with the damper *p*, as above set forth and described.

3. Said flues, in combination with the chamber K K, constructed in the manner substantially and for the purpose above described.

4. The combination of the flues *r r r* and *o o o*, with the flues H H, constructed substantially in the manner and for the purpose above described.

88,988.—James W. Smith, Charlestown, Mass.—*Folding-Table.*—April 13, 1869.

Claim.—The combination, with the cross-legs *a b*, jointed together, of the leaves *e f*, jointed together and to the legs *a b*, and a fastening-device, substantially as shown and described.

88,989.—Thomas G. Smith, Canton, Miss.—*Seed-Planter.*—April 13, 1869.

Claim.—The hopper, constructed with the inclined front side and a nearly vertical rear side, and arranged with the seed-raising wheel G, as described, and combined with the supporting-wheel B and shares I D, as and for the purpose set forth.

88,990.—Joseph Steger, New York, N. Y.—*Method of Transmitting Motion in Car-Brakes and other Machinery.*—April 13, 1869.

Claim.—The arrangement of two hinged jaws, C D, each carrying one or more rollers, which, when the jaws are closed, bear on the shaft A from opposite sides, and are capable of accommodating themselves to any eccentricity or unevenness in said shaft, the roller or rollers in one of the jaws being made to actuate a shaft or drum, B, substantially in the manner herein shown and described.

88,991.—J. B. Sweetland, Pontiac, Mich.—*Horse Hay-Fork.*—April 13, 1869.

Claim.—1. The combination of a fork, having two stationary upwardly-turned tines, two movable tines, turned in an opposite direction, and a stop, *d*, to prevent the fork from swinging back too far, substantially as herein set forth.

2. The trigger F, constructed as described, and placed relatively to the bar A, substantially as and for the purpose set forth.

3. The lever C, provided with one or more adjustable or hinged tines, substantially as shown and described.

4. The arrangement of the hinged or pivoted trigger F, the dog or pawl *e*, and spring *i*, substantially as and for the purpose set forth.

88,992.—Charles A. Taylor, Chicago, Ill.—*Trunk.*—April 13, 1869.

Claim.—1. A trunk-tray, having an inner tray hinged therein, so as to form a lower stationary and an upper movable compartment, and having both

compartments subdivided by partitions, substantially as herein described.

2. The metallic stays *f*, when constructed and arranged to operate substantially as herein described and for the purpose set forth.

3. So constructing and arranging a tray within a trunk, that it may be attached to or detached from the top or cover of the same, from the outside, at will, by a sliding bolt, or by the hasp of the lock operating a spring, substantially as herein described, or by any equivalent devices.

4. The device for supporting the top of the trunk, when raised, and locking it in position, so that it can be released only by design, consisting of the mechanical contrivances constructed substantially as herein described, and arranged to operate as set forth.

5. The combination of the trunk with the device consisting of the frame K, having pivoted therein a tongue, *q*, provided with a pin, S, for securing the straps, constructed substantially as herein described.

6. The device for locking the ends of trunks, consisting of the metallic plate N, provided with tongue Q and shoulder *t*, and the socket-plate R, provided with the sliding bolt S, constructed and arranged to operate substantially as herein described.

7. In combination, the plate L and frame K of the buckle, when constructed substantially as described, for the purpose of preventing any lateral motion of the parts of the trunk.

8. In combination, the metallic plate O, in which the hasp is pivoted, with the metallic plate P, when constructed and arranged substantially as herein described, and for the purpose set forth.

88,993.—H. Uhry, New York, N. Y.—*Stair-Rod.*—April 13, 1869.

Claim.—The combination of the rod A with the screw V and the pin P, placed eccentrically to the plug or end-piece F, as shown and described, and for the purpose set forth.

88,994.—H. Uhry, New York, N. Y.—*Stair-Rod.*—April 13, 1869.

Claim.—The end-caps C, or rings C′, slipping freely over the ends of the slotted rod A, and in combination with the hooks T, all constructed as shown and described, and for the purpose set forth.

88,995.—H. Uhry, New York, N. Y.—*Stair-Rod.*—April 13, 1869.

Claim.—The improved stair-rod A, having its end-caps B fastened thereto, and yet capable of being turned freely thereon, as described, in combination with the screw-eyes T, and pins P, constructed and arranged as shown and described, and for the purpose herein set forth.

88,996.—Thomas Welham, Philadelphia, Pa.—*Ring and Traveler for Spinning.*—April 13, 1869.

Claim.—1. The combination of the slotted rings *f f*, the adjustable arms *k k*, and the pulleys *g*, with the springs *m*, substantially as described.

2. The box-ring and pulley-travelers, constructed as herein described, and for the purpose set forth.

3. The combination of the box-rings and pulley-travelers with drawing and paying-out rollers of a spinning-machine.

88,997.—Thomas Welham, Philadelphia, Pa.—*Mechanism for Mixing Soapstone with Cotton being Carded.*—April 13, 1869.

Claim.—1. The combination of the sieve with a carding-machine, for the purpose set forth.

2. The driving-rod C, and its connections, in combination with a sieve and a carding-machine, as shown and described.

88,998.—George Wharton, Jerseyville, Ill.—*Gang-Plow.*—April 13, 1869.

Claim.—The parts described, consisting substantially of the lever *c′*, arm C, link D, and catch E, when arranged and operating substantially as described and for the purpose set forth.

88,999.—John P. Whipple, Woonsocket, R. I.—*Sirup-Pitcher.*—April 13, 1869.

Claim. — A sirup-pot, constructed with a cup-shaped head, C, and neck B, and the hollow elastic sphere or bellows D, with the stopper *d* and the vent E, substantially as described.

89,000.—John Young, Amsterdam, N. Y.—*Washing-Machine.*—April 13, 1869.

Claim.—1. The levers C C, when provided with the pin *c* or projection *c′*, and arranged so as to be folded within the tub.

2. The bulk-head F, provided with the openings F′ at its ends, as and for the purpose described.

3. The combination of the wash-board B, having levers C and foot-piece B′, with the bulk-head F′, when constructed with perforations F situated at its end, as and for the purpose described.

89,001.—Joseph C. Curryer, Thorntown, Ind.—*Hand Corn-Sheller.*—April 13, 1869.

Claim.—1. The serrated bars B, constructed in the manner and for the purposes set forth.

2. The serrated longitudinal bar D, constructed substantially as and for the purpose specified.

3. The box, or chute, as shown, when used in combination with serrated bars B D, and curved cross-bars C.

89,002.—John F. Adams, Worcester, Mass.—*Gold-Leaf Condenser.*—April 20, 1869.

Claim.—As a new article of manufacture, a leaf-condenser, consisting of the two plates A and B, combined with the apron D, operated substantially as described, and for the purpose set forth.

89,003.—John P. Allen, Manchester, Mass.—*Railway-Carriage Wheel.*—April 20, 1869.

Claim.—In a wheel provided with an inelastic body and tire, and an elastic annulus disposed between and eccentric with the two, as set forth, the combination and arrangement of the annular pockets or grooves *a a* with the cap D and flange *f*, and with a tire, B, separate from the flange *f* and cap D, and made so as to encompass and fit directly to the elastic annulus C, and with the elastic annulus C extended into such pockets or grooves, in manner as specified.

89,004.—Joseph Arbeiter, East Hartford, Conn.—*Lawn-Mower.*—April 20, 1869.

Claim.—1. The sliding adjustable journal-boxes R, moving in curved slots, as described, when used in combination with the frame of a lawn-mower, resting on shoes at its forward end, and movable about the axle of the wheel A, and with a revolving cutter, substantially as described.

2. The revolving cutter, adjusted as described, in combination with the train of wheels A B C D, the whole arranged and operating substantially as specified.

89,005.—J. S. Atterbury and T. B. Atterbury, Pittsburgh, Pa.—*Manufacture of Glass-Ware.*—April 20, 1869.

Claim.—1. A mold for blowing ewer-mouthed glass vessels, so constructed that the axis of the neck or mouth of the mold shall be situate forward of the center or axial line of the main cavity, and over that part of the mold in which the ewer-mouth is formed.

2. A mold for forming ewer-mouthed glass vessels, furnished with a shoulder, *i*, and flaring blow-over recess, substantially as described, for the purposes set forth.

3. Blowing ewer-mouthed glass vessels in a mold, constructed substantially as hereinbefore described, and for the purposes set forth.

4. The movable points *n′*, entering the cavity of the mold, and operated substantially as described, and for the purposes set forth.

89,006.—Austin Bartlett, Chester, Mass.—*Saw-Sharpener.*—April 20, 1869.

Claim.—The arrangement of the slide-table B, moving on a plane inclined below the center of the grindstone-shaft, in combination with the grindstone A, the parts being constructed in the manner shown and for the purpose specified.

89,007.—Isaac N. Beals, North Bridgewater, Mass.—*Lasting Boot and Shoe.*—April 20, 1869.

Claim.—1. In combination with a lasting-strap, a flexible tongue, operating with the strap, to draw the edge of the vamp over the shank of the boot, substantially as described.

2. In combination with the strap and tongue, the spring *d*, substantially as and for the purpose set forth.

89,008.—Jacob H. Beam, Woodside, Ill.—*Corn-Marker.*—April 20, 1869.

Claim.—1. A corn-marker, constructed with the frame-work A, tongue B, revolving jointed axle C, markers F, standards E, stirrups D, uprights G, braces H H, scraper-arm L, scrapers M, and treadle N, all arranged substantially in the manner herein described, and for the purposes set forth.

2. The arrangement and combination of the uprights G G, braces H H, and metal collar and band I, substantially in the manner herein described, and for the purposes set forth.

89,009.—Hugh R. Bean, Marlborough, Mass., assignor to himself and Samuel N. Aldrich, same place.—*Shoe-Last.*—April 20, 1869.

Claim.—The dovetail grooved metallic last, as made, with the grooves to extend across and be covered by the metallic toe-plate, and to open through the toe of the last, in manner as set forth.

89,010.—E. Bigelow, Springfield, Mass.—*Ice-Chest for Soda-Apparatus and Refrigerators.*—April 20, 1869.

Claim.—Providing the metallic water-tight lining of ice-chests with an inner lining of sheet gutta-percha, or other equivalent gum, as herein described, and for the purposes set forth.

89,011.—Erastus B. Bigelow, Boston, Mass.—*Loom.*—April 20, 1869.

Claim.—1. The combination of mechanism, herein described, for elevating and depressing the jacquard machine, and retaining it in position, consisting of two loom-girths, which support the elevating and depressing mechanism, four cams, arranged in pairs on two shafts, on which the four feet of the jacquard machine rest, and a connecting-shaft and two sets of worms and gears, by which the cams are simultaneously operated, the two sets of cams, worms, and gears being opposite-handed, substantially as and for the purpose specified.

2. The combination of mechanism, herein described, for operating the trap-boards and pattern-cylinder of the jacquard machine, consisting of a cam-shaft, placed transversely to the trap-boards, and receiving its motion from a loom-shaft, as herein specified, the cams on said cam-shaft, by which the trap-boards and pattern-cylinder are actuated, (the number of the trap-board cams varying according to the number of the trap-boards employed,) and the upright levers, and the connecting-straps, or their equivalents, arranged horizontally, or nearly so, as described, by which the action of the cams is imparted to the trap-boards and pattern-cylinder, as described.

3. In combination with the cam-shaft, for operating the trap-boards of the jacquard machine, placed transversely thereto, as herein described, the cams for operating the journals, (the number of the cams varying according to the number of journals employed,) and the levers and oscillating shafts by which the action of the cams is imparted to the journals, substantially as specified; and

4. In looms, having their shuttle-boxes detached from the lay, the combination of mechanism herein described, for operating a series of shuttle-boxes, or holders, on one or both sides of the loom, consisting of a shaft, from which the shuttle-boxes, or holders, are suspended, two ratchet-wheels, with teeth of opposite faces, affixed thereto, two vibrating lever-arms and pawls, which vibrate in opposite directions, and the cords and balance-levers, which convey the governing-action of the jacquard machine to the pawls, substantially as specified.

89,012.—Erastus B. Bigelow, Boston, Mass.—*Stopping-Mechanism for Power-Looms.*—April 20, 1869.

Claim.—1. The combination of mechanism, herein described, for arresting the movement of the loom, when the shuttle fails to enter its box, consisting of a protecting-rod, disconnected from the lay, but connected with the loom-shipper, and operated by a cam, as herein described, and a stop-lever, which is caused to engage with a fixed stop on a moving part of the loom, substantially as described.

2. The stop-lever for arresting the movement of the loom, in combination with a reversing-shipper, by which the reversing-mechanism is brought into action to reverse the motion of the loom, when the reversing-shipper is employed to release the stop-lever, substantially as described.

3. An elastic cushion, or spring, in combination with the stop-lever, as herein described, when said stop-lever is brought into action by a protecting-rod and withdrawn by a reversing-shipper, substantially as specified.

89,013.—Robert Blake, Scranton, Pa.—*Box-Opener.*—April 20, 1869.

Claim.—A tool for opening boxes, and for other purposes, constructed substantially as herein described.

89,014.—John T. Blois, Jonesville, Mich.—*Railway-Car Brake.*—April 20, 1869.

Claim.—1. The device for connecting the brakes of the different cars of a railroad-train to each other, consisting of paws *j k*, dogs *i h*, rods *g*, chains *g'*, *m*, *n*, and *e*, drum G, ratchet-wheel *l*, and brake-staff F, substantially as and for the purposes set forth.

2. In combination with the above, the rod and chain *f*, lever *b*, rod *a*, and spring *c*, substantially as and for the purposes described.

3. The device for removing the brakes from the wheels of the cars upon a railroad-train, from the locomotive, consisting of the jointed rack-bars H I, connected to each other by hinged bars K, toothed wheels J and *d*, racks *p* and *q*, springs *w*, and pins *v*, substantially as described.

4. The device for disconnecting the bars K from the toothed wheel *d*, on the brake-staves, consisting of grooves *r r'*, partition *s*, springs *t t'*, and pin *u*, substantially as described.

5. The additional iron staff Z, provided with spring *x*, substantially as and for the purposes set forth.

89,015.—Alonzo T. Boon, Galesburg, Ill.—*Steering-Apparatus.*—April 20, 1869; antedated April 5, 1869.

Claim.—1. The combination of the two half-wheel plates C' C, and pin G, substantially in the manner and for the purpose as herein set forth.

2. The combination of the spring F with the plates C' C, and pin, substantially in the manner and or the purpose as herein set forth.

89,016.—Andrew J. Braley, Berlin, Vt.—*Sled-Brake.*—April 20, 1869.

Claim.—The combination of the movable roll A, with the slots B B, the brakes C C, the brake-bars K K, and the hooks I I, when constructed and operated substantially as herein described, and for the purposes specified.

89,017.—H. Beaumont Briggs, Clarksburg, assignor to James Hunter and James E. Hunter, Adams, Mass., for one-half of said invention.—*Spinning-Frame.*—April 20, 1869.

Claim.—1. In combination with the movable yarn-delivering rollers and the continuously-revolving spindle, the lifting-bar, for lifting the yarn from the point of the spindle prior to winding the same on to the spindle, substantially as described.

2. The lifting-bar, in combination with the continuously-revolving spindle, for the purpose of lifting the yarn off from the point of the spindle, and holding it up while it is receiving the twist and being wound on to the spindle, without reducing the speed thereof.

89,018.—J. W. Brooks, Boston, Mass.—*Fastening for Stays of Corsets.*—April 20, 1869.

Claim.—The device, herein described and represented, for fastening the whalebone, or stiffener in

corsets, and other garments, viz, a metallic clip, having two or more points, which pass into or through two or more openings in the stiffener, and clinched therein or thereto, as herein described and represented.

89,019.—ADDISON P. BROWN, Worcester, Mass.—*File-Holder.*—April 20, 1869; antedated April 10, 1869.

Claim.—A file-holder, consisting of the jaws B and B′, screws D and E, and shank A, constructed and arranged substantially as described.

89,020.—JOHN H. BROWN, Pittsgrove, N. J., assignor to himself and JOHN B. HARRIS, same place.—*Pump-Valve.*—April 20, 1869.

Claim.—In combination with a well-pump, A B, and the platform C D, of the well, the lever e', together with its pawl-catch e''', the same being applied, arranged, and operated as and for the purpose shown and described.

89,021.—GEORGE BUCHANAN, Washington, Pa.—*Device for Steering Sleds.*—April 20, 1869.

Claim.—The combination and arrangement of the cutter, a T-shaped lever, *b*, and rein *e*, substantially as and for the purpose set forth.

89,022.—EBENEZER BUEL, Silver Creek, N. Y.—*Press for Baling Hay and Cotton.*—April 20, 1869.

Claim.—1. The angular shaft K and the chain L, when constructed and combined in the manner specified.

2. The levers F, with their hooks G and H, which form the device for locking the doors, or lids, when made and used substantially as described.

3. In combination with the box A and follower B, and the friction-rollers *e e* and *d d*, and the ratchets *e*, and the pawl *f*, and the lever M, the double-fusee wheel N.

89,023.—HENRY C. BULKLEY and AMOS SHEPARD, New Britain, Conn., assignors to the UNION MANUFACTURING COMPANY, same place.—*Pump-Valve.*—April 20, 1869.

Claim.—A pump-valve, C, and valve-seat D, secured in their places, by means of the end of the cylinder B, resting on and in direct contact with both the valve C and valve-seat D, all as and for the purpose substantially as required.

89,024.—LEGRAND S. CARPENTER, East Hampton, Conn.—*Gong-Bell.*—April 20, 1869.

Claim.—The combination and arrangement of the lever C D, the hammer-wire F, and the bridge H, to form a double-striking mechanism, substantially as herein described, and in combination with the lever, the hammer-wire, and bridge, the regulating stop-wire I, and the aperture *h*, for the purpose of regulating the position of the hammer, substantially as herein described.

89,025.—WILLIAM T. CARROLL, Medway, Mass.—*Ring for Spinning-Frame.*—April 20, 1869.

Claim.—The combination of the ring made with two races, as described, the socketed ring-rail and the clamp-screws for holding said ring to the rail, the whole being constructed and arranged as and for the purposes shown and specified.

89,026.—HENRY J. CASE, Auburn, N. Y.—*Mechanical Movement.*—April 20, 1869.

Claim.—1. The combination of the pedals, the rock-shafts, the vibrating arms, the links, and the cranks, all arranged and operating as described, with the driving-wheel.

2. The combination, as set forth, with the oscillating pendulum pedal of the rocking foot-rest.

89,027.—LEVI R. COMSTOCK, Keokuk, Iowa.—*Railroad-Car Stove.*—April 20, 1869.

Claim.—The construction of the oval-shaped stove A, with the draught-box D, cold-air chamber H, cold-air pipes J, hot-air chamber K, heated-air pipes L, N, and R, when arranged and combined, as herein described, and for the purpose set forth.

89,028.—CATHARINE F. CORBETT, Boston, Mass.—*Fluting-Machine.*—April 20, 1869.

Claim.—In a fluting-machine, the combination and arrangement of the hinged rods H H H, &c., the arms C′ D′, and the pressure-bar E F, substantially as described, and for the purpose set forth.

89,029.—EDWARD CRANDAL, Northville, Mich.—*Horse-Rake.*—April 20, 1869.

Claim.—The hay-rake described, having the main frame, to which are attached the rake-frame *h*, as described, head *h*, rods *x*, and lever *w*, the whole being arranged and operated as described.

89,030.—J. W. CULBERTSON, Richmond, Ind.—*Catarrhal Syringe.*—April 20, 1869.

Claim.—The enlarged oval nozzle A, having a central perforation for the jet, and provided with a concavity at the end, as and for the purpose set forth.

89,031.—JOHN DANNER, Canton, Ohio.—*Shelf, Coat-Rack, and Clothes-Frame.*—April 20, 1869.

Claim.—The arms C, and their metallic end-pieces *e*, with the bar B, made square or with ribs *a* and spaces *b*, in combination with a shelf, and with brackets for sustaining them, substantially as herein described and represented.

89,032.—JAMES DEMPSEY, Geneva, N. Y., assignor to himself and NATHAN LEVY, same place.—*Thill-Coupling.*—April 20, 1869.

Claim.—The combination of the thill-iron D, having the rubber bearings *g g*, with the socket C, provided with the heads *a a* and narrow slots *b b*, the whole arranged as described, and operating in the manner and for the purpose specified.

89,033.—ARNOLD DOLL, Cleveland, Ohio.—*Sad-Iron Heater.*—April 20, 1869.

Claim.—1. The combination of the perforated cover H and standards B′, in the manner as set forth.

2. The ribs P, in combination with the standards B′ and handle C′, substantially as and for the purpose specified.

89,034.—JOSIAH FOSTER, Sandwich, Mass.—*Safety-Pocket.*—April 20, 1869.

Claim.—1. In combination with the lid *d*, the spring-catch *f*, lip *h*, and locking-ring *k*, substantially as described.

2. In combination with the case *b* and its lid *d*, the hinged front flaps, or a flap, *l*, substantially as described.

89,035.—GEORGE C. GAGE, Waterford, N. Y.—*Copying-Press.*—April 20, 1869; antedated April 9, 1869.

Claim.—The combination and arrangement of the nut D and screw E, together with the platen-holding device *g h i j*, all constructed substantially as shown, and operating as set forth.

89,036.—ALFRED C. GARRATT, Boston, Mass.—*Voltaic Battery.*—April 20, 1869.

Claim.—In a voltaic pile, constructed substantially as described, slotted bars, constructed as and for the purposes set forth.

89,037.—GEORGE S. GRANT, Providence, R. I., assignor to ALBERT O. BAKER, same place.—*Snap for Bracelets, &c.*—April 20, 1869.

Claim.—The application of mortises or slots, or their equivalents, to the post of the snap, for the purpose of locking the snap, substantially as herein described.

89,038.—OLIVER E. GREENE, Lawrence, Mass.—*Lubricating Sleeve for Loose Pulleys.*—April 20, 1869.

Claim.—1. A lubricating cylinder or sleeve, arranged between the shaft or axle and the hub of the pulley or wheel, and fitted to turn freely on the shaft and in the hub, substantially as described.

2. Perforating the cylinder or sleeve, arranged to turn freely between the shaft or axle and the hub of the wheel or pulley, substantially as described, for the purpose set forth.

89,039.—Richard Guinn, Baltimore, Md.—*Medicine for Purifying the Blood.*—April 20, 1869.

Claim.—The combination of the ingredients in the quantities or proportions and for the purposes substantially as set forth.

89,040.—William Stuart Guinness, London, England, assignor to himself and Augustus Gardiner Seaman, same place.—*Sewing-Machine.*—April 20, 1869.

Claim.—1. The combination in a sewing-machine of a vertically reciprocating needle, a horizontally vibrating shuttle, and a vibrating take-up, all constructed substantially as described, and driven by a pitman from a common center, *c'*, as and for the purposes set forth.

2. The combination with the driving-shaft of the pitman *c*, driving the needle-bar, the link-rod *f*, the bell crank lever A, the pitman *h*, and the shuttle-slide, all arranged and operating as set forth.

3. The combination, substantially as set forth, of the feed-bar, supported by the throat-plate, with the inclines on the shuttle-holder, for the purposes specified.

4. The combination of the take-up and tension-spring with the links *f h*, the bell-crank lever A, and the shuttle-carrier, the combination being and operating substantially as set forth.

5. A reciprocating shuttle, the shell of which is provided with longitudinal ribs, to prevent the thread from coming in contact with the body of the shuttle.

89,041.—William Hall, North Adams, Mass.—*Mop-Wringer.*—April 20, 1869.

Claim.—In combination with the segmental press-plate B, the bent lever D, pivoted arm C', rod C, slotted guides E, draw-rods *b*, all arranged and operating substantially as and for the purposes set forth.

89,042.—Jamison H. Harrison, Boston, Mass.—*Saw-Sharpening Device.*—April 20, 1869.

Claim.—The saw-sharpening wheels C and C', arranged to operate as described, and for the purpose set forth.

89,043.—Myron E. Haskell, Lowell, Mass.—*Shuttle-Binder for Looms.*—April 20, 1869.

Claim.—The finger *h* and spring *i*, in combination with the binder *g*, substantially as and for the purposes herein described.

89,044.—Nehemiah L. Hatch, Cape Elizabeth, Me.—*Stove-Tongs.*—April 20, 1869.

Claim.—The improved stove-tongs, as herein described, combining the different parts, their form and arrangement, as herein set forth, to be operated by a single hand, as and for the purposes specified.

89,045.—John Hilts, Detroit, Mich.—*Table-Leaf Support.*—April 20, 1869.

Claim.—The circular bar C, hinged or otherwise secured to the plate K, or to the under side of the leaf of a table, as herein set forth, in combination with the loop D and latch F, substantially in the manner and for the purposes herein set forth and described.

89,046.—Stoughton B. Holden, Woburn, assignor to himself and Luther L. Holden, Boston, Mass.—*Churn.*—April 20, 1869.

Claim.—The cone-shaped bottom C, with corresponding form of dasher B', perforated as shown at S', in combination with valve E and tube *d*, substantially as shown and described.

89,047.—James A. House and William B. Snyder, Bridgeport, Conn.—*Velocipede.*—April 20, 1869.

Claim.—1. The combination, in a velocipede, of the steering-wheel, the steering-handle, and the brake, all constructed, arranged, and operating as set forth.

2. The combination, with the velocipede, of the sectional wheels, adjustable at equal distances from the center of the axle, by studs inserted in the axle, as set forth.

89,048.—Daniel Hussey, Nashua, N. H.—*Machine for Finishing Cloth.*—April 20, 1869.

Claim.—The combination and arrangement of two supporting-rollers G J, with the dampening-roller C, and trough D, the pressure-roller K, provided with journals, arranged in grooves *d'*, and with the cloth-roller I, unprovided with journals, the whole being operated substantially as specified, so that the cloth shall travel faster than the surface of the said dampening-roll on which it runs.

89,049.—A. B. Jones, Wilmington, N. C.—*Material for Journals and Bearings, and for Lubricating.*—April 20, 1869.

Claim.—The employment, for lubricating purposes, of vegetable fiber, disintegrated by the explosive force of steam, in combination with oil, or other suitable lubricant, substantially as herein specified.

89,050.—John Jordan, East Windsor, assignor to himself and C. N. Harlow, West Cummingtou, Mass.—*Turbine Water-Wheel.*—April 20, 1869; antedated April 15, 1869.

Claim.—1. The combination of the frame E, having the adjustable racks F, with the water-gates C, whereby the latter may be opened or closed simultaneously, substantially as described and shown.

2. The combination of the shafts I, having gear H and pinions K, with the circular racks J upon the water-gates C, substantially as shown.

89,051.—Robert W. Lamb, Wilmington, N. C., assignor to himself and A. Paul Repiton, Jr., same place.—*Still for Turpentine and other Substances.*—April 20, 1869.

Claim.—1. The application of superheated steam to the distillation of spirits of turpentine, as herein described.

2. The perforated pipe G, in combination with the coil I I, for the purpose of diffusing the superheated steam through the charge, as set forth.

3. The coil of pipe, arranged around the sides of the still, substantially as described and for the purpose set forth.

4. The steam-jacket, in combination with the still, as and for the purpose described.

89,052.—William St. George Little, Boston, Mass.—*Ladies' Work-Table.*—April 20, 1869.

Claim.—The combination and arrangement of the divided rotary drum D, the drawers *f f*, and the writing-tablet C, with the case A, and its cover, made in two parts, *a b*, hinged together, as set forth, the said case being applied to a stand, B, as described.

89,053.—Robert O. Lowrey, Salem, N. Y.—*Mode of Rendering Brick, Stone, Clay, Plaster, &c., Water-Repellent.*—April 20, 1869; antedated March 23, 1869.

Claim.—The method of rendering brick, artificial stone, mortar, plaster, cement, concrete, and similar articles, water-repellent, by the addition or use of a lime and grease compound, substantially as herein described.

89,054.—Robert O. Lowrey, Salem, N. Y.—*Mode of Rendering Fibrous Fabrics Water-Repellent.*—April 20, 1869; antedated March 23, 1869.

Claim.—The method of rendering fibrous fabrics, and similar articles, water-repellent, by the addition or use of a lime and grease compound, substantially as herein described.

89,055.—R. O. Lowrey, Salem, N. Y.—*Manufacture of Water-Proof and Water-Repellent.*—April 20, 1869; antedated March 23, 1869.

Claim.—A water-proof repellent fluid, consisting of an artificial gum, made as herein described, in combination with benzole, benzine, or similar volatile liquids, substantially as herein set forth.

89,056.—R. O. Lowrey, Salem, N. Y.—*Water-Proof Compound.*—April 20, 1869; antedated March 23, 1869.

Claim.—A water-proof compound, made of lime, grease, oil, or fatty substances, when combined substantially as herein described.

89,057.—A. C. LUTHER, Canton, Ohio.—*Harness-Buckle.* April 20, 1869.

Claim.—1. A push-bar or knob, B, when used in combination with the pivoted tongue A, substantially as and for the purpose specified.

2. The peculiar goose-necked form of the end *b*, of the tongue A, when said tongue is used in combination with a push-bar or knob, B, substantially as and for the purpose specified.

3. The tongue-blank A B, constructed of a single piece of metal, having the flattened end or push-bar B formed thereon, and with or without the goose-necked form of the end *b*, substantially as and for the purpose specified.

4. The harness-buckle herein described, composed of the frame D C D F, cross-bar E, and tongue A, with push-bar B, the several parts being constructed, combined, and arranged substantially as and for the purpose herein described.

89,058.—CHARLES LYNE, Padstow, England.—*Folding Perambulator.*—April 20, 1869; antedated Arril 6, 1869.

Claim.—The within-described folding perambulator, arranged, constructed, and operating substantially as specified.

89,059.—SAMUEL MASON and EDWARD BINNS, Beaver Falls, Pa.—*Attaching Handles to Cutlery.*—April 20, 1869.

Claim.—Attaching articles of cutlery, having flat and round tangs, to recessed, bored, and shouldered handles, by passing a rivet through the lips of the handle and the flat part of the tang, and covering the ends of the rivet, whether headed or headless, as well as the lips and tang, by casting a bolster thereon, substantially in the manner hereinbefore set forth.

89,060.—SYLVESTER G. MASON, Rochester, N. Y.—*Pump-Piston.*—April 20, 1869; antedated April 15, 1869.

Claim.—The arrangement of the segmental rings *g g*, with holes *i i*, the pins, or bearings *h h*, and spaces *o o*, in combination with a piston having openings *d d*, and valves C C, substantially as and for the purpose herein set forth.

89,061.—ALPINE MCLEAN, Boston, Mass.—*Car-Coupling.*—April 20, 1869.

Claim.—A car-coupling, having a draught-bar, *d*, in which there is a shackle-pin, *g*, operated by a spring, as described, arranged with the incline *f*, and provided with the spring-follower *i*, and the spring-jaws *c*, substantially as described.

89,062.—WILLIAM MOREHOUSE, Buffalo, N. Y.—*Machine for Punching, Shearing, and Straightening Fish-Bars.*—April 20, 1869.

Claim.—1. The frame B, constructed with lugs *a*, and offsets *a'*, for receiving screw-rods D, and confining-nuts *b b'*, and provided with bearings, for an eccentric carrying-shaft P, and with a reciprocating punch-carrying-block R, which has a chambered punch-head J' attached to it, in combination with the chambered section C, furnished with fish-bar-forming die-blocks *e e*, all being constructed and adapted to operate substantially as and for the purposes described.

2. The arrangement herein described and shown, of the punch-carrying head J J', furnished with a series of chambers, which are in communication with one another, and which separately conduct liquid to the heated parts of the punches and dies, the follower-block R, the flexible pipe V, and the dies *e e*, all constructed substantially as described.

3. The arrangement of shear or cutter *n*, stationary cutter 2, straightener W, grooved block *e'* and die-blocks *e*, and punches *c*, substantially as and for the purposes described.

4. In combination with the arrangement of the devices in the foregoing clause, the adjustable gauge-plate F, substantially as described.

5. The improved machine, herein described, for punching, straightening, ganging, and shearing concavo-convex fish-bars, having its parts constructed, combined, arranged, and operated substantially as described.

89,063.—ISAAC MORSE, Henniker, assignor to himself and CHARLES H. THORNDIKE, Weare, N. H.—*Water-Wheel.*—April 20, 1869.

Claim.—The water-wheel, having the guide *b* projecting forward into the mouth of the bucket, toward the guide *c*, at the back of the bucket, substantially as set forth.

89,064.—WILLIAM MUIR, Montreal, Canada.—*Sewing-Machine.*—April 20, 1869.

Claim.—1. The cams C C, constructed as described, in combination with the shaft J, and the needle-bar D, and shuttle-frame F, arranged respectively with tension devices and shuttle-guides, all operating as described for the purpose specified.

2. The shuttle-frame F, with the rollers *e*, in combination with the ways *f f*, for the purpose of facilitating the movement of the shuttle-frames, as set forth.

3. The feed-rollers L L', in combination with the pinion *ux*, keyed on the shaft V, the drum W, and ratchet-wheel X, placed loosely on said shaft, and the multiple pawl *xx*, operated from the driving-shaft B, through the media of the cam Z, yoke Y, all arranged substantially as shown and described.

4. The combination, with the yoke Y, of the bar B', of taper-form at its upper end, and operated by the pattern-cam R, for the purpose of regulating the feed-movement of the rollers L L', substantially as set forth.

5. The cam Q, arm S, bar T, and rod U, operated from the driving-shaft B, through the media of the cam O, yoke P, pawl *m*x, on radius bar *k*x, substantially as shown and described, for giving lateral movement to framing G.

89,065.—ANDREW MURRAY, Lowell, Mass., assignor to LOWELL MANUFACTURING COMPANY, same place.—*Power-Loom for Weaving Ingrain-Carpets.*—April 20, 1869.

Claim.—1. The combination of the vibrating connecting-bars with the pendulous frames, herein described, when said vibrating connecting-bars are pivoted or hinge-jointed to the pendulous frames, and communicate thereto the vibratory action of a cam or cams, substantially as specified.

2. In combination with each of the pendulous frames, a cam, by which said pendulous frames are severally operated, substantially as described.

3. The combination of mechanism herein described, for uniting and vibrating the two pendulous frames, consisting of a revolving shaft, extending across the loom from side to side, two cams, carried by said shaft, and vibrating connecting-bars, which severally communicate the vibratory action of said cams to the pendulous frames, substantially as specified.

89,066.—BYRON W. NICHOLS, Canton, Ohio, assignor to himself and WILLIAM R. RAYNOLDS, Jr., same place.—*Jam-Nut.*—April 20, 1869.

Claim.—The improved jam-nut herein described, composed of the nut B, with the conical hole E, and the conical washer C, with slots D D, the several parts being constructed and arranged substantially as and for the purpose herein described.

89,067.—OLE OSMUNDSON, Mission, Ill.—*Bee-Hive.*—April 20, 1869.

Claim.—The combination of hopper A, aperture B, sieve *c*, alighting-board D, and apertures *f g h i*, when constructed and arranged substantially in the manner and for the purpose herein set forth.

89,068.—THOMAS F. PALM, Toledo, Ohio, assignor to himself and L. J. BLIVEN, same place.—*Eaves-Trough Suspender.*—April 20, 1869.

Claim.—The arrangement of the metal strap or loop B, and the metal clamp or clasp A, applied to the trough, or roof, in the manner and for the purposes herein specified.

89,069.—GEORGE T. PARRY, Philadelphia, Pa.—*Velocipede.*—April 20, 1869.

Claim.—1. The steering apparatus, composed of the projection C, terminating in the horizontal cross-piece D, the cog-system *a*, *b b*, the horizontal arms *c c*, the vibrating-levers E E, the slides F F, and the

tiller M, or the equivalent of any of the foregoing constituent parts, arranged, constructed, and operating in the manner and for the purpose substantially as described.

2. The combination of the steering apparatus, the central frame, and the running-gear, arranged, constructed, and operated in the manner and for the purposes substantially as described, and forming a locomotive-machine, propelled, guided, and controlled by pedal or manual power.

89,070.—Denison Chauncy Pierce, Clayton, N. Y.—*Railway-Rail.*—April 20, 1869.

Claim.—As an improvement upon my patent, granted March 27, 1866, No. 53,479, the construction of the main or base rail, when the same is provided with broad lateral flanges and a lower vertical flange, and when the central upper portion of the rail and lower vertical flange, either or both, are made hollow, and the rail is combined with a suitable cap and interposed strips, substantially as and for the purposes set forth.

89,071.—Robert Pilling, Waterford, N. Y.—*Stop-Valve for Steam and other Enginery.*—April 20, 1869.

Claim.—The arrangement of the toggle-joint levers D D, between and with reference to the valves C and C′, fulcrum-stops I, and actuating screw-stem or spindle E, substantially as shown and set forth.

89,072.—Archibald Putnam, Owego, N. Y.—*Seeding-Machine.*—April 20, 1869.

Claim.—1. The face-plate E, provided with lugs or ears *m m m*, for the purpose of fastening to the outside of the grain-box, when used in combination with a vertical distributing-wheel, substantially as described.

2. The manner of constructing the distributing-wheel D, with a flange on its periphery, and indentations in or irregularities upon the bottom of its circular channel or recess, in combination with a round, grooved rod, for giving it motion, substantially as herein set forth.

3. The employment of a clutch, *n*, grooved sliding-rod O, (or their equivalent,) and incline lever *d*, divided at the clutch *n*, for the purpose of stopping and starting the feed-runs simultaneous with the lifting or lowering of the hoes or teeth, substantially as described.

89,073.—David Quinn, Chicago, Ill.—*Submarine Pump-Dredge.*—April 20, 1869.

Claim.—The guides E, in combination with the quadrant F, pipe C, and pump B, when the same are used in the manner and for the purposes herein specified.

89,074.—Tryon Reakirt, Philadelphia, Pa.—*Manufacture of White Lead.*—April 20, 1869.

Claim.—1. Subjecting metallic lead, in a closed chamber, heated to a proper temperature by confined steam, or other heating apparatus, simultaneously to the action of free steam, or its equivalent, to start the oxidation of the lead, and then to the action of acetic acid, in the form of a spray, or shower, and of carbonic-acid gas, diffused through the chamber, substantially as described.

2. The use of chlorine gas and solution of caustic soda, substantially as described as and for the purpose specified.

3. The peculiar application of the carbonic-acid gas, by injecting it into the chamber, through pipes passing through either the top or bottom thereof, or through both, and thus securing a more perfect diffusion of the gas throughout the chamber, and bringing it into more perfect contact with the lead, substantially as described.

4. The use of carbonic acid and chlorine gases, or chloride of soda, or their equivalents, in and during the process of washing the lead, substantially as described, as and for the purpose specified.

5. Purifying carbonic acid gas arising from the combustion of fuel, by passing the same through water, holding in solution hypochlorous or chloric acid, or the other substances previously named, substantially as described, as and for the purpose specified.

88,075.—William G. Reed, Chelsea, Mass.—*Chimney.*—April 20, 1869.

Claim.—A chimney-building block, provided with smoke and ventilating-flues, substantially as and for the purpose described.

89,076.—John Reichenbach, Allegheny City, Pa., assignor to himself, John Heath, and William R. Fitzsimons, same place.—*Composition for Making Chilled Castings.*—April 20, 1869.

Claim.—As a coating for the chill in making chilled castings, a mixture of gum-shellac, alcohol, and lamp-black, in the proportions and used substantially as stated.

89,077.—Hiram A. Reid, Beaver Dam, Wis.—*Bag-Holder and Truck Combined.*—April 20, 1869.

Claim.—In combination with the handles E E, spreaders F F, supported in place by a single or double rod K, and held apart by a coiled spring, I, or its equivalent, a curved ratch, G, pivoted or hinged in the handles E E, to engage on pin M, all arranged to operate with the truck, substantially as herein set forth.

89,078.—Elisha B. Rich, South Boston, Mass.—*Automatic Feed-Crib for Stable-Stalls, &c.*—April 20. 1869.

Claim.—1. The combination and arrangement, with a feed-crib for stalls, of an arrangement of mechanism susceptible of automatic operation, substantially as described, for the purpose specified.

2. The extended shaft F, with cam N, in combination with the devices of the first clause of claim, substantially as and for the purpose specified.

89,079.—Thomas C. Robinson, Boston, Mass., assignor to himself and George H. Sanborn.—*Railroad-Chair.*—April 20, 1869.

Claim.—1. The combination of the plate P, clamps C C′, braces B B′, and wedge W, all constructed and operating substantially in the manner and for the purpose set forth.

2. In combination with the slotted wedge W and plate P, the lock L, arranged and operating as described.

3. A railroad-chair, constructed substantially as described, by which the rails are held most immovably, and most directly in line with each other, when subjected to the greatest superincumbent weight, as specified.

89,080.—George W. Rogers, Philadelphia, Pa.—*Rotary Pump.*—April 20, 1869; antedated April 3, 1869.

Claim.—The segmental piston S P, in combination with the receiving-valves C C^1, partition P T, circular flanges C F, and delivery-valves C^2 C^3, the whole arranged and operating substantially in the manner described.

89,081.—Mark M. Rowell, Brandon, Wis.—*Automatic Seed-Separator.*—April 20, 1869.

Claim.—1. The combination of the shoe G, trough F, and wheel J, constructed and arranged as and for the purpose set forth.

2. The shoe G, screens H H, and stretcher-rod M, the latter being arranged to strain the screens, as and for the purpose set forth.

3. The trough F, hinged to the cross-piece B, in combination with the shoe G, frame D C, straps E E, legs A, wheel J, depending supports *b*, set-screw R, and cross-piece B, as and for the purpose set forth.

89,082.—Alonzo Saltsman and Clark H. Charlesworth, Avoca, and R. F. Osgood, Rochester, N. Y.; said Osgood assigns his right to said Saltsman and Charlesworth.—*Harvester.*—April 20, 1869.

Claim.—1. The arrangement of the rectangular lever-frame, G H, I I, pivoted at *c h*, and inclosing the cam-wheel C, in such a manner as to divide the strain on both sides of the center of motion of said frame, as herein set forth.

2. In combination with the rectangular lever-frame G H, I I, and the cam-wheel C, the adjustable teeth *d d*, for gauging the stroke of the sickle, the

whole arranged as described, and operating in the manner and for the purpose specified.

89,083.—CHARLES G. SARGENT, Westford, Mass.—*Cotton-Gin.*—April 20, 1869.

Claim.—1. The guard-plate and guard-roller, arranged substantially as described, in combination with the cleaning-cylinder, when constructed as to its surface, substantially in the manner set forth.

2. The ginning or cleaning cylinder, having its surface constructed substantially as described, in combination with a guard-plate or roller for retarding or knocking off seeds or burrs for ginning purposes.

3. A raw-hide or partially elastic surfaced guard-roller, arranged to operate in combination with a cleaning-cylinder in a machine for cleaning fiber, when the surfaces of the two revolve one with and the other against the feeding-direction of the fiber, substantially as described.

89,084.—ARTHUR SCHÄFFER, Dubuque, Iowa.—*Music-Rack.*—April 20, 1869.

Claim.—1. The construction of the base of a portable rack, of right-angle strips A A, united by pivots to a central standard, in combination with hinged pieces C C and pins *i i*, arranged substantially as described.

2. The slotted standard B, having pivoted in its slot the perforated piece D and prop E, and having pivoted to its ends the pieces C C and A A, substantially as described.

89,085.—CARL SCHARFFE, Cleveland, Ohio, assignor to WILLIAM G. WILSON, same place.—*Gathering-Attachment for Sewing-Machine.*—April 20, 1869.

Claim.—The combination of the rod B, adjusting-screw D, feeder C, lever E, connecting-rod or arm F, and plate A, the same being constructed and arranged to operate substantially as described, and for the purpose set forth.

89,086.—PHILANDER SHAW, Boston, Mass.—*Street-Car.*—April 20, 1869.

Claim.—In a car or other vehicle, a series of suspended seats, arranged to operate substantially as described, and for the purpose set forth.

89,087.—JOSEPH SHIRK and ISAAC W. MARTIN, East Earl Township, Pa.—*Boiler-Feeder.*—April 20, 1869.

Claim.—The flanged stuffing-plates G, in combination with the plunger, or piston F, cylinder A B, and shoulders *s*, constructed and arranged as described.

89,088.—DEXTER SMITH and J. W. STORRS, Springfield, Mass., assignors to the WESSON FIRE-ARMS COMPANY, same place.—*Cartridge.*—April 20, 1869.

Claim.—1. The construction of the paper shell with a solid butt of paper, C, forming the nut for the screw A of the metallic head B, substantially in the manner herein described.

2. The combination and arrangement of the head B and paper shell C, the parts being constructed substantially as herein described.

89,089.—JOHN F. SPAULDING, Rutland, Vt.—*Car-Coupling.*—April 20, 1869.

Claim.—The combination and arrangement of the ear E with the draw-bar, its sliding bunter B, and the operative spring, C, thereof, the whole being substantially as described.

89,090.—CHARLES A. STEBBINS, Springfield, Mass.—*Gas-Holder.*—April 20, 1869.

Claim.—1. The construction of a gasometer in such a manner that an inner body of water serves for purifying the gas before reaching the receiver, said inner body of water being kept from contact with the outer body of water forming the filling for the main tank, which filling remains pure, substantially as shown.

2. The arrangement of the tank C, pipes *a* and *b*, tank B, and cover A, substantially in the manner and for the purpose herein set forth.

89,091.—GEORGE P. SWEEZY, Riverhead, N. Y.—*Device for Measuring, Laying Out, and Cutting Garments.*—April 20, 1869.

Claim.—1. In combination with the two arms *n' n*, adjustable with the horizontal piece *g*, and capable of being moved toward or from each other simultaneously, and by gearing the fixed or central measuring-tape V, as and for the purpose described and represented.

2. In combination with the arms *n' n*, adjustable vertically and horizontally, the arms *p* and *t*, operating in connection with them, as and for the purpose set forth.

3. In combination with the shifting-arms and the centrally-fixed measuring-tape V the movable tape Z, for measuring from the three points, A, B, and D, as shown and represented.

89,092.—CHARLES A. S. TEMPLE, Greenwood Village, assignor to himself and STEPHEN E. TEMPLE, Boston, Mass.—*Safety-Switch.*—April 20, 1869.

Claim.—The combination and arrangement of the two switch-rails M M, and their locking-lever latching mechanisms, with the two switch-plates P P′, provided with a spring or springs, and the tongues R S R′ S′, as described, the whole being constructed and arranged with and so as to operate with the main and turn-out tracks of a railway, substantially in manner specified.

89,093.—ALEXANDER TITTMAN, Indianapolis, Ind., assignor to himself, WILLIAM H. TURNER, and DUNCAN HENDERSON.—*Sewing-Machine.*—April 20, 1869.

Claim.—1. So constructing a sewing-machine that it may be made to sew with two threads, forming either a shuttle or lock-stitch, or a double-loop stitch, at the pleasure of the operator, without taking from it any of its parts or adding to it other parts, substantially as described.

2. A sewing-machine for making the different stitches herein described, wherein are employed a circular bobbin, a turning hook, and a lower thread-carrying looper, the said elements being permanent fixtures to the machine at all times, substantially as and for the purpose described.

3. Providing for turning the hook 2 on arm N^2, out of the way of the looper, substantially as described, in order to admit of making a double-looped stitch.

4. The connecting-rod K, or its equivalent, for putting the looper out of motion and out of the way of the revolving hook, substantially as described.

5. The application of a latch-bolt, M, or its equivalent, to the connecting-rod K of the looper, substantially as and for the purpose described.

6. The self-acting tension device, shown in Fig. 6, consisting of a perforated lever spring, b^1, and pivoted block *y'*, combined with the devices *m' n'*, and operating substantially as described.

7. The double-crank arm N^2, provided with a hook, 2, or its equivalent, on one end, and also means for attaching a connecting-rod, L, to either end, substantially as and for the purposes described.

8. The organization of a sewing-machine for making the different stitches herein described, in such manner that both systems of mechanism provided for making these stitches are operated from the same driving-shaft without altering the cam which operates these devices for making both stitches, or the prime motors of the machine, the parts composing the machine being permanent attachments at all times, substantially as and for the purposes set forth.

9. Operating a hook which turns on an axis, and a vibrating or reciprocating thread-carrying looper in one and the same machine, but at different times, accordingly as one or the other of the aforementioned stitches is being formed from the same driving-shaft, these elements of the machine being permanent attachments thereof at all times, substantially as and for the purpose set forth.

10. The use of a turning-hook and a lower-thread-carrying looper in one sewing-machine, but at different times, accordingly as one or the other of the aforementioned stitches is being formed, these elements of the machine being at all times permanent parts thereof, substantially as and for the purpose described.

89,094.—Charles Toppan, Wakefield, Mass.—*Mode of Treating Paper and Other Fabrics to Render them Water-Proof.*—April 20, 1869.

Claim.—The treatment of paper, cloth, cork, sponge, leather, and other similar felted or textile fabrics and porous substances, or articles made therefrom, by the application thereto of paraffine in solution, substantially as herein described, for the purpose set forth.

89,095.—Charles Toppan, Wakefield, Mass.—*Water-Repellent Material.*—April 20, 1869.

Claim.—A repellent material, consisting of a paper, felted, or textile fabric or article, or porous substance, treated with paraffine in solution, substantially as herein described.

89,096.—J. H. Tyler, Martin, N. C.—*Horseshoe.*—April 20, 1869.

Claim.—The band C, with socket *c*, in combination with projection *a'*, of the toe-piece *a*, when secured substantially as described, and arranged in connection with a horseshoe of the described construction, as set forth.

89,097.—Calvin Wardwell, Painesville, Ohio.—*Auger.*—April 20, 1869.

Claim.—A boring-bit, having the small part A and large part B constructed together in one and the same tool, to operate in the manner and for the purpose described.

89,098.—George W. Warren, Alma, N. Y.—*Churn.*—April 20, 1869.

Claim.—1. The combination, with the stationary dasher C and rotating barrel B, of the vertically-sliding key *k*, the same being independent of the dasher, but preventing its rotation, and forming, with the dasher-shaft, the axis of the barrel, substantially as described.

2. The rotating barrel B, having the operating and steadying cog-rim 4 encircling its middle, in combination with the gearing 1 2 3, cord *c*, and weight *f*, when arranged and operating as described.

89,099.—Hiram Webster and Cyrus Powers, East Pembroke, N. Y.—*Potato-Digger.*—April 20, 1869.

Claim.—1. The arrangement, with the intermatching rake E and digger C, of the bolts and slots *g h*, and the bars and braces F G, said devices serving to adjust the said rake and digger relatively with each other, in the manner and for the purpose specified.

2. In combination with the above, the arrangement of the cog-bars *i i*, pinions I I', slots *j j*, connecting-piece J, and lever K, the whole operating in the manner and for the purpose specified.

3. The construction of the revolving rake, forming four teeth, *e e e e*, on one piece, each tooth projecting from the square, and not the center, and having square eye *l*, for the reception of the square shaft, with washers *m m* between each series of teeth, arranged and constructed as herein set forth.

4. The machine, as a whole, consisting of the digger C, adjustable by bolts and slots *g h*, the rake E, adjustable by bars and braces F G, the cog-bars *i i*, pinions I, slots *j j*, connecting piece J, and lever K, the whole operating as described, and for the purpose set forth.

89,100.—William M. Welling, New York, N. Y.—*Elastic Composition to Imitate Ivory and Similar Materials.*—April 20, 1869; antedated April 9, 1869.

Claim.—The elastic compound, formed by a mixture of the ingredients Nos. 1 and 2, in a heated state.

89,101.—J. Spencer White, Prescott, Wis.—*Door-Holder.*—April 20, 1869; antedated February 1, 1869.

Claim.—The cone A, the lock, B, with the bowl *d*, latch *c*, spring *f*, and thumb-key *g*, constructed and arranged for the purposes as herein set forth and described.

89,102.—Thomas E. M. White, New Bedford, Mass.—*Velocipede.*—April 20, 1869.

Claim.—Conveying motion to the driving-wheels of a velocipede or other machine by means of the combination of loose pulley C^2, lever-cam M^2, band D^2, and spring E', with the hub or shaft of the wheel.

89,103.—Amos Whittemore, Cambridgeport, Mass.—*Steam-Engine Valve-Gearing.*—April 20, 1869.

Claim.—1. The variable eccentric C *c*, and expander *g*, controlled by a governor, and operating to regulate the movements of the slide valve, substantially as described.

2. The expansible eccentric C *c*, in combination with a hub, J, carrying a wedge, *g*, said parts being applied upon the driving-shaft D, and controlled by a governor, substantially as described.

3. Shaft D, arranged at right angles to the piston P, and receiving motion directly from the piston, in combination with slide valve V, rod H, stuffing-box G, rod F', yoke F, rollers E, and an expansible eccentric C *c*, all being arranged to operate substantially as described.

4. The valve-chest B, and rectangular piston-chest A, constructed as herein described, and having a shaft D, arranged at right angles to them, and receiving motion directly from the piston P, substantially as described.

5. The construction of the rectangular piston P, with a slot in one side of it, for receiving the swivel block T, on the crank of the driving-shaft D, in combination with the adjustable piece T', substantially as described.

89,104.—Amos Whittemore, Cambridgeport, Mass.—*Mechanism for Operating Sewing-Machines.*—April 20, 1869.

Claim.—1. The arrangement and combination of the seat-frame K K, pawl G, ratchet, or other equivalent toothed wheel J, an intermediate train of gearing, and the driving-shaft B' of a machine which is to be operated by force of gravitation, all substantially as described.

2. The combination of the friction-brake *d* d^4, or its equivalent, with the seat-frame K, pawl G, ratchet J, or other equivalent wheel, an intermediate train of gearing, and the driving-shaft B', of a machine which is to be driven by force of gravitation, substantially as described.

3. The combination of the speed-equalizer *g' g*, or its equivalent, with the shaft B', and with the seat-frame K K, pawl G, ratchet J, or its equivalent, and an intermediate train of gearing, substantially as described.

4. The combination of the pawl K and ratchet J of the seat-frame, and the ratchets J J and pawls U U of the movable foot-stands R^2 R^2, or their equivalents, an intermediate train of gearing, and the shaft B', substantially as described.

5. The combination of the lever V, vertically-moving foot-stands R^2 R^2, pawls U U, and ratchets J J, all substantially as and for the purpose described.

6. In a mechanical movement, for operating small machines by the weight of the operator, locating the axis of the seat-frame K K below and in line, or nearly so, with the shaft I, in combination with the arranging of the pawl G, near the upper end of the seat-frame, substantially as described.

7. The combination of the foot-rest M *m* with the seat-frame K K, substantially as and for the purpose described.

8. The combination of the stop S, pawl G, and curvilinear-moving seat-frame, substantially as and for the purpose described.

89,105.—William Williams, Rochester, N. Y.—*Insole for Boots and Shoes.*—April 20, 1869.

Claim.—1. The arrangement of the felt next to the cloth *f*, which forms the foot-lining, and between it and the porous paper, in combination with the oiled or water-proof paper at the bottom, the edges of the cloth being turned in and interposed between the layers, substantially as set forth.

2. For the purpose of an insole-stiffener, the non-elastic but flexible shank, applied substantially as described.

89,106.—Benjamin F. Wilson, Geddes, N. Y.—*Filtering Feed-Water Heater for Steam-Generators.*—April 20, 1869.

Claim.—1. The air-chamber *c*, when arranged, with reference to the chambers M and I and tube *a*, substantially in the manner shown and described.

2. The arrangement of the air-space *b b*, pipes A, B, C, D, and E, filter G, plates K^1 K^2, catcher J, and chambers H and I, in the manner substantially as set forth.

3. The arrangement of parts making the continuous passage *a a a*, whereby to heat and filter the feed-water or other liquid, substantially in the manner specified.

89,107.—Thomas Wilson and John W. Appleyard, Chicago, Ill.—*Carpet-Stretcher.*—April 20, 1869.

Claim.—The combination and arrangement of the board A, the claws *c c*, the pawl *g*, the ratchet-wheels *r r*, the windlass *w*, the lever *l*, the cord *b*, and the hook *h*, as and for the purpose specified.

89,108.—Louis C. Woehning, New York, assignor to Pauline L. Ruthenburg, Brooklyn, N. Y.—*Size-Mark for Hats.*—April 20, 1869.

Claim.—The hatters' size-mark, formed of a metal frame, with points to secure the number in the frame, and points to attach the frame to the hat, as set forth.

89,109.—Shepherd S. Woodcock, Somerville Mass.—*Pencil-Sharpener.*—April 20, 1869.

Claim.—The within-described pencil-sharpener, consisting, essentially, of the wheel C, with its shaft B, the belt D, guides or holders *c f*, and guide-rest *g*, all combined and operating substantially as set forth.

89,110.—Charles E. Woodman, Boston, Mass.—*Buckle.*—April 20, 1869.

Claim.—The improved buckle, as constructed, with the stationary lip or lips, arranged with the receiving-mouth, and to operate with the auxiliary mouth, or slot of the body, in the manner substantially as explained.

89,111.—Jasper A. Woodworth, Hickory Corners, Mich.—*Device for Moving Heavy Bodies.*—April 20, 1869.

Claim.—The arrangement of the frame A, runners B, hinged brace C, rope or chain D, wheel E, pawl F, pinion G, shafts H and I, drums J and K, line L, grooved wheel M, posts N, crank O, line P, lugs Q, vertical rollers R, rope or chain S, lever T, drag-ropes U, and catches V, or their equivalents, when combined and operating substantially as and for the purposes herein set forth and described.

89,112.—Wilson Silas Wright, Ithaca, N. Y.—*Lathing-Machine.*—April 20, 1869.

Claim.—The combination and arrangement of the ends A with spaces and projections C D, connecting-bar B, and handle G, with the spike or rod J, through and loose in the handle, the same making the hand-tool or lath-machine, as set forth.

89,113.—Benjamin Anyan, Fitchville, Ohio.—*Combined Cultivator and Planter.*—April 20, 1869.

Claim.—1. The combination of the stationary cross-bar Q, foot-levers S, and cords or chains R, with the central beam K and movable side beams O of the cultivator, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the pivoted lock-lever U with the central beam K and movable side beams O of a cultivator, substantially as herein shown and described and for the purpose set forth.

3. The combination of the cross-bar L′, lever M′, cross-bar N′, and guards P′, with the spouts I′, plows J′, slide H′, hopper G′, beam or frame F′, and beams K, substantially as herein shown and described, and for the purpose set forth.

4. The combination of the cross-bar V, chains W, cross-bar X, lever Y, rack-bar A′, and seat-board B, with the beams K and forward part of the running-gear of a wagon, substantially as herein shown and described, and for the purpose set forth.

5. The combination of the brace-bars E′ with the forward part of the tongue G, substantially as and for the purpose herein set forth and described.

89,114.—Alfred Arnold, Tenafly, N. J.—*Jacket, or Case for Teapots.*—April 20, 1869.

Claim.—The "article of table-furniture," herein described, as a new article of manufacture.

89,115.—G. M. Atherton, Friendsville, Ill.—*Plow.*—April 20, 1869.

Claim.—1. The detachable, adjustable, and reversible cutter J, constructed and operating substantially as herein shown and described, and for the purpose set forth.

2. The bent support K, carrying the cutter J, perforated at the angle L^1 L^2, and adjusted upon the plow-beam, by means of the curved slot and the set-screw, as herein described, for the purpose specified.

3. The casting E, secured to the beam B by the rod *c′*, and adapted to be adjusted to regulate the pitch of the plow, by means of the wedge-shaped block F, arranged as herein shown and described.

4. The slotted bar O, adjusting-cap P, and notched arm N, combined and arranged with the draught-rod M, and plow-beam A, for the purpose of adjusting said rod laterally, so that the line of draught shall be parallel to the beam, as herein shown and described.

89,116.—Jackson Barnes, Burlington, Vt.—*Bedstead-Fastening.*—April 20, 1869.

Claim.—The plate A, provided with the operating thumb-piece I, and having the double eccentric slots C D, engaging with the pins F H in the pieces E G, all the parts being constructed, arranged, and operating as herein described, for the purpose specified.

89,117.—Frederick Bauschtliker, Washington, D. C., assignor to himself and Frederick Gentner, same place.—*Hydrant.*—April 20, 1869.

Claim.—The arrangement of the plunger B and valve J, in the cylinder C, lever H, and arms G and D, with the supply and discharge-pipes, when combined and operating as herein described, and for the purpose set forth.

89,118.—Samuel S. Bent, Portchester, N. Y.—*Hook for Supporting Carriage-Poles.*—April 20, 1869.

Claim.—A hook for carriage-poles or harness, formed with an elastic tubular surface, as and for the purposes set forth.

89,119.—Jakob Böhmer, St. Louis, Mo.—*Spring-Bedstead.*—April 20 1869.

Claim.—The post A, clasp-links *b*, bars B, scrolls F, and side rails E, combined with the end rods C, and hangers D, substantially as and for the purposes set forth.

89,120.—R. O. Brackett and D. W. Brackett, Vineland, N. J.—*Shaft-Support.*—April 20, 1869.

Claim.—The shaft-support, consisting of the rigid parts A B, extended at *a b*, to clasp the strap C, recessed at *f* for the buckle D, and secured firmly together by the screws *d d*, as herein shown and described for the purpose specified.

89,121.—Samuel Brock, New Orleans, La.—*Composition for Preventing the Incrustation of Steam-Boilers.*—April 20, 1869.

Claim.—1. The composition above described, composed of the ingredients above described, compounded and used in the manner, proportions, and for the purposes substantially as above set forth.

2. The use of said composition for the removal and prevention of scale and incrustation in steam-boilers, or other vessels used for heating and evaporating water, substantially as above set forth.

89,122.—Benoni S. Brown, Buffalo, N. Y., assignor to himself and Lewis B. Joy, same place.—*Machine for Compounding and Applying Roofing-Compositions to Felt, Paper, and other Fabrics.*—April 20, 1869.

Claim.—1. The mixing-reservoir, consisting of a vessel A, provided with the rotating arms and steam-jacket, for preparing and maintaining plastic compo-

sitions for roofs in a state required for application to the felt or other material, substantially as set forth.

2. The combination of the mixing-vessel A, feeding-hopper D, sand-box K, endless apron *g'* moving over the table G, arranged and operating substantially as and for the purposes set forth.

89,123.—John G. Bryan, Philadelphia, Pa.—*Hydrant.*—April 20, 1869.

Claim.—A hydrant, consisting of the box F, screw-plug I, revolving plug *g*, delivery pipe H, combined handle and nozzle *h*, post B, and box C, all as and for the purposes specified.

89,124.—Robert Burchell and Robert T. Burchell, Trenton, N. J.—*Miter-Box.*—April 20, 1869.

Claim.—The combination, in a mitering apparatus, of the guide-plates M N and J K with the plate L and clamp-screws *d e*, substantially as and for the purpose shown and described.

89,125.—Jonathan Carl, Grenada, Miss., assignor to himself and J. A. Carl, same place.—*Churn-Dasher.*—April 20, 1869.

Claim.—1. The combination of the breakers E and movable dashers D, constructed and arranged as described.

2. The movable dashers D and breakers E, operating within the churn-box A, as set forth in combination with the driving apparatus H, F, and M, and the pulley G.

3. The removable breakers E, in combination with horizontal bars *a*, for securing them in position, as represented.

89,126.—Alonzo M. Cheney, Charlotte, Mich.—*Curtain-Fixture.*—April 20, 1869; antedated October 29, 1868.

Claim.—The application of a flanged roller, substantially in the manner shown, to curtain-fixtures in which the shade is elevated or lowered by means of a weighted tassel and cords, arranged as above described.

89,127.—Benjamin F. Cloud, Philadelphia, Pa.—*Glass-Blowing Apparatus.*—April 20, 1869.

Claim.—1. The combination with a glass-blowing furnace, of a fan-blower, C, air-supply pipe B, and lateral or pendent flexible tubes D, or their equivalent devices, for supplying air to the glass-blowers' tubes, substantially as and for the purpose specified.

2. The flexible tubes D, provided with valve-mechanism for regulating the blast, and arranged for attachment to the glass-blowers' tubes, substantially as and for the purpose described.

3. The method of raising the valves E by the levers G, operated by the flexible and elastic bulb F, and either connected to the valve by the levers I, or supporting the projecting foot K of the same on the right-angled projections of the said arms, or any equivalent thereof, substantially as and for the purpose specified.

89,128.—Henry S. Cohu, New York, N. Y.—*Velocipede.*—April 20, 1869.

Claim.—In combination with a one-wheeled velocipede, the balance-wheels E E, crank *a*, and pendent seat D, all constructed and operating substantially as herein shown and described.

89,129.—James H. Crandell, Upper Marlborough, Md.—*Bee-Hive.*—April 20, 1869.

Claim.—1. The moth-trap screen *d*, arranged upon a partition, H, in relation to the bee-entrance *b*, and to the moth-entrance, substantially in the manner and for the purpose described.

2. The partition H, when arranged in the angular lower section of the hive, substantially as and for the purpose described.

3. The double-screened moth-trap *d f*, made of less width than the bee-chamber of the hive and applied and confined in its place, substantially in the manner described.

4. The combination of the angular section F, partition H, drawer G, moth-trap screen *f*, and honey-section S, substantially in the manner shown and described.

5. The removable screen *f*, confined in place by cleat *g* and fastening *h*, substantially as described.

89,130.—D. C. Cumings, Fulton, N. Y.—*Vise.*—April 20, 1869.

Claim.—1. The spring F, when arranged upon and to move with the block E, for the purposes specified.

2. The yoke or block E, when provided with the screw *g* and wheel *h*, or their equivalents, when arranged and combined with the base of the two jaws A and A', as described.

89,131.—William A. Daggett, South Vineland, N. J.—*Clothes-Frame.*—April 20, 1869.

Claim.—1. The combination of the horizontal bars A, when made in sets of different lengths, vertical bars B, the single bars G, and pivoting, or hinge-bar C D E F, with each other, substantially as herein shown and described, and for the purpose set forth.

2. Securing the clothes-frame, when closed, by means of a button, H, pivoted to the central one of the longest set of horizontal bars A, and buttoning into the vertical bar B, attached to the ends of the shortest set of horizontal bars A, substantially as herein shown and described.

89,132.—Adna T. Denison, Poland, Me.—*Manufacture of Corded-Edge Paper Goods.*—April 20, 1869.

Claim.—As an improvement upon the said corded-edge paper-machine, before alluded to, the process of passing the strips of paper to be corded and folded, through a steam-box, previous to the process of cording and folding, as therein described, substantially as and for the purpose described.

89,133.—George Dorn and John Shibley, Albany, N. Y.—*Egg-Carrier.*—April 20, 1869.

Claim.—1. A tray, A, constructed of pasteboard or light panel, as described, furnished with the holding-cords *e e'*, arranged as described through the apartments *a a*, for the purposes set forth.

2. The canvas *d*, in combination with a tray, A, furnished with the apartments *a a* and the meshes described, as and for the purpose set forth and described.

3. The separator B, constructed with the apartments *f f* and canvas *g*, as and for the purpose set forth, as specified.

89,134.—Charles H. Duncan, Pithole City, Pa.—*Tubular Pump for Deep Wells.*—April 20, 1869.

Claim.—1. The movable tube *d*, extending above and below the range of the upper valve, and carrying with it the lower valve, in combination with the outer barrel *a*, and seats or shoulders *e* and *f*, the whole operating substantially in the manner and for the purposes set forth.

2. The lower valve of a pump, attached or suspended to or within a movable inner barrel or tube, under such an arrangement of parts that the friction of the upper valve upon said inner movable barrel or tube shall effect the opening and closing of said lower valve, substantially as set forth.

89,135.—F. B. Dunton, Centre Lincolnville, Me.—*Mast-Hoop.*—April 20, 1869.

Claim.—The adjusting-hoop D *d*, in two parts, having a riding-block, *a*, embraced between the two projections *d*, and the lower ends of the said projections formed with holes, for a pivot-bolt, substantially as and for the purpose herein shown and described, the whole constituting an improved hoop-adjusting attachment for fore-and-aft sails, all as set forth.

89,136.—B. W. Field, Ferrisburgh, Vt.—*Band-Drawer.*—April 20, 1869.

Claim.—The arrangement of the handle A a^1, pivoted lever B, and the notched and forked claws b' a^2, as herein described, for the purpose specified.

89,137.—E. L. FREEMAN, Williamstown, N. Y.—*Cultivator-Tooth.*—April 20, 1869.

Claim.—The harrow or cultivator tooth herein described, when constructed as set forth.

89,138.—F. H. FURNISS, Waterloo, N. Y.—*Vise.*—April 20, 1869.

Claim.—1. The combination of the spindle C, spring D, and bracket F, with the vise B, and bed-plate A, provided with teeth, arranged to operate in the manner described, for the purpose specified.

2. In combination with the foregoing, the lever G, and treadle H, as herein described, for the purpose specified.

89,139.—O. L. GARDNER, New York, N. Y.—*Adjustable Cornice for Window-Curtains.*—April 20, 1869.

Claim.—Making the cornices of windows adjustable, substantially as and for the purposes herein shown and described.

89,140.—WILLIAM B. GARDNER, Almond, N. Y.—*Washing-Machine.*—April 20, 1869.

Claim.—The combination with the cylinder B, of the toothed brake-wheel and brake, when arranged to be operated by the hand or foot, and provided with the spring E, all substantially as specified.

89,141.—JOHN H. GOODFELLOW, Troy, N. Y.—*Base-Burning Stove.*—April 20, 1869.

Claim.—1. The combination of the interior pipe B, extending down through the fire-box a', body A, smoke-flues E F, and cold-air flue I, with each other, substantially in the manner herein shown and described, and for the purpose set forth.

2. Interposing the cold-air flue I between the smoke-flues E and F, substantially as herein shown and described, and for the purpose set forth.

3. Perforating the lower part of the brick lining and the side wall of the fire-chamber, for the passage of the products of combustion into the flue E, substantially as herein shown and described.

4. The annular fire-chamber a', formed by the combination of the central air-pipe B, ring-grate D, and perforated side-walls M, with each other, substantially as herein shown and described, and for the purpose set forth.

89,142.—PETER GORSLINE, Elizabeth, N. J.—*Blotting-Pad.*—April 20, 1869.

Claim.—As a new article of manufacture, a combined blotting-pad and hand-rest, made substantially as herein shown and described.

89,143.—JOSEPH GREGG, Manchester, N. H.—*Water-Cock.*—April 20, 1869.

Claim.—A water-cock, operated by means of the concentric tubes I and G, and the diaphragm K, as and for the purposes specified.

89,144.—THOMAS J. HALL, Bryan, Texas.—*Gang-Plow.*—April 20, 1869.

Claim.—1. The combination of the up-and-down adjustable slotted cross-bar D, having the perforated plate *f*, with the plow-beams E, pins *e*, and pivoted levers G, all arranged and operating substantially as and for the purpose herein shown and described.

2. The levers G, pivoted to the up-and-down adjustable cross-bar D, connected at their front ends with the plow-beams, and adjusted with their rear ends on a cross-bar, *k*, all arranged and operating substantially as described, for the purpose of oscillating the plow-beams, as specified.

89,145.—GEORGE HARRIS, Ipswich, Mass.—*Railway-Car Coupling.*—April 20, 1869.

Claim.—1. The arrangement and combination of the tripping-car or projection, *c*, with the tumbler applied to the draw-bar, in manner and so as to operate substantially as specified.

2. The combination and arrangement of the stop or projection *b* with the tripping-ear or projection *c*, and with the tumbler applied to the draw-bar, in manner and so as to operate substantially as explained.

3. The combination and arrangement of the pin-passage *e* with the draw-bar and the tumbler, the whole being substantially as set forth.

89,146.—E. D. W. HATCH, Chicago, Ill.—*Table-Attachment for Bedsteads.*—April 20, 1869.

Claim.—The adjustable table B C D, and sockets and notches a^1 a^2, either or both, when constructed substantially as herein shown and described, and used in connection with a bedstead, or similar support, as and for the purpose set forth.

89,147.—E. W. HAVEN, Brandon, Vt.—*Sash-Holder.*—April 20, 1869.

Claim.—The plate *a*, cam *b*, and its connection with lever *g*, as constructed and shown, in combination with the other devices.

89,148.—CORNELIUS S. HURLBUT, Springfield, Mass.—*Burial-Casket.*—April 20, 1869.

Claim.—1. A burial-casket, made from caoutchouc, or India rubber, and having the sides, ends, and bottom cast or molded in one piece.

2. The use of a metallic lining, or foundation, and metallic braces, in the construction of rubber burial-caskets.

3. A burial-casket made from caoutchouc, or India rubber, as described, and made air-tight and water-tight, by placing the top, or covering of glass or other suitable material, upon packing of rubber, gutta-percha, or other suitable material, laid in a shoulder prepared for the purpose, in the upper edge of the sides and ends of the casket, as described.

89,149.—JOSEPH IRVING, New York, N. Y., assignor to A. T. DEMEREST AND COMPANY, same place.—*Velocipede.*—April 20, 1869.

Claim.—1. The brake-lever C, suspended from the crotch B, and arranged to act upon and oscillate with the front wheel, substantially as specified.

2. The combination of the brake-lever C, suspended from the crotch and arranged to oscillate therewith, and guiding-lever G, when the latter is capable of rotation, and connected to the said brake-lever by a cord, F, substantially as specified.

3. The leg-rests D, supported upon the arm A, projecting from the oscillating crotch, substantially as specified.

89,150.—SEWELL E. JEWETT, Haverhill, Mass., assignor to himself and OSGOOD G. BOYNTON, same place.—*Shutter-Worker.*—April 20, 1869.

Claim.—1. The application of the bar E to the window-frame, so that while capable of being moved longitudinally, so as to effect the opening or closing of the blind, such bar may be moved downward on a fulcrum, and used as a lever, to effect the elevation of the blind or shutter, for the purpose specified, preparatory to its being opened or closed by means of such bar, slotted head, and pin, as set forth.

2. The combination and arrangement of the wind-guard plate *h* with the escutcheon-plate *d*, the lever E, and its passage *c*, when such lever is applied to the blind by means as explained.

3. The combination of the movable stop *t*, or its equivalent, with the cammed lever E, the pin *i*, and the latching-mechanism of the blind, the purpose of such stop being as explained.

89,151.—JOHN KEANE, New York, N. Y., assignor to himself and G. H. BROWN.—*Slowly-Closing Valve.*—April 20, 1869; antedated April 15, 1869.

Claim.—The pipe A, having one or more holes, or openings, in the lower parts of its sides, and a packing, C, attached to, and a valve, B, placed in the upper end, and the pipe or chamber D, having one or more openings formed in the lower part of its sides, and a small hole formed through its top, or upper end, in combination with each other and with the pipe E, substantially as herein shown and described, and for the purpose set forth.

89,152.—JOHN L. KENDALL, Foxborough, Mass.—*Garment-Supporter.*—April 20, 1869.

Claim.—1. The new manufacture of coat or garment supporter, or metallic ring A, and perforated metal disk B, applied or hinged together as and for the purpose specified.

2. The combination of the flat guard-annulus D

with the perforated disk B, the hinge C, and the ring A, applied together as set forth.

3. The arrangement of the flat guard-annulus D, so as to project beyond and around the periphery of the perforated disk, in manner and for the purpose set forth, when the disk is hinged or applied to the ring A, as and for the object described.

89,153.—JOHN G. LETTELIER and F. WHITE, Bloomington, Ill.—*Automatic Weighing-Machine.*—April 20, 1869.

Claim.—1. The weighted lever I, provided with the wipers i' and i'', and the segmental arm L, provided with the lugs l and l', or their equivalents, in combination with the arm K, substantially as and for the purpose set forth.

2. The combination of the weighted lever I, the segmental arm L, and the vertical rock-shaft M, for actuating the gates N and O, with the hoppers C and D, (or with either separately,) substantially as shown and described.

3. The within-described automatic weighing-machine, consisting of the hoppers C and D, suspended by trunnions upon the arms $e\ e$ and $f\ f$, of the shafts E and F, and provided with gates N and O, wiper e', curved lever G, rack g, and weight g', segmental gear H and arm h', weighted lever I, and wipers i' and i'', arm K, segmental arm L, and lugs l and l', vertical shaft M, with its arms m, m', and m'', and scale-beam P, all arranged to operate substantially as and for the purpose herein shown and described.

89,154.—J. G. LETTELIER and F. WHITE, Bloomington, Ill.—*Automatic Weighing-Machine.*—April 20, 1869.

Claim.—1. The swinging-gates F and H, suspended by means of the links $f\ f$ and $h\ h$ and operated by the arm K, on the shaft I, substantially as described, and for the purpose set forth.

2. The employment of the bristles $z\ z$, arranged vertically around the openings of the receiving and discharge-spouts G and E, substantially as and for the purpose shown.

3. The means employed for operating the weighted arm N, consisting of the short arm O, bar P, and lugs $p\ p$, against the latter of which the weighing-beam X is caused to strike as it is raised or lowered, by the reception into or discharge from the hopper D of the grain.

4. The V-shaped guides $x'\ x'$, upon the weighing-beam X, for the purpose of receiving the lugs $p\ p$, substantially as and for the purpose shown.

5. The pinion R, and racks S S, the latter being provided with the lugs $s\ s$, by means of which the weighted arm N is secured in a vertical position, and the automatic action of the mechanism arrested, when it is desired to use the device as an ordinary platform-scale.

6. The within-described automatic grain-scale, consisting of the hopper D, spouts E and G, gates F and H, shaft I, double arm K, forked connections k and k', segmental arm L, forked standard M, weighted arm N, short arm O, bar P, lugs $p\ p$, pinion R, and racks S S, provided with lugs $s\ s$, in combination with a platform-scale of the usual construction.

89,155.—P. F. LEWIS, Columbus, Pa.—*Churn.*—April 20, 1869.

Claim.—The construction of the cup B, provided with the circular rim E and the concave centrally-perforated bottom C, and having the three sector-shaped openings D, extending between the said rim and bottom round alternately with the ribs H, provided with the air-openings I, as set forth.

89,156.—WILLIAM A. LIGHTHALL, New York, N. Y.—*Steam-Enginery for Surface-Condensers.*—April 20, 1869.

Claim.—The arrangement of the driving-engine A, circulating-pump B, and air-pump C, when all coöperate together, to perform the functions herein set forth.

89,157.—RICHARD M. LIVINGSTON, Menteno, Ill.—*Cheese-Vat.*—April 20, 1869.

Claim.—The described arrangement of the perforated pipes D, hot-water supply-pipe C, support F, for the milk-vat, and the removable false bottom, having central perforations, for the passage of the supports F, as herein set forth, for the purpose specified.

89,158.—JOHN MCCLOSKEY, New York, N. Y.—*Steam-Pump.*—April 20, 1869.

Claim.—1. The cylinder A, provided with the partition B and the pistons C C′, connected by the hollow piston-rod D, all arranged as herein shown and described.

2. The hollow piston D, having orifices F and F′, as described, the tubular extensions E and E′, in combination with the pistons C C′ and cylinder A, substantially as and for the purpose specified.

3. The arrangement of the cylinder A, having the partition B and the pistons C C′, with the pump-valve mechanism, arranged substantially as specified.

4. The construction and arrangement of the valve G and projections a with reference to the pistons C C′ and partition B, substantially as herein set forth.

89,159.—C. MCELROY, New Baltimore, Mich.—*Device for Detaching Horses from Carriages.*—April 20, 1869.

Claim.—1. The hooks C D, arm E, and spring G, or their or either of their equivalents, in combination with each other and with the thills A, substantially as herein shown and described, and for the purpose set forth.

2. The strap B, constructed as described, in combination with the hooks C D, or equivalent support, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the cord or wire H with the arms E, springs G, and hooks C D, substantially as herein shown and described, and for the purpose set forth.

89,160.—G. W. MIDDLECOFF, Atlanta, Ill., assignor to himself and A. MCR. BLAIN, same place.—*Horse-Rake.*—April 20, 1869.

Claim.—A hay-gatherer, consisting of the teeth h, cross-pieces A B, braces S D, standards f, and cap C, in combination with ropes M L, chains E, and loops K, as set forth.

89,161.—DARWIN V. MILLER, Weedsport, N. Y., assignor to himself and JAMES KEHNAN, same place.—*Door-Lock.*—April 20, 1869.

Claim.—1. The combination of the notched sliding bolt C, lever H, spring I, bar J, arm K, rod M, and knob L, with each other, substantially as herein shown and described, and for the purpose set forth.

2. The notched sliding guard-bar D, in combination with the key G, and notched sliding bolt C, as and for the purpose herein shown and described.

3. The notched sliding guard-bar D, in combination with the notched sliding bolt C, substantially as herein shown and described, for the purpose specified.

4. The bar R, constructed as described, in combination with the bolt N, stop a^5, and spring lever H, arranged and operating as described, for the purpose specified.

89,162.—JOSEPH C. MILLER, Lancaster, Ohio.—*Ironing-Board.*—April 20, 1869.

Claim.—An improved ironing-board formed by the combination of the covered board A, bar or stop B, bracket C, set or clamping screw D, hinged frame E, swiveled block G, and hinged bosom-board H, said parts being constructed and arranged substantially as herein shown and described, and for the purposes set forth.

89,163.—B. F. MOHR, Mifflinburgh, Pa.—*Wood-Boring Machine.*—April 20, 1869.

Claim.—The spring-pawl P, having the inclined lug W, and the spring-top Q, having the lateral pin R, arranged to operate with relation to the notched carriage B, as herein described, for the purpose specified.

89,164.—S. R. NILES, Rawsonville, Mich.—*Machine for Pulling Beans.*—April 20, 1869.

Claim.—1. The combination with the frame A, of

the arms L, supporting the truck-wheels and the bent rods N, substantially as specified.

2. The combination with the plows G of the gathering-forks I, substantially as specified.

89,165.—R. H. PARKS, Columbus, Ohio.—*Horse-shoe.*—April 20, 1869.

Claim.—A horseshoe, extended to form the support B B′, for the frog, and beveled in the parts D, substantially as specified.

89,166.—JOHN PINTER, St. Louis, Mo.—*Washing and Wringing Machine.*—April 20, 1869.

Claim.—1. The shaft *c*, wheel c^1, and parts d^1, d^2, d^3, d^4, and d^5, combined and arranged with the parts f^3, f^2, f^1, and *f*, and the roller B, substantially as and for the purposes set forth.

2. The arrangement of the belt G, conveyer H, compresser I, and wringer K, substantially as and for the purposes set forth.

89,167.—CHARLES PRATT, New York, N. Y.—*Nozzle for Cans.*—April 20, 1869.

Claim.—As a new article of manufacture, a nozzle for sheet-metal cans, provided with a struck cap C, of soft metal, having a curved flange, *a*, and cutting-shoulder *b*, substantially as described, for the purpose specified.

89,168.—A. C. RAND, Westfield, Mass.—*Whip.*—April 20, 1869.

Claim.—As a new article of manufacture, a whip, having the threads of its covering laid spirally, and intertwined relatively to each other, as herein described, and for the purpose set forth.

89,169.—GEORGE M. RICHARDSON and CHARLES C. RICHARDSON, Dana, Mass.—*Horse-Rake.*—April 20, 1869.

Claim.—The combination of the band, or flange G, lever H h^1 h^2, and slotted arm I, with each other, and with the axle *B* and wheel F, substantially as herein shown and described, and for the purpose set forth.

89,170.—CHARLES ROBERTS, Lake Village, N. H.—*Twisting Tube for Spinning-Machines.*—April 20, 1869.

Claim.—The hollow cone-points *f f*, held together by elastic pressure, arranged and operating substantially as and for the purpose herein specified.

89,171.—FREDERICK W. ROTH, Washington, D. C.—*Safety Hat and Coat Rack.*—April 20, 1869; antedated April 17, 1869.

Claim.—The lock, and the several parts thereof, including the chamber, in combination with the ring H, the double hook, the board A, the rod G, the swivel *i*, and the key of the lock, substantially as and for the purpose specified.

89,172.—EBENEZER B. ROWE, Chicago, Ill., assignor to the SOUTH BRANCH PLANING-MILL COMPANY, same place.—*Manufacture of Lumber.*—April 20, 1869.

Claim.—The method of forming tongued and grooved ceilings, by forming two or more grooves and two or more tongues on opposite edges of pieces of lumber, and then sawing such plank, or piece of lumber, longitudinally into two or more strips of uniform thickness, each having a tongue upon one edge, and a groove upon the other, as herein described.

89,173.—ENNO SAUDER, St. Louis, Mo.—*Medicine-Chest.*—April 20, 1869.

Claim.—1. The chest A, arranged with sub-chests, and interior compartments, to contain the cans G, in such proportions and sizes as hereinbefore set forth and described.

2. The chest A, its lid A′, mortised hasp a^1, and supporting-bar B, substantially as set forth.

3. The chest A, lid A′, its sub-chest C, lid C^1, and direction-card C^2, substantially as set forth.

89,174.—ALEXANDER SELKIRK, Albany, N. Y.—*Egg-Carrier.*—April 20, 1869.

Claim.—1. The application of pasteboard or cardboard, or their equivalents, as named, when perforated and arranged in the manner as described, and used in combination with the slats S S′ S″ S‴, substantially as and for the purpose set forth, as specified.

2. The detachable frame, with its pasteboard or equivalent material, as named, perforated as described, and supported by the slats S″, substantially as and for the purpose set forth and described.

3. The lower side slats S′ of a tray, T, in combination with a tray, T′, furnished with permanent tiers, Nos. 1 or 2, or both, and a detachable tier, No. 3, as and for the purpose set forth and specified.

89,175.—ALEXANDER SHAFER, Wellsville, N.Y. assignor to L. SWEET AND COMPANY, same place.—*Lubricator.*—April 20, 1869.

Claim.—An improved rotary oiling-pump, formed by the combination of the body A a^1 a^2, plug B *b′*, and oil-reservoir D, with each other, said parts being constructed and operating substantially as herein shown and described, and for the purpose set forth.

89,176.—CHARLES F. SHOURDS, New York, N. Y.—*Manufacture of Feather Dusters.*—April 20, 1869.

Claim.—1. The method, herein described, of utilizing the "short waste" in the manufacture of feather brushes, by braiding the same together to extend the length, substantially as set forth.

2. A feather dusting-brush, formed wholly or in part of short feathers united to form the requisite length, substantially as and for the purposes set forth.

89,177.—DWIGHT SLATE, Hartford, Conn., assignor to PRATT, WHITNEY AND COMPANY, same place.—*Shipping-Apparatus for Metal-Planers.*—April 20, 1869.

Claim.—The cam E, sliding-block A, in their relation to the reciprocating planer-bed B, through the stops A′, and in combination with the rock-shaft F, arms or segment-gear J, transverse sliding-shaft K, and shipper-arms I, substantially as and for the purpose described.

89,178.—CHARLES SOMMER, Chicago, Ill.—*Saw-Mill.*—April 20, 1869.

Claim.—1. The mode herein described of sawing stuff with parallel sides from round logs.

2. The arrangement of the two laterally and vertically adjustable centers with the circular saw, substantially as described.

3. The combination of the slotted portions E *e* of head-blocks, centers G G′, slides F F′, and clamping-nuts *c c*, the said parts being constructed and arranged and operated substantially as described.

4. The combination of the center G′, screw *s*, and clamping-devices F′ *d c*, with the slotted head-block D E, substantially as described.

89,179.—JAMES SPEAR, Philadelphia, Pa.—*Stove-Collar and Damper.*—April 20, 1869.

Claim.—The construction and combination of the three cast-iron pieces A B C, so as to form a stove-pipe collar and damper, as herein described.

89,180.—JAMES SPEAR, Philadelphia, Pa.—*Base-Burning Stove.*—April 20, 1869.

Claim.—The construction of the crown-top V with an outlet, X, and central opening, N^3, in combination with the urn M, arranged in combination, substantially as shown and described.

89,181.—EDWARD C. STODDARD and JOHN R. HOYT, Woodbury, Conn.—*Stove-Pipe Attachment.*—April 20, 1869.

Claim.—As a new article of manufacture, the single or double stove-shield B, provided with pins or hooks *d*, and adapted to be applied to stove-pipes, for the purpose of protecting mantel-pieces, &c., from danger of fire, as herein shown and described.

89,182.—MILES SWEET, Troy, N. Y.—*Curry-Comb.*—April 20, 1869.

Claim.—1. A malleable cast-metal end-piece for curry-combs, having lugs *b b* formed thereon, and

rivet-holes or rivet-blanks *a a a* cast or formed thereon, so that said piece shall not only facilitate the putting together of the parts, but serve as the means of holding them together when clinched or hammered down, as described.

2. In a curry-comb, a series of sheet-metal comb-bars, B, riveted to malleable cast-metal end-pieces A A, which end-pieces have lugs *b b*, &c., bent tight upon or around the wire frame, which is a continuation of the shank for the handle, as and for the purpose set forth.

3. Terminating the outer ends of the wire frame in knocking-lugs, or fenders D D, as and for the purpose set forth.

89,183.—Stephen D. Tucker, New York, N. Y.—*Machine for Making Printers' Rules.*—April 20, 1869.

Claim.—1. The combination with the segment-bed B and rule-holder D of the reciprocating and vibrating head C, the whole constructed, arranged, and operating substantially as described.

2. The mechanism for operating the cutter-head, consisting of the reciprocating and vibrating lever F, with its swivel-fulcrum H and universal joint *f f* on the cutter-head, the whole constructed and operating substantially as described.

3. Making the segment-bed B adjustable laterally, in combination with a reciprocating vibrating cutter, so that by adjusting the bed the whole width of the knife may be used, substantially as described.

89,184.—William Tweedle, Providence, R. I.—*Tool for Making Plugs for Gas and Water Cocks.*—April 20, 1869.

Claim.—The improved device herein described, consisting of the body A, cutters B and C, and drill F, combined substantially as set forth.

89,185.—J. S. Van Buren, Norwich, Conn.—*Coal-Stove.*—April 20, 1869.

Claim.—1. Constructing the heater with two domes, placed the one directly above the other, substantially as herein shown and described, and for the purpose set forth.

2. Forming the rear pipes E smaller than the front pipes D, substantially as herein shown and described, and for the purpose set forth.

3. An improved heater, formed by the combination of the close chamber a^1 of the base A, body B, domes b' and C, larger pipes D, smaller pipes E, and egress flue F, with each other, said parts being constructed and arranged substantially as herein shown and described, and for the purpose set forth.

89,186.—Charles G. Von Tagen, Philadelphia, Pa.—*Cement Roofing.*—April 20, 1869.

Claim.—The compound, prepared and applied substantially as described.

89,187.—John I. Vinton, Altoona, Pa.—*Compound for Forming Cores for Molding Iron, &c.*—April 20, 1869.

Claim.—A core compound, for foundery purposes, composed of the ingredients above named, substantially as described.

89,188.—J. S. Wachsmuth, Highland, Ill.—*Method of Transferring Oil Paintings from one Surface to Another.*—April 20, 1869.

Claim.—The herein described process of treating paintings, so that they may be transferred from the canvas or paper support to any other suitable surface, as specified.

89,189.—Fenn Wilcox, Newark, N. J.—*Culinary Boiler.*—April 20, 1869.

Claim.—The vessels A D, arranged one within the other, when the annular space E is formed between the outer wall of the vessel A and the flange B, to receive the water of condensation and prevent its escape to the fire, as herein shown and described.

89,190.—William Zeiger, Elmore, Ohio.—*Potato-Peeler.*—April 20, 1869.

Claim.—The combination of the hollow perforated cylinders B and C with the movable grater-box D and aperture *e*, as and for the purpose set forth.

89,191.—Wilber F. Arnold and Ogden L. Steele, New Britain, Conn.—*Bolt for Doors, &c.*—April 20, 1869.

Claim.—The hollow bottom, D, *c*, *e*, fitted to slide on the pin *b*, and inclosing the spring *d*, when arranged as shown, with relation to the bolt A, casing B, and slot *a*, to be operated as set forth.

89,192.—A. M. Bakewell, Normal, Ill.—*Harrow with Cultivator-Attachment.*—April 20, 1869.

Claim.—1. The combination of the cultivator and harrow, substantially in the manner and for the purpose set forth.

2. The arrangement of the bars E E, cross-bar F, and eye-bolts D D, D′ D′, as a consequence of which I am enabled to change the position of the bars of the cultivator, substantially as and for the purpose set forth.

3. The combination of the side-bars E E and cross-bar F, substantially as shown and described.

4. The arrangement of the handles G G, with reference to the bars E E, substantially as shown and described.

89,193.—John F. Baldwin, Nashua, N. H.—*Till-Lock Alarm.*—April 20, 1869.

Claim.—1. The latch-plate L, and latches *a*, constructed substantially as described, to effect both the locking and the double-locking of the drawer, or till, as specified.

2. The swing-catch P, as described, and the reversible lips *n*, in combination therewith, to effect the changing of the combination which controls the locking and unlocking of the drawer, or till, as described.

3. The spring-latch *x*, constructed and arranged with relation to the swing-catch plate P, and the spring-hammer A, as and for the purpose described.

4. The keys $g^{1\,2\,3\,4\,5}$, arranged and operating with relation to the catch-plate P and lips $n^{1\,2\,3\,4\,5}$, as described, so as to control both the lifting of the latches *i*, to unlock the drawer, or till, and the swing-catch P, which prevents the unlocking of the drawer, except by a given combination, substantially as specified.

89,194.—Joseph W. Bates, St. Paul, Minn.—*Binding-Attachment for Harvesters.*—April 20, 1869.

Claim.—1. The combination of the slotted binding-table D, slotted inclined plane C, and slotted platform B, all constructed and arranged substantially as and for the purposes herein set forth.

2. The arrangement with table D, inclined plane C, and platform B of the shaft G, teeth I, tripper H, and seat F, all constructed and operating substantially as herein set forth.

89,195.—Orson P. Beardsley, McDonough, N. Y.—*Process of Refining Maple Sugar.*—April 20, 1869.

Claim.—Extracting magnesia and adherent impurities from maple sugar, by reducing the sugar from a consistency sufficient to cause granulation in the magnesia, and straining it, substantially as hereinbefore set forth.

89,196.—Valentin Borst, New York, N. Y.—*Harness-Saddle.*—April 20, 1869.

Claim.—1. A saddle-tree, composed of the wooden side-pieces *a a*, connected by the metallic flanged corner-pieces *b b*, substantially as described.

2. The cross-braces *d*, in combination with the side-pieces *a a* and corner-pieces *b b*, substantially as set forth.

3. The base-plate *g*, forming the support for the back-band loops *i*, and connected to the side-pieces *a a* and corner-pieces *b b*, substantially as described.

4. The lugs *k k*, on the cantel B, in combination with the sockets *j j*, in the corner-pieces *b b*, and with lips or flanges *l l*, on said corner-pieces, and with a key, *m*, substantially as set forth.

89,197.—Edward W. Brettell, Elizabeth, N. J.—*Door-Latch.*—April 20, 1869; antedated April 9, 1869.

Claim.—1. The center disk t^2, when used to turn the tube *v*, in combination with the key *r*, fitted thereto, substantially as shown and described.

2. The combination of the slide *p*, catch *m*, and spring *j*, constructed and arranged in the manner and for the purpose specified and shown.

89,198.—Morgan W. Brown, New York, N. Y. —*Composition for Coating Paper, for Manufacture of Neck-Ties, Cravats, and other Articles of Wearing-Apparel.*—April 20, 1869.

Claim.—The mode or means of preparing and manufacturing a composition of matter, for treating and preparing paper and paper-fiber, preparatory to and for its uses and application to the manufacture of paper neck-ties, or cravats, gloves, mittens, caps, collars, and articles of dress, wear, and utility, substantially as herein described and set forth.

89,199.—Robert Gordon Carlyle, San Francisco, Cal., assignor to A. C. Robinson, W. J. X. Robinson, and J. H. Addison; and said J. H. Addison assignor to John H. Wise.—*Drain-Tile Machine.*—April 20, 1869.

Claim.—1. The combination of the shaft A and water-tube with the core-barrel, having a conical spiral-bladed top, the lower die-plate M, and casing N, the whole arranged and operated substantially as and for the purpose set forth.

2. The combination of the vertically-moving core-barrel B, and its rollers *a a*, with the square-shaft A, as set forth.

89,200.—George B. Clarke, New York, N. Y. —*Cigar-Machine.*—April 20. 1869.

Claim.—1. The combination, with the table B, of the rollers C C^1 C^2 C^3, arranged substantially as described, for rotation in like directions, and formed, any or all of them, with trumpet-shaped extremities at their one end, essentially as specified.

2. The trumpet-shaped portions *i*, arranged to turn freely and independently of the rollers to which they belong, substantially as and for the purpose herein set forth.

3. The combination of the automatically-operating knife H, with the several cigar-forming rollers, and arranged in relation thereto, or to the trumpet-shaped portions thereof, essentially as and for the purpose specified.

4. In combination with the forming rollers, driven to rotate the cigar, as described, the knife K, adjustable in relation to said rollers, or to the cigar in between them, substantially as herein set forth.

5. The combination, with the rollers C C^2 C^3, of the upper roller C^1, hung in a swinging-frame, F, essentially as specified.

6. The combination, with the rollers C^1, C^2, and C^3, of the front roller C, carried by a swinging frame, E, substantially as described.

7. The combination of the swinging frames E and F, with their respective rollers C and C^1, in such manner as that the swinging of the one frame, F, may be made to swing or operate the other frame, E, essentially as herein set forth.

89,201.—Oliver Cogsil, Harlem Springs, Ohio. —*Ferry-Railway.*—April 20, 1869.

Claim.—A railway-ferry, in which the carriage is so formed as to support the cars, and run upon a track laid on the bottom of the river, and to connect with a railway on the banks, as and for the purpose set forth.

89,202.—E. S. Cram, New Hampton, N. H.— *Car-Coupling.*—April 20, 1869.

Claim.—1. The arrangement and combination of the coupling-pin C, with its enlargement *g*, the spring *i*, and the hollow guide G, with its smaller cavity for the spring, and its enlarged cavity *h*, for the reception of the pin-enlargement *g*, substantially as and for the purpose herein specified.

2. The arrangement and combination of the coupling-pin C, with its enlargement *g*, the link D, and the spring sliding block B, having its forward end both concave horizontally, and inclined forward vertically, and limited in its movement by the depression *b*, and pin, or projection *e*, substantially as and for the purpose herein specified.

89,203.—A. D. Dailey, Terre Haute, Ind.— *Fire-Place.*—April 20, 1869.

Claim.—As an article of manufacture, a cast-iron hearth-plate, constructed with a fillet, B, formed substantially as set forth.

89,204.—Edward A. Dana, Brookline, Mass. —*Concussion Fuse.*—April 20, 1869.

Claim.—1. The combination of the plunger, or cylinder B, with the walls H′, when the former is coated with a composition inflammable by friction against the latter, prepared substantially in the manner specified.

2. The combination of the plunger B, the plug G, and the powder block E, arranged substantially as described.

89,205.—Deloss A. Danforth, Elkhart, Ind., assignor to himself and W. P. Chamberlain, same place.—*Sash-Operator.*—April 20, 1869.

Claim.—The vertical rack C, with hook *f*, in combination with catch I and disk D, provided with a spiral thread, all constructed and arranged substantially as herein described, to operate and fasten window-sash.

89,206.—John Davis, New Bedford, Mass.— *Nut-Fastener.*—April 20, 1869.

Claim.—The bar A^2, with turned-up ends B^2 and clasps C^2 b^2, constructed substantially as described, and for the purpose specified.

89,207.—George Dryden, Worcester, Mass., assignor to R. Ball and Company, same place.— *Wood-Working Machine.*—April 20, 1869.

Claim.—1. The upper part L and lower part M of the divided spindle, and the set-screw *b*, when said parts are constructed and arranged for joint operation, as shown and described.

2. The hollow spindle F and pulley G, formed or cast in one piece, in combination with the spindle L M, said parts being constructed substantially as shown and described.

3. The combination with the frame C or journal-box D of the oil-chamber, with its sliding cap K, substantially as and for the purposes set forth.

89,208.—William F. Duerr, Newark, N. J., assignor to himself and Reuben D. Baldwin, same place. —*Feed-Water Device for Boilers.*—April 20, 1869.

Claim.—A boiler-feeding apparatus, constructed and arranged to operate substantially as herein described.

89,209.—Edward S. Earley, Philadelphia, Pa. —*Bedstead-Fastener.*—April 20, 1869.

Claim.—1. An augular or curved plate A, having a slot, *m*, to receive and guide the head of a bolt, E, and slots *d d*, for the auxiliary fastenings, for the purposes set forth.

2. In combination therewith, the angular or curved-headed bolt E, for the purposes described.

89,210.—Zebina Eastman, Chicago, Ill.—*Construction of Street-Railways.*—April 20, 1869.

Claim.—The formation of a wrought-iron flange of the rail, or a cast-iron attachment to the under part of it, with openings square or inclined, as the case may require, into which or through which to pass the paving-stone for the support of the rail, and so designed as to furnish a substitute for wooden stringers and ties.

89,211.—C. H. Emerson and J. F. Emerson, New York, N. Y.—*Machine for Making Bolt-Heads.* —April 20, 1869.

Claim.—1. The combination of the heading-stock L, having thereon preparatory and finishing-headers J J′, constructed substantially as described, with the gripers H H and head-squaring jaws I I, formed with upper and lower recesses *e* and *e*, arranged and operating first to roughly form the head, and afterward to finish it, substantially as specified.

2. In combination with the above, the heading-stock L, provided with wedges or inclines *f f*, at or near its forward end, and the inclines *g g*, attached to the squaring-jaws I I, essentially as shown and described, and for the purpose set forth.

89,212.—Orrin B. Gallup, Summit, R. I.—*Round Comb.*—April 20, 1869.

Claim.—The band A, having combs B, pivoted at each end, forming an adjustable round comb, substantially as described.

89,213.—J. C. Gaston, Cincinnati, Ohio.—*Stamp-Canceling Device.*—April 20, 1869.

Claim.—A stamp-canceler, consisting of a perforating blade, A, with adjustable ring D, for regulating the depth of the cut or perforations, constructed and arranged substantially as herein described.

89,214.—John Grant, Hampstead, England.—*Apparatus for Turning the Leaves of Books or Music.*—April 20, 1869.

Claim.—1. The combination of a deep-threaded screw, E, operated by any suitable mechanism, with a book-rest, B, for the purpose of turning the leaves of a book placed upon said rest, substantially as herein set forth.

2. The combination of a thumb-piece, G, with the upper turn F, of a deep threaded screw, when said screw is attached to a book rest, and made to operate, substantially in the manner and for the purpose herein set forth.

3. The combination of a horizontal foot-wheel or driving-pulley H with a deep-threaded screw, E, and suitable book-rest B, and with any suitable intermediate gearing, L, K, &c., substantially in the manner and for the purpose herein set forth.

89,215.—J. J. Groshans, Buffalo, N. Y.—*Counting Register for Paper-Ruling Machine.*—April 20, 1869.

Claim.—1. For the purposes of an indicator for paper-ruling machines, the spring-finger *h*, having its lower end free, and adapted to be struck by the paper, and its upper end carrying a spring-pawl, substantially as described.

2. In combination therewith, the grooved wheel *i*, substantially as and for the purpose described.

3. In combination with the spring-finger *h*, the toothed wheels C D, pin *d*, and hands *a* and *b*, substantially as and for the purpose described.

89,216.—Dan. Guptail, Elgin, Ill.—*Dish-Washing Machine.*—April 20, 1869.

Claim.—1. The combination of the case A and the disk or knife-holder I, substantially as shown and described.

2. The arrangement of the guide K, with reference to the case A and agitator C, substantially as shown and described.

3. The construction of the disk I, with its slots for holding the knives and forks, substantially as shown and described.

89,217.—E. R. Hall, Mexico, N. Y.—*Wood-Sawing Machine.*—April 20, 1869.

Claim.—A sawing-machine, for wood, having main frame and frame C, as described, grooved caps A, saw-frame B, wheels D and E, shafts *a* and *d*, crank G, pitman *c*, lever L, saw-horse H, and hook *s*, when each part is constructed, arranged, and operates as described.

89,218.—Cyrus H. Hardy, Bath, Me.—*Knife-Cleaner.*—April 20, 1869.

Claim.—The movable jaw G, pivoted on the short arm of the lever I, and furnished with lugs, *f*, to guide it in the grooves of frame C, substantially as set forth.

89,219.—Sylvester Harnden, Reading, Mass.—*Cabinet-Ventilator.*—April 20, 1869.

Claim.—An apparatus for ventilating and purifying rooms, constructed as a secretary or book-case, and consisting of the ice-receptacle B, having apertures *d*, C, and *c*, substantially as shown and described.

89,220.—Jacob H. Hawes, Stockbridge, Mass., assignor to the Hawes Patent Wood-Pulp Company, same place.—*Process for Preparing Paper-Stock from Wood.*—April 20, 1869.

Claim.—1. The process of preparing paper-stock from wood, by grating it, substantially as specified.

2. In preparing paper-stock from wood, by grating it, so presenting the block or wood to the grater as that its fibers are made to lie oblique to the plane of the grating-surface, and also to the travel of the grater, essentially as shown and described.

89,221.—Jacob H. Hawes, Stockbridge, Mass., assignor to the Hawes Patent Wood-Pulp Company, same place.—*Reducing Wood for Paper-Stock.*—April 20, 1869.

Claim.—1. The combination of a grater or graters, and wood-holding frame or frames, with a follower or followers, so arranged and operating as that by the travel of the grater over the edge or face of the wood presented to it, or travel of the wood over the face of the grater, and action of the follower or followers, said wood is automatically worked up and reduced, and its reduced or grated particles passed off through the grater for the purpose of producing paper-stock, substantially as specified.

2. The combination of the block-holding frames W W, divided into compartments H H, as described, with the automatic followers I I, and the reciprocating graters B B, having clearance spaces or passages *d d* at their backs, essentially as and for the purpose herein set forth.

3. In a combination of mechanism for reducing wood to paper-stock by grating, giving to the wood or blocks a reciprocating cross-movement relatively to the travel of the graters, substantially as specified.

4. The arrangement of the reciprocating grater-frame C, with its graters B B, clearance spaces or passages *d d*, and endless apron R, essentially as shown and described.

5. The up and down sliding wood-holding frames W W, arranged to reciprocate in reverse directions simultaneously, in combination with the grater-frame C, arranged to reciprocate in a crosswise direction thereto, and provided with opposite graters B B, against which the wood is pressed in reverse directions simultaneously, substantially as specified, and whereby increased freedom is secured to the operation of the grater slide or frame.

6. The combination of the eccentrically-grooved disks P P, the rollers Q Q, connected with the cross or vertically-sliding wood-holding frames W W, and the reciprocating graters B B, essentially as shown and described.

89,222.—Thomas N. Hickcox, Brooklyn, N. Y.—*Mucilage-Brush Handle.*—April 20, 1869.

Claim.—A mucilage-bottle cap, having a tubular or sleeve-like center opening or socket, and a mucilage-brush, having a longitudinally-slitted handle combined for operation, substantially as and for the purpose herein set forth.

89,223.—F. W. Hudson, Leominster, Mass.—*Stove-Shelf.*—April 20, 1869.

Claim.—1. The combination, with a stove, of one or more hinged, or moveable shelves, in the manner and for the purposes stated.

2. The post B, when attached to the side or top of the stove, for supporting a shelf, or shelves, substantially as described.

3. The combination, with the bottom of the post, of a base-piece and clamping-device, for securing, or fastening the post to the top plate of the stove.

4. The combination of the shelf-supporting post with the stove, in such a manner that the post shall stand, or occupy a position forward of the stovepipe.

5. The combination, with the supporting-post, of two swinging shelves, so constructed and arranged that they can be swung to or from each other, in the same horizontal plane, substantially as described.

6. The combination, with a supporting-post, B, of two shelves, and a holding-device, whereby said shelves can be adjusted up and down upon the post, for the purposes stated.

7. The combination, with a shelf-post, B, of an adjustable sleeve, E, and thumb-screw, *e*, or its equivalent, for the purposes stated.

8. The combination, with a supporting-post, B, of two shelves, constructed substantially as described, whereby they can be turned back, by the sides of the stove-pipe, substantially as set forth.

9. The combination and arrangement, with a stove,

of a shelf, for supporting articles to be dried or warmed in an elevated position above the top-plate of the stove, substantially as herein described.

10. The arrangement of supporting-devices above the top-plate of the stove, in such a manner that they can be moved from or toward each other, for supporting articles to be aired, dried, or warmed.

89,224.—JOHN HUGGETT and JOHN ALBERT HUGGETT, Eastbourne, England.—*Machine for Forging Horseshoe Nails.*—April 20, 1869; patented in England, September 27, 1867.

Claim.—1. The combination of the screw k^2x, or other equivalent device, with the claw *s* and lever *q*, for automatically holding and releasing the nail-bar in the notch of the holder *k*, substantially as before described.

2. In combination with a reciprocating and turning holder, a hammer faced with two dies for forming the sides and taper of the nail, and the anvil, faced with two corresponding dies, substantially as before set forth.

3. The device consisting of the gauge *v*, spring v^2, rod v^3, arm *q*x, and lever *q*, all arranged and operating substantially as before described.

4. The device consisting of the cords and springs attached to the axis *k*, the cam *o*, the lever *m*, springs *l n*, and gearing b^1 and *o'*, for shifting the holder *k*, substantially as before described.

5. In combination with the above device, the rods *r* and *w*, and the lever *q*, for returning the holder *k* to the position for receiving the blank, all substantially as hereinbefore described.

89,225.—GEORGE JOHNSTON, San Francisco, Cal.—*Still.*—April 20, 1869.

Claim.—1. The furnace D, with the two flues E and F, and the adjustable slide, or damper G, for transferring, regulating, and stopping the heat, substantially as herein described.

2. The curved pipe T, and the valve V, or an equivalent device for converting the heating-chamber into a chamber of the still, substantially as described.

3. The device consisting of the heating-vessel A, together with the vessel B, with its chambers and passages intervening between the vessel A, and the refrigerating-apparatus, when constructed and operating substantially as herein described.

4. Regulating the temperature of the chambers of the vessel B, by means of water passing through the pipe *i*, or an equivalent device, substantially as described.

89,226.—ROBERT KENT, Brooklyn, N. Y.—*Punching-Apparatus.*—April 20, 1869.

Claim.—The arrangement, substantially as described, of the levers A A', fulcrum *f*, punch and bolster *b* and *b'*, screw B, and rocking nut and bearing *e* and *e'*, for the purpose set forth.

89,227.—PETER LUGENBELL, Greensburgh, Ind.—*Ditching-Machine.*—April 20, 1869.

Claim.—The arrangement of the frame A, with an adjustable pivoted interior frame, having wheel I, flanges P P, shanks J J, and shields K K, with their respective parts all constructed and operating as and for the purposes set forth.

89,228.—CHARLES S. LYNCH and J. AUGUSTUS LYNCH, Boston, Mass., and CHARLES E. COFFIN, Muirkirk, Md.—*Mode of Utilizing Iron-Turnings, &c.*—April 20, 1869.

Claim.—1. Mixing of waste masses of solid iron, as set forth, with molten iron, preparatory to the remelting or reheating of the conglomerate, and for the purpose specified.

2. The employment of oxide of manganese with the waste mass of iron, as set forth, and molten iron, when mixed together, as and for the purpose as explained.

89,229.—SAMUEL MAWHINNEY, Worcester, Mass.—*Last.*—April 20, 1869.

Claim.—1. The metal quill D, provided with the flange E, in combination with the rear part of the last, substantially as set forth.

2. The combination, with the flange E, of one or more spurs, *a*, as and for the purposes set forth.

3. The combination, with the flange E, of the locking-piece F, substantially as and for the purposes set forth.

4. The combination, with the part A of the last and the locking-piece F, of the spiral spring *b*, substantially as and for the purposes set forth.

89,230.—BENJAMIN MERRITT, Jr., Newton, Mass., assignor to himself and CHARLES W. BEALS, same place.—*Lawn-Mower.*—April 20, 1869.

Claim.—1. The arrangement and combination of the guard-plate *k* with the two series of lever-knives and their connecting-bars, the whole being applied to the finger-bar frame, as set forth.

2. The combination and arrangement of the single serpentine groove C with the two levers, and the two series of knives, and the roller B, the whole being applied so as to operate as set forth.

89,231.—DANIEL S. MERRITT, Mount Morris, Mich.—*Propelling-Apparatus.*—April 20, 1869.

Claim.—The arrangement of the perpendicular paddles D D, provided with tenons or shanks *a a*, rod I, metal bar E, and set-screw F, whereby the paddles can be raised or lowered, substantially as and for the purposes herein set forth.

89,232.—JOHN WALTER MORGAN, Saltney, Great Britain.—*Anchor.*—April 20, 1869.

Claim.—1. Anchor-arms B, which are pivoted to the shank A, through the block F, or its equivalent, at a point inside the crown of the anchor, substantially as and for the purposes described.

2. The block F, or its equivalent, constructed as described, and secured to the crown of the anchor, and pivoted to the shank thereof, substantially as set forth.

89,233.—RICHARD P. MORGAN, Jr., Dwight, Ill.—*Elevated Railway.*—April 20, 1869.

Claim.—1. The elevated railway, constructed and arranged in the manner and for the purpose herein described.

2. The arches A and B, so connected as to act as a support to each other in sustaining the superstructure and trains in a street railway, in the manner and for the purpose herein described.

3. The combination of the arcs or arches A and B with the truss frames C and D, in the manner and for the purpose herein described.

4. The connection of the arcs or arches A and B of an elevated street railway by means of truss-frames, in the manner and for the purpose herein described.

5. The combination of the arcs or arches A and B with the tension-rods, as herein described, so as to resist the vertical and lateral pressure upon the whole structure, and by a conflict, and consequent resolution of forces, to direct the same into the line of the greatest strength of the material employed, thus enabling a light and economical structure to be used, and interfering in the smallest possible degree with the space, light, and ventilation of the streets occupied and the buildings thereon.

89,234.—SEBASTIAN OEDAMER, Muscatine, Iowa.—*Washing-Machine.*—April 20, 1869.

Claim.—1. The upper rubber, Fig. 3, when made of a fluted or irregular roller, covered by rubber rings, substantially as set forth.

2. The above, in combination with the horizontal series of rollers and the swinging arms I, supported on rubber springs M, and provided with slides G, substantially as set forth.

89,235.—ARTHUR O'NEILL, Hyde Park, Mass.—*Velocipede.*—April 20, 1869.

Claim.—1. The vibrating seat H, in combination with links G, angular double-armed lever F E, connecting-rod D, and crank C, in the manner and for the purpose as above described.

2. The vibrating seat H, in combination with link *l*, double-armed lever *c*, and stirrup *d*, in the manner and for the purpose as set forth.

3. The vibrating seat H, in combination with the propelling arrangement and stirrups, as applied to a three-wheeled velocipede.

89,236.—JOHN H. OWEN, Houston Township, Ill.—*Harvester-Cutter.*—April 20, 1869.

Claim.—The combination of the teeth A A, constructed with double-concave cutting edges, in combination with the double convex knives C C, when the said knives are worked by a lever, and all constructed and arranged substantially as and for the purpose described.

89,237.—JAMES A. B. PATTERSON, Springfield, Ill.—*Plow-Cleaner.*—April 20, 1869.

Claim.—1. The above-described device for cleaning plows, consisting of the cleaner A, connected with and suspended from the beam of a plow by the pivot bars D and E and the guides F and G, and operated by means of the lever B, substantially as and for the purposes before set forth.

2. The pivot bars D and E, in combination with the guides F and G, connecting and suspending the cleaner A to the beam of a plow, substantially as shown and for the purpose described.

89,238.—JAMES A. B. PATTERSON, Springfield, Ill.—*Harrow.*—April 20, 1869.

Claim.—The within-described adjustable and flexible harrow, consisting of the four similar triangular frames, A, B, C, and D, connected and hinged together by the metal strips E E, F F, H H H H, and G G, and the rod K, and provided with four handles, L L, &c., all constructed, arranged, and combined substantially as and for the purposes above set forth.

89,239.—TREAT T. PROSSER, Chicago, Ill.—*Furnace for Liberating and Using the Gaseous Products of Coal.*—April 20, 1869.

Claim.—A furnace or fire-box, containing a reservoir, within which the coal may be partially or entirely coked before passing to the grate-bars, and in which reservoir the gases evolved by the distillation of the coal may be collected and conducted by suitable pipes, so as to be discharged below the grate-bars, to be burned in passing through the bed of incandescent fuel thereon, substantially in the manner shown and described.

89,240.—TREAT T. PROSSER, Chicago, Ill., assignor to himself and HENRY WALLER, same place.—*Steam-Generator.*—April 20, 1869.

Claim.—1. A chamber or reservoir for exhaust steam, surrounding a steam-generator, and having a space interposed between said chamber and generator, within or through which the heat is radiated from the inner surface of the said chamber upon the outer surface of the generator, and whereby the exhaust steam is prevented from coming in contact with the generator, substantially as shown and described.

2. The combination of a steam-generator with a reservoir or chamber which surrounds the same, for the purpose of receiving the exhaust steam from the engine, they being so arranged as to leave an intervening chamber, A, between them, substantially as shown and described.

3. The combination of the boiler A, the steam reservoir or chamber H, the coal-reservoir C, and gas-conducting pipe D, substantially as shown and described.

89,241.—TREAT T. PROSSER, Chicago, Ill., assignor to himself and HENRY WALLER, same place.—*Steam-Generator.*—April 20, 1869.

Claim.—A steam-generator, having arranged within its fire-box, and opening out of the same, a magazine or reservoir for coals, and a pipe or conduit for conveying the gases which are generated by the distillation of such coals, and discharging them below the grate, substantially as shown and described.

89,242.—WILLIAM S. RABB, Winnsborough, S. C.—*Plow.*—April 20, 1869.

Claim.—The movable feet B C, to which the mold-boards or points are attached, arranged and operating substantially as and for the purposes herein specified.

89,243.—JOSEPH H. RACEY, New York, N.Y.—*Refrigerator.*—April 20, 1869.

Claim.—1. The combination of the corrugated roof D with the corrugated tapering side pockets F F, and lower water-troughs or receptacles G G, substantially as specified.

2. The combination with the refrigerator, constructed as described, of inner and outer doors, arranged to open in reverse directions—that is, the outer door or doors to open outward, and the inner door or doors to open inward—relatively to the chamber of such refrigerator, essentially as herein set forth.

89,244.—ISRAEL L. G. RICE, Cambridge, Mass.—*Inking Apparatus for Printing-Presses.*—April 20, 1869.

Claim.—The application of distributing-disks, placed at right angles with distributing-rollers, or inking-rollers, or inking-tables, substantially as and for the purpose set forth.

89,245.—SENECA M. RICHARDSON, Worcester, Mass.—*Tenoning-Machine.*—April 20, 1869.

Claim.—1. The combination of frame F with frame G, substantially as and for the purposes set forth.

2. The combination with frames F and G of the adjusting-screw H, said parts being constructed and arranged in relation to each other substantially as and for the purposes set forth.

3. The elevating frame G, constructed as described, and as shown in the accompanying drawings, for the purposes stated.

89,246.—JOHN MATHEW RILEY, Newark, N. J.—*Press for the Manufacture of Pens, Buttons, Jewelry, &c.*—April 20, 1869.

Claim.—1. The described arrangement upon the bolt C, formed with a screw-thread of the sleeve F, fitted in the upper bearing E, and secured by a nut or nuts, G, the cross-head H having arms J J, and retained in place by nuts I I and the cross-head L, having arms Q Q, said part L being connected to the cross-head H by links K, and also connected with the lever-arms O, substantially as herein shown and described.

2. The combination of the cross-head A J, nuts I, cross-head L, links K, plates S, nuts T, screw-shank C, and lever M, all constructed and arranged to operate substantially as and for the purposes herein set forth.

3. The adjustable stripper-fingers U U, in combination with the adjustable holder, substantially as described.

4. In combination with the parts A *b*, the holder V *a c*, having lugs K, stripper-arms U, pivots W, beveled plate *z*, and fastenings *d*, all constructed and arranged substantially as and for the purpose herein set forth.

89,247.—PETER J. SCHMIDT, Carlinville, Ill., assignor to SEIGEL, SCHMIDT, AND COMPANY, same place.—*Grain-Drill.*—April 20, 1869.

Claim.—1. The manner of holding the flukes in ground by elastic pressure upon the bar E, substantially as set forth.

2. Moving the flukes to a zigzag or right line setting by the shifting-bars I, substantially as set forth.

3. Moving the feed-tubes K by slides K′ to follow the flukes, substantially as set forth.

89,248.—J. Q. C. SEARLE, Topeka, Kans., assignor to JULIA E. SEARLE, same place.—*Base-Burning Stove.*—April 20, 1869.

Claim.—1. A fire-pot, suspended with a heater, substantially as described, in combination with an annular flue, *t′*, arranged as set forth.

2. A hollow fire-pot, having openings at the upper edge, in combination with an air-conducting tube, E, for the purpose described.

3. The combination of the fire-pot and a series of hollow air-conducting tubes or arms, which support the pot, substantially as set forth.

4. The tube E, extending from the fire-grate through the partition *d′*, and serving both to conduct the ashes to the drawer and to prevent the access of cold air to the exterior plates of the stove.

5. The combination of the fire-pot D, deflectors

G G′, and outer casing B of the heater, the whole being arranged substantially as and for the purpose described.

6. The combination of the above, the partitions *d d′*, openings *y y′*, and pipe X, all arranged as set forth.

7. The feeder H, in combination with the outer perforated casing C, substantially as and for the purpose described.

8. The feeder H, consisting of two concentric tubes and an intervening chamber, containing asbestos or its equivalent.

9. The arrangement of the casing C, feeder H, and inclined partitions *f f′*, extending between the casing and feeder, and inclosing an air-space, *w′*, all as set forth.

89,249.—JOHN SHEFFIELD, Buffalo, N. Y.—*Steam-Generator.*—April 20, 1869.

Claim.—The arrangement of the induction-air pipe D within the chimney C, and with its extension D′, communicating with the furnace B, as herein described.

89,250.—THEODORE SLOAT, Brooklyn, (E. D.,) N. Y.—*Cracker-Machine.*—April 20, 1869.

Claim.—1. The arrangement and combination of the vertical shaft L, crank M, and bevel-pinions I K, for operating the sliding knife B, by or from the shaft H, substantially as shown and described.

2. The combination of the longitudinally-adjustable and removable perforated false bottom C to the dough-box A with the intermittently reciprocating knife or slide B, having apertures, *b*, and formed with a series of cutting-bars, *c*, arranged to play beneath the perforations *a* in the false bottom, essentially as shown and described, and for the purposes set forth.

89,251.—ABRAM C. STANNARD, Milton, Wis.—*Washing-Machine.*—April 20, 1869.

Claim.—The arrangement with the box A of the perforated swinging board C, springs D, inclined board B, perforated beater H, arms G, and rock-shaft F, operated by the tortuously-grooved cylinder K and arm J, all substantially as shown and described.

89,252.—NATHAN STOCKWELL, Windsor, N. Y.—*Table.*—April 20, 1869.

Claim.—The combination of the table A, screw-standard H, sleeve-socket E, and set-screw J with the standard F, rings P, and legs O, provided with the notches R and wedges S, all constructed and arranged substantially as set forth.

89,253.—LEANDER R. STREETER, Chelsea, assignor to himself and A. B. ELY, (Trustees,) Newton, Mass.—*Dental Plate.*—April.20, 1869.

Claim.—1. The manufacture of dental plates and gums from the material or materials, substantially as described.

2. Dental plates and gums manufactured of the material or materials, substantially as described, or in the manufacture of which said material forms an essential ingredient, substantially as set forth.

3. The attachment or combination of artificial teeth to or with artificial bases, plates, or gums, made in whole or in part of the material, substantially as described.

4. The method of preparing, manipulating, and hardening the plate from the material or materials, and in the manner substantially as specified.

89,254.—LEANDER R. STREETER, Chelsea, assignor to himself and A. B. ELY, (Trustees,) Newton, Mass.—*Process of Treating Pyroxyle, Pyroxyline, and the Like Substance, for Forming Useful and Ornamental Articles.*—April 20, 1869.

Claim.—1. Treating pyroxyle, pyroxyline, or xyloidine, or its compounds, with suitable non-solvents, substantially as and for the purposes set forth.

2. Treating pyroxyline, or its compounds, with suitable non-solvents and cementive agents, substantially as and for the purposes set forth.

3. Pyroxyline, or xyloidine, or soluble gun-cotton, and its compounds, treated with suitable non-solvents, substantially as described.

4. Pyroxyline and its compounds treated with suitable non-solvents and cementive agents, substantially as described.

5. The formation of articles of ornament, utility, and manufacture from pyroxyle or pyroxyline and its compounds, rendered yielding, distensible, compressible, and impressible by a second process, substantially as set forth.

6. The formation of articles of ornament, utility, and manufacture, by rendering pyroxyle or pyroxyline, or its compounds, yielding, distensible, compressible, impressible, and adhesive, by a second process, substantially as set forth.

7. The attaching of pyroxyle, or pyroxyline, or its compounds, to other materials, articles, or bodies, after the said pyroxyle, &c., has been treated by my second process, substantially as set forth.

89,255.—JAMES STUTT, Fermanagh County, Ireland.—*Machine for Disintegrating Wood for Paper-Stock.*—April 20, 1869.

Claim.—1. The dogs F F, in combination with the head-blocks E E, and carriage D, for the purposes and substantially as described.

2. In combination with the dogs F F and head-blocks E E, the saws O, hung obliquely upon the shaft P, so that the sinuosities of the track of the saws will cut laterally, as well as longitudinally, for the purpose of making paper-pulp, and for the purposes described.

3. The rollers R R, in combination with the carriage D and saws O, substantially as herein set forth.

4. The bevel-gears M and endless screw K, gear-wheel J, and pinions I I, in combination with the rack H, carriage D, and the gang of saws O, when constructed and operated for the purposes and substantially as herein set forth.

89,256.—WILHELM C. A. THIELEPAPE, San Antonio, Texas.—*Needle-Threader for Sewing-Machines.*—April 20, 1869.

Claim.—The eyelet-frame *a*, in combination with the spring *b b*, for keeping the parallelopipeds together, and the pins *u* and *v* for separating them, the spring *e*, for attaching the device to the machine-needle, and the adjusting-plate *r*, with its notches *n* and *o*, adapted for a curved or a straight needle, all constructed and operating substantially as and for the purpose described.

89,257.—MOSES N. WARD, Linneus, assignor to FREDERICK H. COOMBS, Bangor, Me.—*Horse-Rake.*—April 20, 1869; antedated October 20, 1868.

Claim.—1. In a horse hay-rake, whose rake-head is placed behind the wheels, combining such head with levers or arms, whose fulcra are forward of the axle, and which are thus free to rise and fall independent of the axle, substantially as and for the purpose set forth.

2. The combination, with the rake-head E, of the swinging-arms or levers D, so hung that when at their lowest position they may rest at about their centers, on the carriage axle, substantially as described.

3. The stiff spring I, in combination with the rake-head E.

4. The vertical rods F F, B, and G G, and spiral springs *e e*, in combination with the rake-head E.

5. The combination and arrangement with the swinging-levers D, of the raking-teeth, in such manner that the act of backing shall automatically lift the levers and reverse the position of the teeth, and the forward movement bring them again into operative action, substantially as described.

6. The combination, with the raking-teeth, of the holding-teeth, substantially as and for the purpose described.

89,258.—ELIJAH WESTON, Buffalo, N. Y.—*Steam-Generator.*—April 20, 1869.

Claim.—1. The combustion-chamber E, formed by the partition F, having walls *a b*, and outside space G, in combination with the fire-box D, extended crown-sheet H, arranged substantially as herein specified.

2. The partitions I I′, in combination with the fire-box D, and boiler B of a locomotive, or other boiler, arranged substantially as herein set forth.

3. The wire sieve or screen *c*, and bars *e f g h*, arranged with reference to the fire-door of a boiler, as herein described.

89,259.—DAVID WIGGINS, Greenport, N. Y.—*Ice-Cream Freezer.*—April 20, 1869.

Claim.—The arms E, parallel bars F, pitmen J, fixed bar T, and stationary scraper C, combined and operating substantially as described.

89,260.—R. B. WILLIS, Rochester, N. Y.—*Base-Burning Stove.*—April 20, 1869.

Claim.—1. The screw-plate *h*, when applied to the supply-chamber of coal-stoves, for the purpose set forth.

2. The hollow shaft *b*, with or without the perforated plate *x*, in combination with the elevated supply-chamber of coal-stoves, when it conducts the cold air downward centrally into the combustion-chamber, for the purpose set forth.

89,261.—D. W. WYMAN, New York, N. Y.—*Locomotive-Engine Furnace.*—April 20, 1869.

Claim.—1. The arrangement of the side flues a^2 a^2, and dampers b^2 b^2, controlling the same, in combination with the interior upper deflecting flange or flanges B^2 B^2, arranged relatively to said flues and lower or base portion of the pan, substantially as specified.

2. The arrangement of the T-shaped levers D^2 D^2, link-rods d^2 d^2, and cranks e^2 e^2, on adjacent sides of the pan, for operating the several valves or dampers b^2 b^2, substantially as shown and described.

89,262.—A. R. FULLER, Burlington, Vt.—*Sad-Iron Cleaner.*—April 20, 1869.

Claim.—The combination of the hinged bed-pieces A A, cloth-pieces B B, and pivoted bands C C, all constructed substantially in the manner and for the purposes herein set forth.

89,263.—JAMES LYON, Norfolk, Va.—*Machine for Cleaning Bricks.*—April 20, 1869.

Claim.—1. The door F, hinged as described, in combination with the pin, slotted arms, and cross-head of the plunger, substantially as described.

2. The sets of corrugated rollers A A A A, arranged as herein shown and described, and operated by means of forcing the bricks between them, as herein set forth.

89,264.—E. G. LAMSON, Windsor, Vt.—*Rock-Channeling Machine.*—April 20, 1869.

Claim.—1. A stone-grooving or channeling machine, which is moved upon a track, provided with a series of reciprocating cutters upon each side of the propelling-mechanism when the cutters are operated by means of a crank-shaft, which is formed in sections, substantially as and for the purposes set forth.

2. In a stone-channeling or grooving machine, which is moved upon a track, and provided with reciprocating cutters, which operate on each side of the track, a mechanism which enables the operation of the cutters by one engine on either side of the track, or on both sides of the track at one time, substantially as set forth.

3. The notched lever or bar X, connected to a rock-shaft under the boiler, which is attached to the feed-mechanism, to cause the backward or forward operation of the machine, by the means substantially as set forth.

89,265.—E. G. LAMSON, Windsor, Vt.—*Stone-Channeling Machine.*—April 20, 1869.

Claim.—1. The arrangement, upon the bed-frame C, of the two sets of cutters V V, upon or around the guides R R, arranged upon the same side of the frame, and at each side of a boiler, A′, to operate outside of the frame and track, either vertically or at an angle, and braced upon the rear of the bed-frame, substantially as set forth.

2. In a stone-grooving or channeling machine, the method herein described of moving the machine up and down steep grades, by means of a rope, chain, or their equivalents, substantially as set forth.

3. The arrangement of the toothed wheel G′, chain H′, and weight J′, with a stone-channeling and grooving machine, substantially as set forth.

4. A stone-channeling or grooving machine, which is mounted upon a frame supporting a horizontal or upright steam-boiler, which is hung on trunnions, whereby the same will retain its normal position, irrespective of the incline or angle of the bed-frame, substantially as set forth.

5. In a stone-channeling or grooving machine carrying two or more engines and two or more sets of cutters, an arrangement of devices by which either engine may be made to feed the machine in either direction along the track, substantially as herein set forth.

6. Connecting the feed-mechanism with an eccentric on the main shaft of the engine in such a manner that the said feed-mechanism shall be operated at whatever angle the engine, engine-bed, and cutting-apparatus may be placed, substantially as herein set forth.

7. The cogged segmental arm Y, provided with a collar encircling the trunnion-shaft of the engine-bed G, and held in position by the clutch F′, substantially as and for the purposes herein set forth.

8. The combination, with the shaft *a*, of the worm-gear *x*, axle E, spur-wheel *y*′, and rack-bar B, whereby the spur-wheel is made to act upon its upper and lower face, substantially as set forth.

89,266.—JOHN M. BLAISDELL, Sanbornton, N. H.—*Extension-Table.*—April 20, 1869.

Claim.—1. The chamber F, for the reception of the detachable folded leaves, formed by the two transverse boards F′ and the hinged ends F″, supported by the extension-slides and the central leg J, and connected to the cross-bars H, so as to be inclosed entirely within the table-frame when the latter is closed, substantially as herein described.

2. The upper auxiliary leaves, folded and secured upon the bottom auxiliary folded leaf K″, and between the hinged ends F″ of the chamber F, in the manner and for the purpose described.

3. The ends F″ of the transverse chamber F, hinged for the purpose of serving as supports for the central detachable leaf when in place, and to open and close the ends of the chamber, to facilitate the removal of said leaves from and insertion into the chamber F, as described.

4. The fixed and detachable table-leaves, provided with spring-catches L and staples *l*, arranged and interlocking in the manner and for the purpose herein described.

5. The movable transverse chamber F, combined with the yielding central support or foot J J′, for the purpose described.

89,267.—GEORGE ADAIR and J. F. POOL, Monroe, Wis.—*Device for Cutting Bolts.*—April 27, 1869.

Claim.—The combination of the handle D and cam E with the lever B, the bar A, and knife *c*, all constructed, arranged, and operating substantially in the manner and for the purpose described.

89,268.—MOSES L. ANDREW, Cincinnati, Ohio assignor to himself and GEORGE BURROWS, same place.—*Rotary Pump.*—April 27, 1869.

Claim.—1. The arrangement of the hinged valve or plate C *c*, spring D, and set-screw E, with reference to the piston B, substantially as shown and described.

2. The arrangement of the tapering packing H, plate I, and set screw K, with reference to the piston G, substantially as shown and described.

89,269.—MOSES L. ANDREW, Cincinnati, Ohio, assignor to himself and GEORGE BURROWS, same place.—*Rotary Pump.*—April 27, 1869.

Claim.—1. The arrangement of the curved pipes B C, as set forth, and for the purpose specified.

2. In combination with the elements of the preceding clause, the check-valve *e*, wire F, and stopper G, for the purpose stated.

3. The sliding bearing N, frame O, and key P, in combination with the journals M M, for the purpose described.

4. The keys J, and springs K, in combination with the hubs I, for the purpose described.

89,270.—GUSTAV ANTON, Philadelphia, Pa.—*Holder for Candles and Ornaments on Christmas-Trees.*—April 27, 1869.

Claim.—Combining with a candle-holder the described series of sockets, or their equivalents, substantially as and for the purpose set forth.

89,271.—SILAS D. BALDWIN, Chicago, Ill., assignor to himself and DANIEL LEONARD, same place.—*Vapor-Burner.*—April 27, 1869.

Claim.—1. The deflector B, constructed substantially as and for the purposes specified.

2. The disk A, in combination with the cap C, and deflector B, all constructed and operating substantially as and for the purposes specified.

3. The cap C, constructed substantially as specified.

89,272.—ROBERT R. BALL, West Meriden, Conn.—*Sash-Lock.*—April 27, 1869; antedated April 24, 1869.

Claim.—1. In a sash-lock, as an improvement on the patent granted to me, as assignee of D. P. Lacy, on the 18th of August, 1868, providing the bolt G with lateral arms g g', and the guide e, for the purpose specified.

2. Constructing the tumbler E, with its central projection f^1, socket f^3, and cavity f^4, to be used in combination with the bolt G, for the object described.

3. In combination with the above, the arrangement and construction of the gravitating-crank H, with the tumbler F, and shield I, when employed in the manner and for the purposes stated.

89,273.—ROBERT R. BALL, West Meriden, Conn.—*Sash-Lock.*—April 27, 1869; antedated April 24, 1869.

Claim.—The slide K k, L l, constructed as described, and adapted for use in combination with the slotted lock D d, tumbler F, and bolt G, in the manner and for the purpose explained.

89,274.—JOSEPH B. BATCHELDER, Boston, Mass.—*Surfacing Fabrics with Bronze or Metallic Powders.*—April 27, 1869.

Claim.—The improvement in surfacing with metal or bronze powders substantially as described.

89,275.—EDWIN E. BEAN, Boston, assignor to DAVID WHITTEMORE, North Bridgewater, Mass.—*Sewing-Machine for Sewing Leather.*—April 27, 1869.

Claim.—1. The combination for effecting the movements of the awl and needle, the same consisting of the rotary driving-shaft D, the adjustable eccentric e, its connector f, the rocker-shaft h, its arms g i, and the cranked wheel H, and connecting-rod q, the whole being applied together, and to the awl and needle-carriers I G, and frame, and arranged substantially in manner and so as to operate as specified.

2. In combination with mechanism for feeding the material to be sewed, and mechanism for imparting to the awl and needle their vertical movements, the mechanism, substantially as described, by which the awl, while piercing the material, is moved laterally with such material and feeding-mechanism, without of itself in any way affecting the feeding of the material.

3. The combination for effecting the movements of the feeder and the presser, the same consisting of the grooved cam f', (applied to the driving-shaft,) the lever c', applied to the said cam, as described, the rocker-shaft y and its arms x g, the pendulous bar, or head L, the connecting-rod w, and the shaft u, and its arms t v, the whole being arranged with and applied to the presser, and feeder, and the frame of the machine, substantially as set forth.

4. In combination with the said mechanism for effecting the movements of the feeder and the presser-foot, the slot z, (in the arm x,) and the adjustable pin a', and its clamp-screw applied to the lever c', and the arm x, their purpose being to regulate the "length of stitch," as set forth.

5. The combination of the adjusting-screw p' and nuts q' r', or the equivalent thereof, with the pendulous bar L, the crank-pin o', and the arm g, of the mechanism for operating the awl and the feeder, as set forth, the purpose of the said parts o', p', q', and r', being to enable the awl to be adjusted with reference to the needle.

89,276.—WILLIAM BEERS, Milan, Ohio, assignor to himself and WILLIAM MCMILLEN, same place.—*Fastening for Carriage-Seats.*—April 27, 1869.

Claim.—The hook D and plate b, in combination with the pins E, seat, and box, arranged in relation to each other, as and for the purpose substantially as set forth.

89,277.—HENRY BICKFORD, Cincinnati, Ohio.—*Blind-Slat-Tenoning Machine.*—April 27, 1869.

Claim.—1. In combination with the rotating chucks F F', through which the material is fed endwise, the sliding adjustable jaws K, constructed and operating as described, and for the purpose set forth.

2. The weighted pawl P and bell-crank Q, arranged and operated in the manner and for the purpose specified.

3. The cutter-head A D d, constructed and operated as described, and for the purpose of cutting a double and divided tenon, as set forth.

4. The beveled spurs E, constructed substantially as described, and for the purpose set forth.

5. The adjustable gauge M O o, for the purpose set forth.

89,278.—JEHIAL E. BLODGETT, Oswego, N.Y.—*Stove-Cover Holder.*—April 27, 1869; antedated April 15, 1869.

Claim.—A stove-cover holder, designed to keep stove-covers when not in use, and constructed with one or more narrow open spaces, each between fixed bearing-places, and operating in the manner as herein described.

89,279.—VICTOR G. BLOEDE, Brooklyn, N. Y.—*Method of Utilizing the Waste Products of Sugar-Refineries.*—April 27, 1869.

Claim.—1. The utilization of the waste scum of sugar-refineries as a fertilizer.

2. The mode of treating it with acids, to prevent loss of ammoniacal products.

3. The thorough desiccation of the scum to increase its strength and portability.

4. The utilization of the scum for the manufacture of the prussiate of potash.

5. The method of increasing the fertilizing strength of the scum, by heaping and fermenting it, substantially in the manner and for the purpose herein set forth.

89,280.—REINARD BLUM, Champaign, Ill.—*Stove-Governor.*—April 27, 1869.

Claim.—1. The arrangement, on the outside of a stove-pipe, of the expansive plate a, having a socket, e, at each end, the non-expansive plate b, and the lever D, the lower end of said lever resting in the lower socket e, and the plate b resting on a shoulder, f, on the lever, and its upper end inserted in the upper socket e, all substantially as and for the purposes herein set forth.

2. The arrangement of the damper C, shank B, rod E, and nut h, with the lever D and plates a and b, all constructed as described, and operating substantially as and for the purposes herein set forth.

89,281.—DANIEL BORDNER, Canton, Ohio.—*Fence-Board Gauge-Holder.*—April 27, 1869; antedated April 22, 1869.

Claim.—The fence-board gauge-holder, herein described, consisting of the piece A, with plate F, supporting-pins B B, staples D D, and pins E E, the head-plate G, with one or more holes L, and the foot-rod C, the several parts being constructed, combined, and arranged, substantially as and for the purpose herein specified.

89,282.—JAMES F. BREWER, Plantsville, Conn.—*Chain.*—April 27, 1869.

Claim.—1. The cast-metal link A, with its eye a and pin b, all arranged substantially as shown and described, and for the purposes set forth.

2. As a new article of manufacture, a chain, the alternate links of which are connected by means o the eye a and pin b of a cast-metal link, all as an for the purpose substantially as required.

89,283.—Kennedy Brown, Gardner, Ill.—*Nut-Lock.*—April 27, 1869.

Claim.—The nut-lock represented at letter B, as and for the purpose above described.

89,284.—Simeon Brown, Utica, Ohio.—*Adjustable Gate for Grain-Elevators.*—April 27, 1869.

Claim.—The lever C, spring S, and crank-pin *p*, or its equivalent, in combination with the rod R, lever E, gate G, hopper H, and elevator B, substantially as shown and described.

89,285.—Willard C. Bruson, Chicago, Ill., assignor to himself and George Rounds, same place.—*Composition for Preserving Eggs.*—April 27, 1869.

Claim.—The composition above described, compounded of the ingredients mentioned, substantially as and for the purpose set forth.

89,286.—Isaac N. Buck, Elgin, Ill.—*Burglar-Alarm.*—April 27, 1869.

Claim.—1. In a burglar-alarm, the adjusting-screw M, in combination with the operating-bolt E, substantially as shown and described, for the purpose specified.

2. The combination of the tumbler-shaft F, with its lever-arm G, the operating-bolt E, with springs E E and H, arranged, relatively to each other, in the manner and for the purposes substantially as shown and described.

89,287.—W. H. Bustin, Watertown, Mass.—*Hames.*—April 27, 1869.

Claim.—The hames above described, consisting of plate A, with flange *b*, wood B, plate C, and ears *d*, when constructed in the manner and for the purpose substantially as described.

89,288.—William H. Bustin, Watertown, Mass.—*Hames for Harness.*—April 27, 1869.

Claim.—The hames A, constructed with flange *c* and projecting-plate *b*, and eyes *d*, in the manner and for the purpose specified.

89,289.—Charles Carr, Boston, Mass.—*Steam-Engine Cut-Off.*—April 27, 1869; antedated April 17, 1869.

Claim.—1. The cam *h*, substantially as shown and described, and for the purposes set forth.

2. The combination of the variable cam *h*, pivot, gudgeon *p*, hollow shaft *m*, rod *n*, stem *g*, arms *f*, and valves *r*, as herein set forth.

3. The inclined key *i*, in combination with the adjustable cams *h*, as herein described.

4. In combination with the cam *h*, the inclined key *i*, the hollow shaft *m*, the rod *n*, and toggle-joint *c c*, for the purpose of actuating the cams *h* from the governor-rod *b*, as described.

5. The arrangement of the arms *f f*, sliding valve *x*, and stem *g*, as described.

89,290.—Cyprien Chabot, Philadelphia, Pa—*Twisting and Drawing Heads for Spinning-Machines.*—April 27, 1869.

Claim.—The combination of the spindle C, having the hole through it bored tapering from each end to or about the middle, with the beveled rollers *e e'* made narrower than the diameter of the hole in the end of the spindle, all substantially as herein shown and described.

89,291.—James C. Cochrane, Rochester, N. Y.—*Steam-Generator.*—April 27, 1869.

Claim.—A low-water steam-port, composed of the valve-chamber, (Fig. A, 8,) the valve-seat, (Fig. A, 9,) and the valve, (Fig. A, 10, 11, 12,) in combination with the tube 7, all constructed and arranged substantially as described, for the purposes described.

89,292.—John Collins, Parma, Ohio.—*Spring-Balance Hammer.*—April 27, 1869.

Claim.—The arrangement of devices above described, to form a spring-balanced hammer, consisting of the spring I, hammer-helve C', spring J, hammer C, anvil B, and standards D and E, substantially as specified.

89,293.—Edwin Cowles and George R. Metten, Cleveland, Ohio.—*Velocipede.*—April 27, 1869.

Claim.—1. The arrangement of the drums J J, shaft *p*, wheel A, springs S, clutching-pawls, belts *c*, and treadles D D, in combination with the wheel A', frame or perch B C', and seat G', substantially in the manner and for the purpose described.

2. The arrangement of the device g^2, hook g^1, and cord *c*, in combination with a velocipede, which is constructed and operated substantially as described.

3. The combination and arrangement of the devices *d*, cords *c*, and treadles D D, with a velocipede, constructed and operated as herein described.

4. The arrangement and combination of the guiding-lever C, seat G', treadles D D, perch or frame B, cords *c c*, drums and clutching-pawls, springs, and tracking-wheels A A', substantially in the manner shown and described.

89,294.—Eli L. Crandall, Williamstown, N. Y.—*Table-Car or Caster.*—April 27, 1869.

Claim.—The portable table-car or caster, constructed with chambers or shelves, and mounted upon wheels or runners, all substantially as and for the purpose described.

89,295.—William Franklin Davis, Boston, and Charles Elbridge Broad, Milton, Mass.—*Door-Fastener.*—April 27, 1869.

Claim.—1. The reversible main-piece A, having a catch, *a*, at one end, and teeth *b* at the other end, substantially as and for the purpose herein specified.

2. The adjustable and reversible shoulder-pieces B C, in combination with the slotted main piece A, substantially as and for the purpose herein set forth.

89,296.—Augustus Day, Detroit, Mich.—*Track-Cleaner.*—April 27, 1869.

Claim.—1. The strap A, and adjustable-weight F, when constructed and operating substantially as and for the purposes set forth.

2. In combination with the above, the spur H, and auxiliary scraper or wings E, when arranged and operating substantially as and for the purposes described.

89,297.—Charles M. Dillon, Philadelphia, Pa.—*Swing.*—April 27, 1869.

Claim.—The construction and arrangement of the uprights V and V', cross-piece B, brackets *b* and *b'*, rockers R and R', provided with slots L, reversible seats T and T', with their uprights *a*, a^1, a^2, and a^3, and cross-pieces S and S', rods D and D', shaft H, cradle C, and swing-seat A, the whole operating substantially in the manner and for the purpose above set forth and described.

89,298.—William Henry Elton, Baltimore, Md.—*Machine for Cleaning Coffee.*—April 27, 1869.

Claim.—The cleaning-cylinder, as shown, formed of alternate sections of solid sheet-metal, B, and removable wire-cloth C, and provided with radial shelves E E^1 E^2, and spaces *e* between the outer edges of said shelves and the periphery of the cylinder, all constructed, arranged, and operating as herein set forth.

89,299.—William A. Fenn, Rochester, N. Y., assignor to himself and Henry B. Beach, same place.—*Oil-Can.*—April 27, 1869.

Claim.—1. The employment, in an oil or other can, of a turning or sliding gate *b*, used in combination with packing *a*, and so arranged as to perform the double effect of opening both the spout passage and the vent at one action, and *vice versa*, substantially as herein described.

2. The combination, with the cover of an oil or other can, of a spout, *h*, a vent, *k*, and a cut-off device, *b*, substantially as herein set forth.

3. The arrangement of the cylinder C with spout *h*, the packings *a a*, the gate *b*, and the air-tube *k*, substantially as and for the purpose specified.

4. The combination, with the packings *a a*, of the follower *j* and spring *p*, operating in the manner and for the purpose specified.

5. Attaching the vent-tube *k* to the follower *j*, in the manner and for the purpose specified.

89,300.—William A. Fenn, Rochester, N. Y., assiguor to himself and Henry B. Beach, Meriden, Conn.—*Animal-Trap.*—April 27, 1869.

Claim.—1. The combination, in the circular case A, of the centrally-pivoted gate *f*, operated by a weight or spring, and the hinged platform *n'*, said parts being arranged in such a manner that the gate itself divides the circle of the lower chamber into two compartments, the positions of which change with the rotation of the gate, to admit and discharge the animal, as herein set forth.

2. The offset D, containing the cavities *k l*, for the reception of the bait and the platform, as hereiu described.

3. The combination, with the two chambers B C, situated directly oue above the other, the transparent mica, or glass door *c*, arranged substantially as and for the purpose herein set forth.

89,301.—Benjamin Franklin Fisk, Fredonia Township, Mich.—*Gate.*—April 27, 1869.

Claim.—1. The latching-elevator F, and iuclined-hanging posts B, iu combination with the main gate-post A, and pivoted rails D, and slats S, of a counter-balanced gate, substautially as and for the purpose described.

2. The arrangement and coubination of the two horizontal levers L with the cross-bar C of the inclined hanging frame B C, when said levers are so connected with the latching-elevator F as to be capable of actuating it, in operating a pivoted folding gate, from a vehicle, or on horseback, substantially as set forth.

89,302.—Thomas Jefferson Flagg, New York, N. Y., assiguor to "Fisk, Clark, aud Flagg," same place.—*Felt Suspender-End.*—April 27, 1869.

Claim.—The felt suspender-end, hereinbefore described, as a new article of manufacture.

89,303.—Israel Forman, Fairmount, W. Va.—*Culinary Steamer.*—April 27, 1869.

Claim.—The bracket or ledge E E, in counection with the flange O, constructed substantially as and for the purpose set forth.

89,304.—Calvin Fulton, Rochester, N. Y., assignor to Norman H. Galusha, same place.—*Stove-Grate.*—April 27, 1869.

Claim.—The arrangement of the independent grate A and ring B, as herein described, the grate being sunken, and resting iu lugs *b b*, so as to leave a space, *f*, and having an independent dumpiug-action, as set forth.

89,305.—Benjamin Glasscock, Hillsborough, Ohio.—*Fly-Trap.*—April 27, 1869.

Claim.—1. The arrangement of the lid E, wire *a*, hook *b*, spring *c*, and buttons *f f*, all substantially as and for the purposes herein set forth.

2. The arrangemeut of the box A, divided into bait-box B, and prison C, one portion of the latter extending under the former, and having doors *e* and *h*, substantially as shown and described.

89,306.—Jonathan Goodher, Burlingtou, N. J.—*Trestle.*—April 27, 1869.

Claim.—1. A trestle, provided at each end with a number of hinged legs, H, of differeut lengths, arranged for adjustment, substantially as herein described, for the purpose of regulating the height of the said trestle.

2. The combiuation with the sections A A', having hinged legs H, of bars *c c*, adjustable on and independently of the said sections, for the purpose set forth.

3. The bloeks J J with their pins *s*, when arranged for attachment to the end-pieces of the trestle, substantially as herein described.

89,307.—Wilmer D. Gridley. New Britain, Conn.—*Book-Holder.*—April 27, 1869.

Claim.—1. A leaf-holder, consisting of the coiled spring *a*, socket *b*, aud holding-bar *c*, substautially as shown and described.

2. The combination of the spring *a*, socket *b*, bar *c*, with the supporting-rod *d*, and holdiug-elasp *e*, substantially as shown and described.

89,308.—Thomas Hall, Boston, Mass., assignor to himself and William Dillon, Stamford, Conu.—*Electric Signal for Railroads.*—April 27, 1869.

Claim.—The mechanism for the elevation of the signal, consisting of the armature-lever, the rod H, the lever K, and the chain and pulley, or their equivalents, connected with the counterbalanced signal-arm, substantially as described.

89,309.—George Haneline, Akron, Ohio.—*Fishing-Torch.*—April 27, 1869.

Claim.—The herein-described fishing-torch, consisting of the oil-can A, tube D, rod E', and torch F, when constructed and arranged in relation to each other in the manner substantially as described, and for the purpose specified.

89,310.—John Heatley, Etna, Pa.—*Oscillating Furnace for Puddling and Refining Iron.*—April 27, 1869.

Claim.—1. An oscillating or rotary furnace, for heating, boiliug, puddling, or otherwise working irou or other metals, constructed and operated substantially as and for the purposes above set forth.

2. A sliding pivot, *o'*, conneeted by one or more rods *r*, with a wheel, *t*, by which its distance from the cog-wheels is regulated, and thus a greater or less degree of oscillation obtained, arranged and used substantially as and for the purposes above expressed.

3. The use and arrangement of fire-grates around a central puddling-pan or basin, C', and their rotation under one fuel-hopper, Z, substantially as and for the purposes hereinbefore set forth.

4. A puddling-furnace, constructed with chills *e*, inclosing a circular space or pan, C', on the bottom plate *f*, surrounded by fire-grates, and so made as to rotate, and with openings in its roof, so relatively arrauged to each other and to the fire-grates as to exclude cold air from metal in the puddling-pan, constructed and used substantially as and for the purposes hereiubefore set forth.

5. In combination with the puddling-furnace a meltiug-stove, erected over it, operated by the heat from such furnace, and connected therewith by a pipe, *o*, arranged aud operated substantially as and for the purposes hereinbefore set forth.

6. The series of flues L' in or through the walls of the roof of a melting-stove, arranged and used substautially as and for the purposes above meutioued.

7. Purifying metal while in a molten state, passiug through the pipe *o*, by throwiug iuto it blasts, hot or cold water, or steam, in the manner and substantially as is hereinbefore set forth.

8. An elbow or bend in the conducting pipe *o*, open at the top, substantially as and for the purposes hereinbefore set forth.

89,311.—George Heim, Naperville, Ill., assiguor to himself and John Ruchty, same place.—*Compound for Forming Building-Blocks.*—April 27, 1869.

Claim.—A compound for building purposes, manufactured substantially as herein described.

89,312.—C. C. Hinsdale, Cleveland, Ohio.—*Manufacture of Sheet-Iron.*—April 27, 1869.

Claim.—The herein described mode or process of preparing sheet-iron for rolling, whereby a highly polished surface is given to said sheets, by the means and in the manuer substantially as set forth.

89,313.—Charles E. L. Holmes, New York, N. Y.—*Apparatus for Scouring and Drying Sheet-Metal.*—April 27, 1869; autedated April 20, 1869.

Claim.—1. The elastic rollers or brushes, to wash or scour sheet-metal on both sides, substantially in the manner specified.

2. The elastic squeezing-rollers *e f*, in combination with the water-vat *a* and drying chamber *k l*, substantially as set forth.

3. The coubination of scouriug mechanism for cleaning the surface of sheet-metal, with a heating apparatus for drying the surface of the sheet-metal

with rapidity, previous to its delivery from the machine, as specified.

4. The yielding range of drying-rollers *n*, fitted with springs or weights to keep them down, in combination with the standing-range *i* of rollers, substantially as set forth, so as to accommodate different thicknesses of metal, and to facilitate the introduction of the sheet, substantially as set forth.

5. The drum or roller *h*, made hollow, and heated, in combination with the scouring or drying mechanism, substantially as specified, so as to keep the sheet-metal hot while being wound, as specified.

89,314.—Otho E. Hornidy, Chauncy, Ill.—*Medicine for Cattle and other Animals.*—April 27, 1869.

Claim.—The above new and improved medical compound, the same being for the use of preventing and curing the above-mentioned diseases.

89,315.—P. Gengembre Hubert and J. W. Pitney, New York, N.Y.—*Dress-Protector for Carriage-Wheels.*—April 27, 1869.

Claim.—The carriage dress-protector herein described, made so as to be applied on and be secured to the wheel or wheels of a carriage, substantially in the manner and for the purpose set forth.

89,316.—George Hill Hurd, Memphis, Tenn.—*Dental Impression-Cup and Suction-Mold.*—April 27, 1869.

Claim.—The making an impression-cup for dental use, for taking an impression of the mouth, shaped to fit merely over the "alveolar" process, as shown in Fig. No. II, also mold to form the suction-cavity, as shown in Fig. No. I, each shaped and formed as above described and set forth, and for the purposes herein stated.

89,317.—Henry Hursh, Sen., Mansfield, Ohio.—*Rocking-Chair.*—April 27, 1869.

Claim.—A rocking-chair, constructed with rockers extending from the bottom of the front chair-legs, under the bottom of the rear chair-legs, up to or nearly to the top of the chair-back, substantially as and for the purpose specified.

89,318.—Charles B. Jarvis, New York, N. Y.—*Process of Distilling Spirits.*—April 27, 1869.

Claim.—1. Distilling spirit from mash or wash, continuously injected into a column with perforated divisions, wherein, as it passes, vaporization is induced by a continuous current of steam, substantially as described.

2. The combination of column A, perforated plates *k*, pipes *a*, and worm *d*, constructed and operating together, substantially as explained.

3. Column A, furnished with and divided by perforated plates *k*, for purposes of distillation.

4. The combination of columns A and C, perforated and dividing plates *k*, pipes *c*, *e*, and *f*, worms *d*, *f'*, and *g*, constructed and operating together to distill spirit, substantially in the manner described.

5. The combination of column A, perforated and dividing plates *k*, and siphon G, acting together for the purposes of distillation, substantially in the manner described.

6. A continuous distillation, in the manner set forth, by continuously contacting steam with the mash or wash, and vaporizing the spirits therein, and continuously discharging the slop or waste during the distillation, substantially in the manner set forth.

89,319.—Theophlie Laramie and John A. Scott, Wheeling, W. Va.—*Machine for Wrapping Sugar-Kisses.*—April 27, 1869; antedated April 17, 1869.

Claim.—1. The arrangement of the cross-heads *g* and *e*, with the guide-rods *f* and springs *i*, and the presser *y*, with the bar *r'*, spring *q'*, screw *o'*, and upright *p'*, for operating the presser, substantially as herein recited.

2. The hinged plates *m'* and *n'*, on the end of the presser, as and for the purposes described.

3. The kiss-receiver *z*, with the spring ends, as herein set forth.

4. The hinged plates *l'*, constructed and operated as described.

5. The recessed plates *h'*, in combination with the presser, for the purposes recited.

6. The arrangement of the springs *b'* and *c''*.

89,320.—Robert P. Leonard, Keene, N. H.—*Preparation for Raising Bread.*—April 27, 1869.

Claim.—A composition or yeast for making bread, compounded of the ingredients and prepared in the manner substantially as above set forth, with or without the use of hops.

89,321.—Henry E. Maker, Newton, (Upper Falls.) Mass., assignor to himself and Hosea C. Hoyt, same place.—*Spring Bed-Bottom or Cushion.*—April 27, 1869.

Claim.—1. The combination and arrangement of the two series of springs and the crossed and pivoted frames A B, the whole being applicable to a sacking or mattress, as set forth.

2. The arrangement and combination of the sustaining bars D D, the two series of springs C, and the crossed and pivoted frames A B, the whole being substantially as and for the purpose or purposes as hereinbefore explained.

89,322.—Jared Maris, Marietta, Ohio.—*Hub and Spoke for Carriage-Wheels.*—April 27, 1869.

Claim—1. A wheel-spoke so enlarged at its base as to form projecting offsets or shoulders G, on one or both sides thereof, in the line of the axis of the hub, wherein they are to be inserted, for the purpose of allowing a wider base for the spoke, without a corresponding width outside of the hub, substantially as herein set forth.

2. Bands E, in combination with a hub, and with shoulders G, formed upon the spokes F, in the line of the axis of the hub, substantially as herein described.

3. In combination with a wheel-spoke provided with projecting offsets or shoulders G, as above described, the double mortise A B, so driven in the hub as to make a bearing, C, therefor, below the surface of the hub, for an inner shoulder on the spoke, substantially as herein set forth.

4. The enlargement of that portion of the circumference of the hub included between the spokes, so that the spaces H H between the spokes shall be flush with the outer surface of the bands E, driven upon the hub against the spokes, substantially as and for the purpose herein set forth.

89,323.—Thomas F. Mayhew, Port Norris, N. J.—*Oyster-Dredge.*—April 27, 1869.

Claim.—The bent bar *s*, pivoted to the rods *b* and *b'* of an oyster-dredge, and arranged for attachment to the operating rope *x* of the same, substantially as and for the purpose herein described.

89,324.—Leander J. McCormick, William R. Baker, and Lambert Erpelding, Chicago, Ill.—*Harvester.*—April 27, 1869.

Claim.—1. The combination, substantially as set forth, of the main frame, the rocking coupling frame, and the interposed spring, crossing the pivot of the coupling-frame, to relieve the pressure of the cutting apparatus upon the ground.

2. The combination with the plate-spring, secured to the rocking coupling-frame of the adjusting-screw on the main frame, for the purpose specified.

3. The combination, with the spring of the flange-plate *e*2 on the coupling-frame, to prevent lateral deflection of the spring, as set forth.

4. The combination of the forked removable rocking-lever with the link *i*, substantially as set forth.

5. The reversible-bracket *h*, constructed as described.

6. The arrangement of the spring h^2, on the lifting-lever, as described.

89,325.—Thomas McMullin, Ira N. Mendenhall, and Miles Mendenhall, Jr., Osgood, Ind.—*Wash-Boiler.*—April 27, 1869.

Claim.—1. The wire-frame D, in combination with the spiral-spring E and movable ring *b'*, arranged to operate substantially as described.

2. An adjustable false bottom for any wash-boiler,

consisting of the metal pieces A A′ and end-pieees B B, in combination with wire frame D, spiral spring E, movable ring *b′*, and tube C, provided with spouts *b b*, arranged and operating substantially in the manner and for the purpose described.

89,326.—HUGH MERRIE, Cincinnati, Ohio.—*Machine for Making Tin-Lined Lead Pipe.*—April 27, 1869.

Claim.—1. In combination with the eylinder H, plunger E, and core J′, the additional or supplementary cylinders G I, plungers D F, and passages L M, arranged and operating substantially in the manner and for the purpose specified.

2. In the described connection with the additional or supplementary cylinders G I, plungers D F, and passages L M, the core N, arranged and operating in the manner and for the purpose described.

89,327.—HENRY MITCHELL, Osborne, Ohio, assignor to himself, G. W. GETZANDANER, and J. H. PROTZMAN, same place.—*Fruit-Can.*—April 27, 1869.

Claim.—The combination of the groove B, at the top of the fruit-can, with the flanged lid E, resting upon the groove B, in the full size of the can, with a wire lever, G, to hold the lid firmly to its place, substantially as described, and for the purposes set forth.

89,328.—CHARLES S. MOSELEY, Elgin, Ill.—*Watch.*—April 27, 1869.

Claim.—1. Providing the pillar-plate of a watch with a hole, *h*, or with a recess, through which to reach the pawl *c*, substantially as and for the purposes specified.

2. So constructing and attaching the pawl *c*, that it can be disengaged from the ratchet-wheel *b*, by the use of a pin or lever, substantially as and for the purposes specified.

89,329.—BYRON W. NICHOLS, Canton, Ohio, assignor to himself, CORNELIUS AULTMAN, GEORGE H. BUCKINS, PERCY S. SOWERS, and A. CLARK TONNER, same place.—*Mode of Converting Articles of Iron into Steel.*—April 27, 1869.

Claim.—1. The use of the ingredients herein named, when compounded and used in the manner and in about the proportions herein described, and for the purpose set forth.

2. The employment of the peroxides of manganese and iron in the process of converting into steel articles of iron that have previously been cast or wrought into the desired form for use.

89,330.—E. R. NORNY, McDonough, Del.—*Preserving Fruits and Vegetables, and in Compounds Therefor.*—April 27, 1869.

Claim.—1. The rendering sulphite of lime soluble for preserving purposes, substantially in the manner hereinbefore described.

2. The manufacture of a liquor, as above described, for preserving fruit and tomatoes either hot or cold, the same being hermetically sealed or not, as above set forth.

89,331.—ORRIN A. NORTH, New Britain, Conn.—*Door-Bell.*—April 27, 1869.

Claim.—The application of a lever-gear, matching into a gear-wheel or shaft, in combination with a ratchet and plate with pins or arms thereon, for the better operation of the hammer, to a door or call bell, substantially as set forth and described in the above specification.

89,332.—ALBERT OLMSTED, Windsor, Mich.—*Log-Boat.*—April 27, 1869.

Claim.—The rings B and B′, in combination with the cross-piece C of the log-boat, the chain being arranged with reference thereto, substantially as and for the purpose specified.

89,333.—HENRY PADDACK and CASWELL HOLLAR, Abington, Ill.—*Grain-Drill.*—April 27, 1869.

Claim.—1. The combination of the plate Y, shaft R, and lever J, operating together, substantially in the manner and for the purpose described.

2. The curved bar G and lever I, operating together to raise the shovel, substantially as described.

3. In combination with the lever I, connecting-rod U, and lever-bar M, the slide P, for shutting off the grain, substantially as described.

4. The combination and arrangement of the timbers A A, pin X, and movable bar H, for changing the position of the shovels, substantially as described.

89,334.—J. C. PARMATER and E. H. BOWEN, Vinton, Iowa.—*Grain-Separator.*—April 27, 1869.

Claim.—1. The trough G^3, situated directly beneath the wire screen *b*, and supplied with the spout or discharge-pipe *h*, passing through the upper rear end of shoe D, arranged and operated substantially as and for the purpose set forth.

2. The standards A A′, connected as described, trough B, brake C, handle *g*, shaft g^3, cog-wheel *J*, pinion g^1, shaft g^2, connecting-rod *j*, shoe, or casing D, screens G, G1, G2, and *b*, boards G3 G3 and G4, spout *h*, wire sereens H H′, spout, or troughs F F′, strips *c c*, roller *i*, guide or projection *i*2, and rail *i*1, all combined, arranged and constructed substantially as and for the purpose set forth.

89,335.—L. J. PARSONS, New Haven, Conn., assignor to himself and C. S. BUSHNELL, same place.—*Tool-Adjuster for Lathes.*—April 27, 1869.

Claim.—The combination, with the tool-post B and slotted ring-collar E, of the segment of a flat circular plate or disk, located in the mortise, in the tool-post, and serrated on the lower and curved surface for better adhesion to the ring-collar, all constructed and combined in the manner described.

89,336.—LAWSON G. PEEL, Preston, Ga.—*Coupling for Buggies.*—April 27, 1869.

Claim.—The arrangement of the axle A, fifth-wheel B, bar D, rods E E, and springs F F, all substantially as shown and described.

89,337.—JOHN J. PHARES, Zionsville, Ind.—*Railroad-Fare Box.*—April 27, 1869.

Claim.—1. The combination and arrangement of the covering-can, Fig. 1, with the revolving many-chambered ticket-holder, Figs. 2 and 3, operating substantially as and for the purpose described.

2. In combination with the above, the employment of the system of tickets shown in Fig. 4, substantially as described.

89,338.—JOHN R. POMROY and L. J. WALTER, Lockport, N. Y.—*Pump.*—April 27, 1869.

Claim.—The arrangement, relatively to the air-chamber A, of the valves *a a′*, the tube *b*, the eduction-outlet *c*, the partition *d*, and floor *f*, when the parts are adapted to operate together as described

89,339.—T. W. PORTER, Boston, Mass., and J. D. LEACH and SABIN HUTCHINGS, Penobscot, Me.—*Chain-Plate Attachment.*—April 27, 1869.

Claim.—1. In combination with the chain-plate *c* and holding-bolts *c c*, a metallic plate, or support, formed to be inserted in or secured to the side of the vessel, and through which the holding-bolts pass.

2. The support *d*, formed with the groove for the chain-plate *e*, and hollow pivots for the bolts *c*, substantially as and for the purposes specified.

3. The plates *f*, formed with a hollow pivot for the reception of the holding-bolts *c*, substantially in manner as described, and for the purposes specified.

89,340.—A. J. PYLE, New Galilee, Pa.—*Safety-Stove for Railroad-Cars.*—April 27, 1869.

Claim.—The tanks or reservoirs A A, in connection with a stove, constructed, arranged, and operating substantially as and for the purposes herein specified.

89,341.—JAMES RANKIN, Detroit, Mich.—*Velocipede.*—April 27, 1869.

Claim.—1. The combination of the treadles O, disks L, cylinders M, band N, and pulley P, all arranged to operate as and for the purposes set forth.

2. The hollow standard D, on the platform C, situated between the axles of wheels G and J, to form the bearing of the shaft E of the guide-wheel G, substantially as and for the purpose set forth.

3. The combination and arrangement of the standard D, shaft E, fork F, forked sleeve H, and pivoted

guide-lever I, substantially as and for the purpose set forth.

4. The combination of the flange *d*, lip *e*, notch *f*, and pivoted lever I, as and for the purpose set forth.

89,342.—D. W. S. RAWSON, Peru, Ill.—*Apparatus for Multiplying Photographic Images.*—April 27, 1869.

Claim.—1. The sectional parts of a concave lens, in front of a camera-lens, for multiplying the number of images in the camera.

2. The adjustable blenders D D D D, Fig. 2, moving to and from the center, by this or an equivalent device; also the same movement for the lenses.

3. The box C, for shading the lenses when in use, and protecting from dust when not in use.

89,343.—HENRY REES, Petersburgh, Ind.—*Horse-Rake.*—April 27, 1869.

Claim.—1. The handle B, constructed as described, in two parts, *a* and *b*, the handle proper, *a*, working inside the stock *b*, and also inside a wire spring, *c*, substantially as shown and described.

2. In combination with the handle B, constructed as above described, the stop D, rods *f f*, and hooks *d d*, all substantially as and for the purposes herein set forth.

3. The combination of the rake A, handle B, and slotted band C, all constructed and operating substantially as and for the purposes herein set forth.

89,344.—ALEXANDER K. RIDER, Elizabeth City, N. J.—*Pump-Valve.*—April 27, 1869.

Claim.—1. The cylindrical valve N, seat J, and cross-bars or girds M′, constructed and arranged as represented, relatively to each other, and to the ports I I of a pump, for the purposes herein set forth.

2. The freely rolling or shifting valve N, having an exterior of soft rubber, and an interior of metal, when made in the form of a hollow cylinder, and mounted to work upon a cylindrical seat, in the manner and for the purposes herein set forth.

3. The combination of the removable bushing M, formed with a seat, J, and webs M′, as represented, the bonnets C^1 C^2, the through-bolt D, and the tubular valve N, constructed, combined, and arranged as represented, for the purposes herein set forth.

89,345.—LOUIS S. ROBBINS, New York, N. Y.—*Mode of Preserving Telegraph-Poles.*—April 27, 1869.

Claim.—The process of impregnating the lower portion of telegraph-poles with creosote oil, substantially as herein described.

89,346.—WILLIAM A. ROBINSON, Grand Rapids, Mich.—*Horse-Collar Fastener.*—April 27, 1869; antedated April 17, 1869.

Claim.—1. The combination of the mortise *a*, Fig. 1, and the tenon *a*, Fig. 2, with the catch *c*, Fig. 2, and the spring *b*, Fig. 3, both said catch and spring working in said slot, when constructed and operating substantially as set forth and described.

2. The application of the curved bars, Figs. 1 and 2, or their equivalent, for the purpose specified.

3. The combination of the above-described device for fastening, or its equivalent, with the curved bars, or their equivalent, when applied as and for the purpose set forth and intended.

89,347.—FRANCIS H. ROOT, Buffalo, N. Y.—*Basket-Grate for Stoves.*—April 27, 1869.

Claim.—A circular basket-grate, B, provided with a tilting-bottom, C, when the whole is constructed and arranged so as to be capable of being vibrated, as set forth.

89,348.—CHARLES E. ROPER, Canton, Ohio, assignor to himself and I. DURLIM, actuary of E. BALL & Co., same place.—*Harvester-Pitman.*—April 27, 1869.

Claim.—The combination of box E, strap F, tube H, pipe J, ball C, taper-screw D, adjusting-screw G, and jam-nut I, with the journals B B, all constructed and arranged to operate substantially as herein set forth.

89,349.—HENRY B. ROWLEY, Buffalo, assignor to CARRIE R. LAMAN, Painted Post, N. Y.—*Journal-Box for Railway-Cars.*—April 27, 1869.

Claim.—An improved railway-car journal-box, the improvement therein consisting in the combination therewith of the vulcanized rubber surfaced oiling-roller *c*, substantially in the manner herein set forth.

89,350.—J. R. RUDE, Liberty, Ind.—*Seeding-Machine.*—April 27, 1869.

Claim.—1. The arms or bars C′ C′, pivoted to the brace C of frame A, and provided, at their inner ends, with slots *c c* and cogged segments, gearing into each other and operated by rod f^2 and lever F, substantially as and for the purpose set forth.

2. The crank-shaft *j*, cords *i i′*, seed-drills G^2 G^3 and beams G G^1, all arranged and operated substantially as described.

3. The peculiar construction of the seed-distributers h^1 h^1, arranged and operated substantially as described.

4. The combination of frame A, with the inclined frame *b*, embracing guiding-wheel *b′*, arms C′ C′, beams G G^1, seed-drills G^2 G^3, wire spouts *s s*, secured to outlets *j′ j′*, on seed-box J, cords *i i′*, crank-shaft *j*, lever F, stop or brake *f*, serrated piece f^1, connecting-rod f^2, and braces S S, provided with boxes, through which axle B′, supplied with wheels B B, passes, all constructed, arranged, and operated substantially as described.

89,351.—E. M. SEALAND, Cleveland, Ohio.—*Roller for Pavement.*—April 27, 1869.

Claim.—1. The rollers A, more or less in number, provided with a central flange or rib, E, when arranged and operated in the manner as and for the purpose set forth.

2. The rollers F, as arranged in combination with the rollers E, substantially as and for the purpose specified.

3. The oil-tank H, provided with sprinkling-nozzles M, when arranged in relation to the rollers A, and operated conjointly therewith, in the manner substantially as and for the purpose described.

89,352.—THOMAS SILLIMAN, Three Rivers, Mich.—*Animal-Trap.*—April 27, 1869.

Claim.—1. The combination, with the turning top B of the bait-receptacle *e*, and the lever C, surrounding the bait, and fulcrumed on the top, substantially as and for the purpose set forth.

2. The combination, with the self-setting turning top, and vertically-moving levers, of the stops *d*, the slides, and the spring-strips, substantially as and for the purpose set forth.

89,353.—THOMAS R. SINCLAIRE, New York, N. Y.—*Apparatus for Purifying and Rectifying Liquids.*—April 27, 1869.

Claim.—The pump D, or its mechanical equivalent, in combination with the filtering-vessel A, constructed and charged substantially as set forth.

89,354.—HARVEY A. SPENCER, Cleveland, Ohio, and ROBERT S. CUTTING, Providence, R. I.—*Pen-Holder.*—April 27, 1869.

Claim.—The combination, with the handle, of the pen-holder, constructed as herein described, with the hinge-piece *a* pivoted to the handle, and moving in a slot formed in the end of the same, in the manner and for the purposes shown and set forth.

89,355.—FRED. D. STURGES and WILLIAM M. YOUNG, Mount Vernon, Ohio.—*Car-Coupling.*—April 27, 1869.

Claim.—1. The draw-bar A, constructed as described, with two holes, for the insertion of a double coupling-pin, notches *b b* on its sides, and its under side *a* cut out, for the purpose set forth.

2. The double pin B, operating substantially as described.

3. The combination of the connecting-bar C, with the doubling coupling-pin B and rod D, all constructed as described, and operating substantially as and for the purposes herein set forth.

89,356.—GEORGE ANSON STURGES, Delhi, N. Y.—*Sash-Holder.*—April 37, 1869.

Claim.—The arrangement and application of the above-described device, as and for the purpose specified.

89,357.—H. L. SWARTWOUT, Chicago, Ill.—*Sewing Machine.*—April 27, 1869.

Claim.—1. The combination of the journals E E, frame G, guide-frame H, crank-wheels R R, and bars I J, as described.

2. The combination of the frame G, guide-frame H, bars I J, crank-wheels R R, journals E E, curved arm K, roller L, and spring M, arranged to operate as and for the purpose specified.

89,358.—JACOB P. TIRRELL, Charlestown, and HIRAM WHITNEY, Watertown, Mass., assignors by mesne assignments, to HIRAM WHITNEY and M. L. MARSHALL & CO.—*Paper-File.*—April 27, 1869.

Claim.—In combination, the board A, wires *c c' b d*, springs *d' d''*, and clasp B, the whole making a paper-file, substantially as described and specified.

89,359.—ROSA C. TOMB, Cedar Run, Pa.—*Quilting-Frame.*—April 27, 1869.

Claim.—The arrangement of the strips A, B, D, and E, provided with a series of pins and corresponding openings, and held together by means of the clamps C, substantially in the manner and for the purpose specified.

89,360.—JOHN TOOTHILL and WILLIAM TOOTHILL, Meriden, Conn.—*Process of Ornamenting Sheet-Metal Ware.*—April 27, 1869.

Claim.—The process herein described for ornamenting silver and plated ware.

89,361.—EUGENE A. TOUNLEY and EMIL S. FRIEDRICH, Washington, D. C.—*Steam-Plow.*—April 27, 1869.

Claim.—1. The frames E E, having the traction-feet or treads *a a*, coiled springs *b*, constructed in the manner and for the purpose substantially set forth.

2. The combination of the shafts B B, cams D, or cranks D', with the frames E E, constructed and arranged to operate in the manner substantially as described.

3. The combination of the lever G', connecting-bar *h*, link *h'*, with shafts *g g*, and caster-wheels F F, arranged to operate substantially in the manner and for the purpose as described.

4. The combination of the lever H'', shaft H, segmental pinion G'', with grooved wheels G G, shafts *g g*, and caster-wheels F F, arranged to operate in the manner and for the purpose substantially as described.

5. The combination of the lever K, having pawl *k'*, spring *k''*, with segmental toothed pinion *j*, shaft J, and toothed standard I', for the purpose substantially as described.

6. The flexible traction-feet or treads *a a*, when used for propelling a machine, substantially as described and for the purposes set forth.

7. The steam-plow machine above described, when the several parts are constructed, arranged, and combined together in one machine in the manner substantially as set forth.

89,362.—HIRAM TYLER, Gaines, N. Y.—*Tree and Plant Sprinkler.*—April 27, 1869; antedated April 15, 1869.

Claim.—The combination of the stationary cylinder B, plunger C, tube D, and sprinkler E, with a staff of suitable length, and a slide in the same, for the purpose of discharging fluid on the branches of a tree, of whatever height the same may be, the several parts being constructed and arranged substantially as herein set forth.

89,363.—ALONZO WARREN, Suffolk County, Mass.—*Turbine Water-Wheel.*—April 27, 1869.

Claim.—A series of gates, F, with projections, *l*, in combination with a series of curved sliding-plates, or graduators, K, so connected therewith that the opening of the gates will simultaneously open the graduators, substantially as described.

89,364.—HERMANN WENDT, Elizabeth, N. J., assignor to HENRY SEYMOUR & CO., New York City.—*Shears and Seissors.*—April 27, 1869.

Claim.—In shears, or scissors, which are provided with malleable cast-iron handles or shanks, the bending or curving of the handles or shanks, so that they will lap and work, one over the other, and still admit of the eyes, or thumb, and finger-loops *a a'* being in the same plane, and one of the loops, *a*, provided with a projection, or teat, *b*, to act against the other loop *a'*, and serve as the only stop for the blades A A, substantially as herein shown and described.

89,365.—JOSEPH F. WICKS, Millville, Mass.—*Operating Picking-Staff in Looms.*—April 27, 1869.

Claim.—The combination of the case M N, spiral springs Q S, center-rods I, and hooks J and L, connected by the straps H to the movable picker-staves D D', the whole being arranged substantially as herein described.

89,366.—DANIEL WINELAND, McComb, Ohio.—*Feed-Water Filtering-Heater for Boilers.*—April 27, 1869.

Claim.—1. The pans B, provided with partitions *c*, slots *d*, and inverted tubes C, substantially as specified.

2. The arrangement of the pans B with reference to the vessel A, water-inlet D, and outlet E, and a steam-inlet, E, and outlet *e*, substantially as herein set forth.

89,367.—CHARLES H. WOLCOTT, Randolph, N. Y.—*Lamp-Chimney.*—April 27, 1869; antedated April 16, 1869.

Claim.—The vertical flanges C C, when arranged on the ends of the curved flanges B of a lamp-chimney, to check the chimney, all as herein shown and described.

89,368.—DANIEL WOODBURY, Rochester, N. Y.—*Horse-Power.*—April 27, 1869.

Claim.—1. The metal frame E, with its legs 20, or their equivalents, and bridge-tree G, in combination with girders H and beam C, for the purpose of making a compact support for the machinery of horse-powers of this class.

2. The lugs *g* and *g'*, in combination with the bull-wheel D, as and for the purpose set forth.

3. The sustaining-braces P^3, connecting-plate G^2, and straining-rod H^2, in combination with the main frame of this class of horse-powers, as herein described, and for the purpose set forth.

4. Standards *y* and y^1, in combination with the lever h^2, for the purpose set forth.

5. The hook x^4, when constructed as herein shown, in combination with plate y^6 and bolt x^6, all acting conjointly for the purpose specified.

6. The bevel-wheel L, having a detachable hub, f^2, for the purpose set forth.

7. The pinion 3, when constructed with a cavity around the eye, as herein described, and for the purpose set forth.

8. The pivoted tongue J^3, in combination with the elevating devices, substantially as described.

9. The pipe-box *f*, when constructed in one piece, in combination with its cast seats, of main frame E, substantially as and for the purpose set forth.

10. The step S^6, in combination with the main frame of this class of horse-powers, as and for the purpose set forth.

11. The eye y^7, hook p^3, and beam C, in combination with the rod H^2 and sustaining-brace P^3, as and for the purpose set forth.

12. Attaching and supporting the main frame of horse-powers of this class on the axle, by means of standards B, braces 22, and holding them together by clamping-bolts, 21 as herein shown and described.

89,369.—STEPHEN W. WOODWARD, Buffalo, N. Y.—*Plane for Carpenters' use.*—April 27, 1869; antedated April 16, 1869.

Claim.—The sleeve I, provided with jaws, and pivoted to the bit E, arranged with the screws C and *b*, to operate as set forth.

89,370.—J. Rutherford Worster, New York, N. Y.—*Parlor-Bath*—April 27, 1869.

Claim.—A portable parlor-bath, constructed of parts detachable, as described, with combination of electricity and insulation, in the administration of medicated, steam, vapor, sulphur, spirit, or other kind of bath, as used for the purpose herein described.

89,371.—Reuben Wright, Houston, Texas.—*Spark-Conductor for Railroad-Trains.*—April 27, 1869.

Claim.—1. The combination of the coupling F, guides *f*, conical ring G, and standard H, substantially as set forth.

2. The coupling D, with the spiral spring *d*, in combination with the end *e* of the pipe E, substantially as described.

3. The hanging support L, in combination with the lever I, rod K, and pipe E, substantially as set forth

89,372.—Anton Zwiebel, Burlington, Wis.—*Band-Cutter.*—April 27, 1869.

Claim.—1. A band-cutter, constructed with frame A, cutter G, hangers H, handle F, crank I, and shaft E, and cover D, arranged substantially as described.

2. Cover D, handle F, cutter G, hangers H, and shield K, arranged substantially as described.

89,373.—Levi Abbott, Lewiston, Me., assignor to himself and Edwin H. Cummings, same place.—*Pipe-Coupling.*—April 27, 1869.

Claim.—In combination with metallic or other pipes, the coupling A, and the split fastening-rings G, arranged and applied substantially as and for the purposes described.

89,374.—Marshall J. Allen, New York, N. Y.—*Heating and Cooling Coil for Mash-Tubs.*—April 27, 1869.

Claim.—The concentric rings C.C, formed in the manner described, by means of the pipe a^1 passing successively through the bottom B of the tub, a water-cock being provided at each bend or joint thereof. all arranged so that the ends of the teeth *i* of the rake-head D may work between them, for the purpose indicated.

89,375.—Charles H. Anders, Myersville, Md.—*Sash-Blind.*—April 27, 1869.

Claim.—1. Improved blind, constructed of an outer stationary screen, A, composed of alternate open and closed spaces, *a b*, of equal or nearly equal width, covered by one or more sliding-screens B, having similar open and closed spaces formed therein and which shall operate to cover and uncover the apertures in the stationary screen, substantially as herein set forth.

2. The combination of the blinds A B, constructed as herein described, with sliding-frames or sashes C C, and with a detachable frame E, all substantially as herein set forth.

89,376.—John Anderson, Springfield, Ill.—*Combined Seeder, Harrow, and Roller.*—April 27, 1869.

Claim.—1. The construction and arrangement of the harrows E E, &c., and frame D, made adjustable vertically by means of the screws *n n*, &c., substantially as and for the purpose shown.

2. In combination with the frame of the machine A and the harrow-frame D, the screws *n n*, &c., substantially as and for the purpose specified.

3. The means employed for connecting the roller F to the rear end of the frame A, consisting of the angle pivot-rods *p p* and guides *r r*, substantially as shown and described.

4. The within-described agricultural implement, consisting of a sower, or seeder, harrow, and roller, all constructed and arranged to operate substantially as and for the purpose herein shown and described.

89,377.—James M. Austin, Georgetown, Mo., assignor to himself and John P. Deardoff, same place.—*Washing-Machine.*—April 27, 1869.

Claim.—The combination, with the swinging-frame and rollers, of the bent rod S, substantially as and for the purpose described.

89,378.—Salmon Belden, Visalia, Cal., assignor to himself and Edward F. Roberts, South Amboy, N. J.—*Pump.*—April 27, 1869.

Claim.—1. The two pumps D and D′, having vertical extensions A and A′, provided with stationary pistons B and B′, and arranged to operate substantially as described.

2. The pumps D and D′, arranged to rise and fall with the columns of water, substantially as and for the purpose herein set forth.

89,379.—Samuel S. Blackburn, Fredericktown, Ohio.—*Rest for Shoeing Horses.*—April 27, 1869.

Claim.—The rest, composed of standard B, bar C, having rack *b* and catch *a*, head D, with fixed cheek *d*, hinged cheek *d′*, and cushion *c*, all constructed and arranged to operate in the manner and for the purposes substantially as described.

89,380.—W. I. Blackman, Columbus, Miss.—*Toy-Gun.*—April 27, 1869.

Claim.—The barrel A, stock B, rod C, springs *g g*, and trigger J, arranged and operating in combination, substantially as herein shown and described, for the purposes set forth.

89,381.—C. W. Brewer, Racine, Wis.—*Piano-Bridge.*—April 27, 1869.

Claim.—The rubber lining on the bridge or string-support of a piano-forte, arranged substantially as described.

89,382.—Simon Bruhl, New York, N. Y.—*Neck-Tie Supporter.*—April 27, 1869.

Claim.—The angular loop B, hinged to the ends of the elastic frame A, whose center and arms, supporting the loop, are secured to the tie in such a manner that the ends are left free to be inserted between the folds of the collar, whereby the elasticity of said frame serves to hold the loop B upon the button of the collar, as herein shown and described.

89,383.—John D. Chambers, West Lebanon, Ind., assignor to himself and Reverdy I. Bowlus, same place.—*Device for Displaying Dry Goods.*—April 27, 1869.

Claim.—The combination of the perforated vertical shaft A, arm B, the sleeve C, provided with the notched ferrule, the pin D, the yard-arms E, having the hooks, the wires or cords G F, and the bracing-wire, all arranged as described, for the purpose specified.

89,384.—Almon Cook, Hillsdale, Mich.—*Apparatus for Swaging and Welding Toe-Calks to Horse-shoes.*—April 27, 1869.

Claim.—The combination of the drop C and holder H with the mold K, all arranged and operating as described, for the purpose of welding the toe-calk to a horseshoe, and shaping the same at one operation, substantially as herein shown and described.

89,385.—Augustus Day, Detroit, Mich.—*Wash-Boiler.*—April 27, 1869.

Claim.—The wash-boiler described, consisting of the boiler A, convex perforated false bottom B, end plates C, and cover F, with fillets D, the whole being combined as described, for the purpose set forth.

89,386.—H. B. Dean and S. A. Baker, Ludlowville, N. Y.—*Grain-Drill.*—April 27, 1869.

Claim.—1. The broad cup-table D, zig-zag cups E, movable spouts G^1 G^2, &c., substantially as herein shown and described, and for the purpose set forth.

2. So constructing the cups E, substantially as herein shown and described, as to bring their mouths or upper ends into or nearly into a line with each other, as set forth.

3. The bracket L, constructed as described, with a long and short arm, to receive the bars M, to which the beams N of the hoes are connected, substantially as described, for the purpose set forth.

4. Swaging, grooving, or flanging the spouts G^1 G^2, &c., near their upper ends, so as to form out-

wardly projecting swages or shoulders, substantially as herein shown and described, and for the purpose set forth.

89,387.—Victor de Lyon and Valentine Werner, Canton, Miss.—*Wood-Bending Machine.*—April 27, 1869.

Claim.—1. The strap C, provided with the bolt E, and combined with the former and hook-headed bolt, substantially as specified.

2. The carriage, constructed and arranged substantially as specified.

89,388.—Winfield Denton, Iowa City, Iowa.—*Hay-Loader.*—April 27, 1869.

Claim.—An improved loader, formed by the combination of the rope D, pivoted bar C, pivoted bar F, and rope G, with each other and with an ordinary hay-rack, substantially as herein shown and described, and for the purpose set forth.

89,389.—Ellis Douty, Collomsville, Pa.—*Straw-Cutter.*—April 27, 1869.

Claim.—The elastic strap *e*, in combination with the feed-board H and the feed-frame, consisting of the cross-piece *a*, sides *d d*, and pivoted presser-board *b*, all arranged as described, for the purpose specified.

89,390.—François Simeon Dumont, New York, N. Y.—*Apparatus for Compressing Air.*—April 27, 1869.

Claim.—The machine for compressing air, consisting of the hollow annular vessel A, divided by the partition *b*, above the water-line, into two compartments, *c d*, each provided with an air-aperture, *f*, and valve *g*, and communicating with the hollow axle B, by means of the pipes C C, containing valves *e e*, arranged and operating as described, and for the purpose specified.

89,391.—William C. Durant, West Troy, N. Y.—*Cooking-Stove.*—April 27, 1869.

Claim.—1. The hollow door E, when arranged in connection with the plate *a*, so as to form two passages, *c* and *e*, for the air to be heated before it enters the fire-place, as set forth.

2. Conducting air through the fire-place to the oven, and from the oven to the fire-place, to produce circulation, as specified.

3. The pipes G H, when arranged through the fire-place and fire-door respectively, to conduct fresh air to the oven, as set forth, in combination with the openings *g g*, through which the air can pass from the oven to the fire-place, as specified.

89,392.—Stephen J. Dwyer, Albany, N. Y.—*Milk-Can.*—April 27, 1869.

Claim.—1. The neck C and hinged cover D, constructed substantially as herein shown and described, in combination with an ordinary milk-can, as and for the purpose set forth.

2. The combination of the spring-bolt G H *g'*, with the cover D, and neck C, substantially as herein shown and described, and for the purpose set forth.

89,393.—James J. Essex, Newport, R. I.—*Syringe.*—April 27, 1869.

Claim.—Providing the discharge-pipe C of a bulb-syringe with two valve-boxes and valves at or near the outer and inner ends of the same, respectively, substantially as herein shown and described, for the purpose specified.

89,394.—Anderson Evans, Cincinnati, Ohio.—*Gauge for Setting Planing-Machine Cutters.*—April 27, 1869. antedated April 20, 1869.

Claim.—The planing-machine gauge, constructed as herein described, consisting of the rectangular frame A A B, having the gauge-screw C in the part B, and the screws D in the ends of the parts A A, and centering in the ends of the arbor of the cutter-head, all arranged to operate as and for the purpose herein set forth.

89,395.—Benjamin F. Field, Beloit, Wis.—*Roofing-Fabric.*—April 27, 1869.

Claim.—As a new article of trade and manufacture, the herein-described fabric, for covering the roofs and sides of buildings.

89,396.—Alcemous W. Fleming, Springfield, Ill.—*Corn-Harvester.*—April 27, 1869.

Claim.—The shaft F with its hinged joint T, in combination with the brace R, frame I, and the adjusting-bolt S, as and for the purposes specified.

89,397.—Thomas F. Fouts, Albia, Iowa.—*Railroad Chair and Tie.*—April 27, 1869.

Claim.—The combination of the chair B, clamp E, tie-bars C, and plank or board F, with the rail A, when the same are constructed and arranged substantially as and for the purposes herein shown and described.

89,398.—Walter W. Gilbert, New York, N. Y.—*Steam-Pump.*—April 27, 1869.

Claim.—1. The long valve M, attached to the steam-piston, arranged to alternately open and close ports at each end of the stroke, substantially as described.

2. The chamber O, for the admission of the said long valve, arranged substantially as described.

3. The pump-valves P and P′ and the stem Q, arranged and connected to the cap, as described, whereby the pair may be removed with the cap, substantially as specified.

4. The arrangement of the valve A, piston G, the ports E E′ and L L′, and the valve M, all substantstantially as specified.

89,399.—Walter W. Gilbert, New York, N. Y.—*Governor-Valve.*—April 27, 1869.

Claim.—1. The valve A and seat C, both provided with inclined slots, *a*, whereby the up-and-down movement of the valve, the rotary movement, or both combined, will open and close the steam-passages, substantially as herein shown and described.

2. The arrangement of the bearing surface K, terminating in a ledge, I, the spring H, or its equivalent, the arm F, and valve-spindle B, substantially as and for the purpose specified.

89,400.—Joseph Gill, Cincinnati, Ohio.—*Metallic Beam and Girder for Bridges.*—April 27, 1869.

Claim.—1 The cellular beam A, built up or constructed out of metallic bars of any regular geometrical figure, riveted or bolted together, substantially as set forth.

2. The metallic plate-iron beams B B, composed of plates that are arranged either vertically or obliquely in lattice-shape, and that have steps *b b* on their edges, as set forth, so that they can be fitted together, the said beam being made of one or more thicknesses of such plates, with crossed joints, as specified.

3. The combination of said cellular and plate-beams into a compound cellular and plate-girder, substantially as herein shown and described.

4. The cellular structures in the roof of the bridge, held apart by the distance columns, in combination with the cellular sides and step-plates, substantially as described, for the purpose specified.

5. The treble-plated folded cap-plates H, constructed and applied as herein set forth and shown.

89,401.—David Graves, Spring Valley, N. Y.—*Washing Machine.*—April 27, 1869.

Claim.—1. The movable tilting-box E, having wheels or rollers, F, pivoted to its lower part, in combination with the tilting-frame G, pivoted to the frame or case A, and operated by the lever H, or other suitable device, substantially as herein shown and described, and for the purpose set forth.

2. The stationary rubber-board B, adjustably connected to the frame or case A, in combination with the movable tilting-box E, substantially as herein shown and described, and for the purpose set forth.

3. The movable rubber-board J, constructed and operating substantially as herein shown and described, in combination with the movable tilting-box E and rubber B, as and for the purpose set forth.

89,402.—Alfred Gregory, New York, N. Y.—*Life-Preserver.*—April 27, 1869.

Claim.—The life-preserver, constructed of the sec-

tions A A′, extending over the entire back and front, in contradistinetion to the use of air-cells, inflated through the tubes *g*, shoulder-straps *a*, and straps *j*, *b*, and *b*,′ all constructed, arranged, and operated in the manner and for the purpose set forth.

89,403.—JOHN HALL, Boston, Mass.—*Stove-Pipe for Decks of Vessels.*—April 27, 1869.

Claim.—A deck stove-pipe for ships, when made flexible, by being connected by springs *a*, with a fixed supporting-pipe, B, substantially as herein shown and described.

89,404.—W. W. HAUPT, Mountain City, Texas.—*Seed-Planter.*—April 27, 1869.

Claim.—1. Constructing the dropping-cylinder F, with teeth *f*3, for dropping cotton-seeds, and with two or more sets of cups for different kinds of grain, so that the cylinder may be used without change for planting different kinds of seeds, substantially as herein shown and described.

2. The seed-block or bridge H, constructed substantially as herein shown and described, to support the lower ends of the end-plates M, in different positions, and to guide the different kinds of seeds to their appropriate cups, as set forth.

3. The seed-box J K L M, constructed with adjustable hinged end-boards M, in combination with the dropping-cylinder F and seed-block H, substantially as herein shown and described, and for the purpose set forth.

4. The hinged and folding extension-box N, constructed substantially as herein shown and described, in combination with the seed-box J K L M, as and for the purpose set forth.

5. An improved seed-planter, formed by the combination of the furrowing-plow D, having a conducting-spout, with a broad upper end formed in its standard, covering-plows E, covering-roller B, dropping-cylinder F, seed-block H, seed-box J K L M, and concave I, with each other and with the frame A, substantially as herein shown and described, and for the purpose set forth.

89,405.—H. R. HILDRETH, Lynn, Mass.—*Machine for Picking Hair-Rope.*—April 27, 1869.

Claim.—1. A machine for untwisting and picking hair-rope, constructed substantially as shown and described, that is to say, with a loose drum on a revolving shaft, into and from which the rope passes to a clasp or compresser, P, or its equivalent, arranged and operating substantially as specified, for the purposes set forth.

2. The combination and arrangement of the clutch *z*, gear-wheel *y*, shaft *w*, roller *s*, spring *g*, arm *e*, rod *d*, and lever *f*, substantially as described, for the purpose specified.

3. In combination with the spring-clasp P, shaft B, and drum J, the feed-rolls R S, and picking-cylinder B′, arranged substantially as described, for the purposes set forth.

89,406.—NEWELL HINMAN, Sparta Centre, Mich.,—*Elevator-Attachment for Fanning-Mills.*—April 27, 1869.

Claim.—The arrangement of the box A, endless chain of buckets B, hopper E, bolts *a*′, and hooks D, with relation to the fan-mill, as herein shown and described.

89,407.—G. W. HOLTON, Berlin, Ky.—*Clevis.*—April 27, 1869.

Claim.—Clevises, having the extended front-bar provided with the hitching-rings D, and braced, all substantially as specified.

89,408.—W. A. HOUGH, St. Johnsville, N. Y.—*Game-Register for Billiards.*—April 27, 1869.

Claim.—The combination with the bar A, having the series of notches *a* and *b*, of the counter D, provided with the pawls *a*′ *b*′, and the slide E, having an inclined projection, all substantially as and for the purpose described.

89,409.—BENJAMIN S. HYERS, Pekin, Ill.—*Cultivator.*—April 27, 1869.

Claim.—1. The loop B, when rigidly secured to the blade A, in combination with the hook C, substantially as and for the purposes herein shown and described.

2. The plates F and G, in combination with the loop B and hook C, as herein shown and described, and for the purposes set forth.

3. Also, the loop B, hook C, and plates F and G, in combination with the blade A, and leg D, when constructed and arranged substantially as herein shown and described.

89,410.—CORNELIUS L. IRVING, Indianapolis, Ind.—*Car Brake and Starter.*—April 27, 1869.

Claim.—1. A car brake and starter for street-railway cars, when constructed and arranged in the manner and for the purpose herein described,

2. The combination and arrangement of the windlass 1, rod *f*, beveled gear-wheels *o* and *q*, *w* and *w*′, in the manner and for the purpose herein described.

3. The combination and arrangement of the handle 4x with the rod *a*, levers *b d p*′, and rod *e*, in the manner and for the purpose herein described.

4. The combination and arrangement of the handle 4 with the rod *f*′, lever *c*, and flange *f*, and its sleeve, on the shaft *m*, in the manner and for the purpose herein described.

5. The combination and arrangement of the rod *gx* with its yoke *u*, clutch-sleeve *t*, and dog or ratchet *g*, sleeve and clutch *s*, chair *v*, and drum *x*′, and its spring, in the manner and for the purpose herein described.

6. The combination and arrangement of the drum *x*′, with an inclosed spring, the chain *v*, shafts *l* and *m*, clutches *s*, *t*, *m*′, and *n*, in the manner and for the purpose herein described.

89,411.—JAMES P. KINTNER, Harrison County, Ind.—*Screw for Cotton and Hay Presses.*—April 27, 1869.

Claim.—The arrangement of the female screw G, male screw C, in combination with the outside nut or collar, F, when used on top of the base-block O, provided with the automatic spring-latch E, and the spring L, pin M, and trip-rod U, with its supports, attached to the frame, all constructed and operating substantially as herein set forth.

89,412.—WILLIAM H. KNIGHT, East Machias, Me.—*Mowing-Machine.*—April 27, 1869.

Claim.—1. The arrangement of the sliding bell-crank levers E, connected together by the cord *h*, and operated by the pins *g* upon the driving-wheel, the rods *r*, cranks *s*, links *u*, and cutter-bars, as herein described, for the purpose specified.

2. The bell-cranks E E, when fitted upon a rod, *b*, and connected by means of levers F *d* and rods *e*, with a lever, G, so that they can be moved apart, and out of gear with the driving-wheel, as specified.

3. The arrangement of the pivoted bars *v*, vertical arm *k*, guide-plate *l*, cord or chain *m*, rod *n*, and lever I, with reference to the finger-bar H, and frame A, as herein described, for the purpose specified.

89,413.—L. M. KNOWLES, Owatonna, Minn.—*Water-Elevator.*—April 27, 1869.

Claim.—1. The combination of the slotted lever G, large gear-wheel I, small gear-wheels E and F, with each other and the cylinder D, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the short cross-bars M, and ropes or chains N, with the bucket-bails O, ropes L, and roller R, substantially as herein shown and described, and for the purpose set forth.

89,414.—I. LANCASTER, Baltimore, Md.—*Harvester-Rake.*—April 27, 1869.

Claim.—1. The sliding collar K, provided with the flange *h*, in combination with the arms O′ and S of the rocking-shaft, and the gate *q*, so arranged as to cause all of the rakes to sweep the platform, substantially as described.

2. The sliding collar K, having radial studs, *i i*, so arranged thereon as to rotate in different planes, so that only one, or every other one of the four rakes, may sweep the platform, substantially as described.

3. The rocking-shaft O, with arm O′, and crank-lever S, on the end thereof, in combination with the gate *q*, substantially as described.

89,415.—William W. Lowerree, Albany, N. Y.—*Ruffling-Attachment for Sewing-Machines.*—April 27, 1869.

Claim.—1. The tension-rollers A and B, and spring J, in combination with lever C, and ratchet D, and pawl E, when combined and operated by the needle-bar of a sewing-machine, substantially as and for the purpose herein shown and described.

2. The separating-plate H, and tension-wire G, or their equivalents, in combination with rollers A and B, substantially as and for the purpose herein shown and described.

89,416.—Newton Matlick, Williamstown, Mo.—*Derrick.*—April 27, 1869.

Claim.—An improved derrick, formed by the combination of the pivot-block E, pivoted lever F, inclined pivoted or hinged brace G, pulleys I, J, and K, and rope H, with each other, and with the supporting frame-work A *a'* B C D, said parts being arranged and operating substantially as herein shown and described, and for the purpose set forth.

89,417.—Thomas J. McArthur, New York, N. Y.—*Sewing-Machine.*—April 27, 1869.

Claim.—The arrangement and combination of the crank-shafts D E, needle-bar F, cam G, presser-foot *p*, connecting-rod *o*, shuttle-carrier J, feed-cams H I, forked feeder L M, and eccentric V, the whole constructed and operating substantially as described and specified

89,418.—W. C. McGill, Cincinnati, Ohio.—*Caster.*—April 27, 1869.

Claim.—The construction of the circular rings or bearings *b* and *b'*, as shown and described.

89,419.—Lewis McLellan, Gorham, Me.—*Culinary-Boiler.*—April 27, 1869.

Claim.—The trap I, in combination with the vessel A, constructed as described, and provided with the flange B, steam supply opening *m*, the hinged cover C, bail E, hook F, nut *g*, and rack H, as herein set forth, for the purpose specified.

89,420.—John McNaught and William McNaught, Jr., Rochdale, England.—*Machine for Washing Wool.*—April 27, 1869.

Claim.—1. The connecting-link *e5*, with its adjustable fulcrum, combined with the rakes, for regulating the sweep of the points thereof, substantially as specified.

2. The inclined plate *f*, forming part of the trough *a*, combined with the cradle or lifter *g*, substantially as specified.

3. The arrangement of the crank *k*, brackets *c'*, cams *k*[1], and bars *g'*, for actuating the cradle, substantially as specified.

4. The retaining-prongs *n*, combined with the inclined bottom *f*, and actuated substantially as specified.

5. The combination of the cradle *g'* with the incline *f*, rollers *h*, and squeezers *i*, substantially as specified.

89,421.—Theodore H. Mead, Boston, Mass.—*Machine for Mitering Printers' Rules.*—April 27, 1869.

Claim.—1. The arrangement of the frame A, segment-plate C, rule-holder D, and mitering-lever E, all constructed substantially as described, and for the purpose set forth.

2. Connecting the lever to the frame A, and guiding the same in its movements by means of the socket on the side of frame, the ball on the end of lever, and the slot in bed B, as described.

89,422.—Joseph B. Moody, Pembroke, Ky.—*Cultivator.*—April 27, 1869.

Claim.—The cultivator-teeth or plows G, constructed and attached to the frame A, substantially in the manner herein shown and described, and for the purpose set forth.

89,423.—Cyrus T. Moore, Gilmanton, N. H.—*Crank.*—April 27, 1869.

Claim.—The combination and arrangement of the reversible pawl D, and its holding-latch E, and spring *e*, with the shaft-head C, and the crank B, applied to the shaft A, substantially in manner as specified.

89,424.—J. T. Moxley, Owasso, Mich.—*Farm-Gate.*—April 27, 1869.

Claim.—The combination in a farm-gate of the several parts A C D *d f* G *a h*, operating substantially as and for the purpose shown and described.

89,425.—James Myers, Jr., Williamsburgh, N. Y., assignor to the Barrons Patent Steel Manufacturing Company.—*Steel-Surfaced Railroad-Bar.*—April 27, 1869.

Claim.—A rail, or railway-bar, so constructed that the rails, or parts of the same, shall consist of an interior core, of wrought or malleable iron, and an outer envelope of steel, of any desired thickness, formed from a homogeneous bar of wrought or malleable iron, through the conversion of the outer portions of such bar into steel, by chemical processes, as and for the purpose set forth.

89,426.—Edwin Norton, Toledo, Ohio.—*Blank for Stove-Pipes.*—April 27, 1869.

Claim.—The herein-described blanks for stove-pipe elbows, when the edges C D are separated from each other by dies, as specified, as an improved article of manufacture.

89,427.—Josiah Odell, Petroleum Centre, Pa.—*Quilting-Frame.*—April 27, 1869.

Claim.—The combination of the legs A, transverse bars B, rollers C, clamp-bearings D, E, and H, and thumb-screws G, when arranged and adapted for the employment in a quilting-frame or clothes-drier, as and for the purpose specified.

89,428.—William Ord, Brooklyn, Ohio.—*Steam-Engine Piston.*—April 27, 1869.

Claim.—1. The construction of the packing-ring A, composed of three or more hard-metal segments, united by a single piece of soft metal, substantially as specified.

2. The combination, with the soft-metal portion of the ring, of the T-shaped pieces B, substantially as specified.

3. The combination, with the piston-head and the packing-ring, of the sheet-metal rings E, when all arranged as specified.

4. The ring A, provided with the recess F, and opening H leading thereto, substantially as specified.

89,429.—D. J. Owen, Springville, Pa.—*Animal-Trap.*—April 27, 1869.

Claim.—1. The construction and arrangement of the pinion B, with its wings C in the frame A, and operating by means of the spring D, and toothed-spring platform H, in the manner shown, and for the purpose herein set forth and described.

2. The toothed-spring platform H, constructed as shown, and attached to the bottom of the trap, so as to operate through the opening *b*, in the manner and for the purposes herein set forth and described.

89,430.—P. G. Pearson, Jacksonville, Fla.—*Beverage from Sour or Bitter Oranges.*—April 27, 1869; antedated April 20, 1869.

Claim.—As a new article of manufacture, the orange-wine, made from sour or bitter oranges, in the manner and by the process herein shown and described.

89,431.—Charles Pratt, New York, and Conrad Seimel, Greenpoint, N. Y.—*Soldering-Apparatus.*—April 27, 1869.

Claim.—1. The air-tubes C C, arranged on the supporting-platform, or shield B, of a soldering-apparatus, substantially as and for the purposes herein shown and specified.

2. The supporting platform, or shield B, of a soldering-apparatus, when provided with one or more depressions, or indentations, *a a*, substantially as and for the purpose herein shown and described.

89,432.—James B. Pullman, Los Angeles, Cal.—*Subsoil-Plow.*—April 27, 1869.

Claim.—The combination in a subsoil-plow of the

share E, coulter D, and heel-plate G, with the stock A B C, substantially as and for the purpose herein shown and described.

89,433.—B. F. QUINBY, Boston, Mass., assignor to himself and G. W. QUINBY, same place.—*Machine for Making Paper Boxes*—April 27, 1869.

Claim.—1. The combination of the reciprocating matrix-cylinder h, and its piston i, with the reciprocating cylinder k and its elastic bag, or former l, expanded by fluid pressure, substantially as described.

2. In combination with the hollow piston p, the water-containing tank m, the pipe o, and its valve q, and tube v, and its safety-valve w, arranged to operate substantially as described.

3. In combination with the reciprocating matrix-cylinder and its piston i, and the piston or plunger-cylinder k, the fingers q^2, for carrying the blank into position over the piston i, and the fingers y^2, for arresting the blank and for removing the finished box, substantially as described.

4. In combination with the matrix, or cylinder h, elastic bag or former l, fluid cylinder k, and piston p, the mechanism for locking the parts together, substantially as described.

5. In combination with the matrix-cylinder h, the steam-box c, for imparting heat thereto, substantially as described.

6. A machine so organized that a semi-pulpy, or moist and soft box-blank, is operated upon while in a matrix, by an expanding plunger, to perfect its shape, substantially as described.

89,434.—JOSEPH REPETTI, Philadelphia, Pa.—*Quartz-Crusher.*—April 27, 1869.

Claim.—1. The arrangement herein described of the cam-wheel n^2, with its lugs o, in combination with the cylindrical stamp-collar p^3, when provided with ratchet-collars, for the purpose of imparting rotary motion to the said rods, and causing the same to remain for a time at rest upon the ring v, as herein described.

2. The pipe m, with its shoulders, and grooves r r r, when combined and arranged with the cylindrical stamps p^1, as described.

3. The arrangement, herein described, of tables a b c, hopper y, pipe m, toothed cam-wheel n^2, stamps p^1, pot x, shafts 6 and 10, wheels 8, 9, and 7, and E^2, screw 11, and worm-wheel 12, all constructed as set forth and shown.

89,435.—PETER ROBERT, New York, N. Y.—*Propelling-Apparatus.*—April 27, 1869.

Claim.—1. Raising or lowering the floats or propelling-devices O O′ vertically, at the end of each stroke, when the horizontal motion has entirely ceased, as specified.

2. The levers L L′, for raising and lowering the floats when pivoted to the sides of the carriages, substantially as herein shown and described.

3. Connecting the levers L L′ by means of the rods g and N, and by the plate M, with the sliding-bars J J′, substantially as herein shown and described, so that thereby the desired motion can be imparted to the floats, as set forth.

4. The bars J J′, when connected with the driving mechanism, to receive reciprocating motion, so that they may at once impart horizontal and vertical motion to the floats, as specified.

5. The carriages E E′, when arranged so that they carry the floats O O′ in a horizontal direction, while they cannot interfere with the vertical motion of the same.

6. The combination, with each other, of the levers L L′, bars g N, link h, plate M, and bar J, all arranged and operating substantially as described, so that, by their means, the motion of the floats can be reversed.

89,436.—WILLARD W. RUSSELL, Ludlow, Vt.—*Wire Bracket.*—April 27, 1869.

Claim.—The herein-described wire bracket, constructed as and for the purpose set forth.

89,437.—L. SAVAGE, Ashtabula, Ohio.—*Device for Transferring Freight on Railways.*—April 27, 1869; antedated April 16, 1869.

Claim.—1. The method of transferring railway freight by means of removable freight-boxes, supported by piers or platforms, arranged on each side of the track, and provided with suitable devices for taking the weight of the box, when the same are employed in combination with the rails arranged to raise and lower, all substantially as herein shown and described.

2. The mechanism for raising and supporting the freight-box, consisting of the eccentries b b, arranged on the inner ends of the rods d d, the latter being provided with arms connected by rods e e, all operated by the lever f, as herein set forth and described.

3. The eccentries g g, shafts h h, rods i i, and l, and lever j, as herein described, when employed to raise and lower the rails for the purpose herein set forth.

89,438.—JAMES F. SELL, Cambridge, assignor to CHARLES HOUGHTON, trustee, Roxbury, Mass.—*Process of Hardening Talc, Steatite, &c.*—April 27, 1869.

Claim.—The treatment of talc, or equivalent matter, or articles formed therefrom, by first heating them, with or without contact of salt, or salt and alum, and then immersing the talc, or its equivalent, while hot, in a sulphuric or other acid bath, substantially as described.

89,439.—WILLIAM SELLERS, New York, N. Y.—*Blind-Slat Fastener.*—April 27, 1869.

Claim.—The reversible fastening for blind-slats, composed of the sheet-metal plate a, slotted radially at c, to brace the tenon of one of the blind-slats, and adapted to be secured to the side-piece of the blind, either at its central portion or rim, whereby a spring is formed of either of said parts to act or press against the end of the slat, for the purpose of holding it in any desired position, as herein shown and described.

89,440.—DANIEL SHERWOOD, Lowell, Mass., assignor to WOODS, SHERWOOD & CO.—*Dish-Stand.*—April 27, 1869.

Claim.—As a new and improved article of manufacture, a wire dish-stand, composed of the parts A B C, substantially as described and specified.

89,441.—CHARLES WILLIAM SIEMENS, Westminster, England.—*Metallurgical Process and Furnace.*—April 27, 1869.

Claim.—1. Treating the metal in the bath of the furnace with litharge, or any other oxide of lead, formed into cakes or compact masses before use, by mixing it, substantially as described, with fused nitrate of soda, nitrate of potash, or any other fused salt, to which I sometimes add an oxide of manganese or other reagents.

2. The method of preventing injury to the furnace, or the choking up of the regenerators or flues, when oxide of lead, or other substances, which give off gases or vapors, are added to the molten metal in the bath of the furnace, by drawing off the gases or vapors, or the greatest part of them, from the furnace, without letting them pass into the regenerators or flues, and condensing them, to recover the products.

3. The combination and arrangement of one or more tubular hoppers I I′, and the surrounding heating-chamber or chambers F, with the furnace D, whether such hoppers be either wholly of metal, as shown in figs. 10 or 11, or constructed partly of metal and partly of clay, or its equivalent, as shown in figs. 1 and 2 of the accompanying drawings.

4. The combination and arrangement of the tube J or J′ with each of the said hoppers I I′.

5. The combination and arrangement of the connection M, provided with holes and caps, as set forth, with the tubes J J′, when arranged with the hoppers and furnace, in the manner as set forth.

6. The combination of the system of heat-generators, as described, with the furnace D, its tubular hopper or hoppers, and the air-heating chamber or chambers thereof, the whole being to operate together, and with one or more gas-producers, applied substantially as described.

7. In connection with the process of making steel by a bath of metal, and one or more hoppers and heating-chambers thereof, as described, the employ-

ment of a series of regenerators, (of the kind described,) in such manner that a portion of the products of combustion shall be withdrawn to heat the ore, metal, or materials, while descending, through the hopper or hoppers, into the furnace or bath-chamber, and the remaining products of combustion not reduced in temperature be caused to pass through the regenerators to, and escape by, the chimney, the effect being to not reduce the temperature of the furnace by the introduction of the cool ore or materials through the hopper or hoppers.

89,442.—FREDERICK H. SMITH.—Baltimore, Md.—*Bridge.*—April 27, 1869.

Claim.—1. The screw-loop G, bracing-rods H, and parting-timbers I, or their equivalents, when attached directly to the angle-blocks B, instead of to their chord-timbers, all constructed substantially as shown, and for the purpose specified.

2. Connecting the angle-blocks B B′ by the truss-rods, in such a manner that the truss-strains are rested directly upon the angle-blocks, instead of carrying them through the chords and block again.

3. The combination of the angle-blocks B B′, chord-timbers A A′, screw-loops G, rods H, braces I, rods C, and swivels D, or their equivalents, when arranged substantially as herein shown, and for the purpose specified.

89,443.—WILLIAM H. SMITH, Newport, R. I.—*Velocipede.*—April 27, 1869.

Claim.—1. The steering-apparatus, consisting of the pin *a*, index-hand *i*, and the arm *b*, of the pivoted lever F, and of the steering pivot E, having the arm *e*, all combined and operating substantially as herein shown and described.

2. The spring *g*, when arranged as described, in combination with the pin *a*, arm *b*, lever F, and arm *e*, of the steering-post, substantially as herein shown and described.

3. The combined brake and starting-lever I, when arranged to swing and slide, as herein shown and described, for the purpose specified.

89,444.—JOHN G. SOMES, Charlestown, Mass.—*Coal-Hod.*—April 27, 1869.

Claim.—A coal-hod, having a lateral outlet for removal of the coal, when said outlet is provided with the guard *g*, substantially as shown and described.

89,445.—JOHN SPARKS, Concord, Ky.—*Take-Up Mechanism for Looms.*—April 27, 1869.

Claim.—1. The combination, with a ratchet and pawl take-up mechanism, of the spring-actuated pawl *e*, substantially as and for the purpose described.

2. The combination, with the pawl *e*, of the oscillating-block *g*, provided with a pin, *i*, or its equivalent, substantially as and for the purpose described.

89,446.—JOSEPH THOMAS, New York, N. Y.—*Embroidering-Attachment for Sewing-Machines.*—April 27, 1869.

Claim.—The arrangement of the bell-crank levers B and C, turning on centers *b* and *c*, in combination with the rods or bars D and E, connecting-bar F, spring-rod *m*, and lever *f*, and the slide G, operating together in the manner and for the purpose substantially as set forth and described.

89,447.—J. A. TRUITT, Oakland, Pa.—*Mail-Bag Fastening.*—April 27, 1869.

Claim.—The chain C, constructed as described, and combined with the part A of the bag, and the staples E, substantially as specified.

89,448.—STEPHEN D. TUCKER, New York, N. Y.—*Machine for Grinding Circular Saws.*—April 27, 1869.

Claim.—1. A pair of geared rollers, arranged to grasp the saw on opposite sides by a spring pressure, substantially as described, and for the purpose specified.

2. The combination of a pair of geared rollers, for driving and controlling the saw, with a reciprocating carriage, upon which the saw is supported, that moves in a plane parallel to the axis of the grindstone, so as to present the saw to the action of the stone, substantially as described and specified.

3. The arrangement of the mechanism for moving the grindstone to and from the surface of the saw, in combination with the rollers for rotating the saw, and a reciprocating carriage, which holds and moves the saw, substantially as described, and for the purpose specified.

89,449.—JOSEPH R. VAN MARTER, Lyons, N. Y.—*Still.*—April 27, 1869.

Claim.—1. The rubbber packing, when inserted in a groove in the top of the staves, substantially as set forth.

2. The use of two hinges, to hold the cover from swinging on the top of the staves, and also the adjustability of the hinges in combination with the rubber packing between the two parts of the cover, substantially as set forth.

3. The use of the eccentrics, or cams, for fastening the cover, substantially as described.

4. The rim upon the cover, for the purposes specified.

5. The rubber packing around the tubes, substantially as set forth.

89,450.—WILLIAM W. WADE, Medford, Mass.—*Machine for Making Covered Buttons.*—April 27, 1869.

Claim.—1. A machine for forming and covering buttons, automatically constructed, and operating substantially as described.

2. Forming the dies in several detached parts, capable of having different movements, in combination with suitable mechanical devices for changing the positions of such parts in their proper order, and causing them to coöperate with the opposing die or dies, so that several separate operations may be performed in succession upon the inclosed material before it is released therefrom, substantially as described.

3. The combination of two series of bed-dies, arranged alternately in the same line of movement, which receive and form the materials to make the buttons, one of them the back parts, and the other the face parts, with two coöperating movable dies, by which the preparation of both parts of the button goes on simultaneously, substantially as described.

4. Combining the die which forms and holds one part of the button with the die that forms and holds the other part, so that by their coöperation the two parts will be forced together and secured, substantially as described.

5. The combination of the movable dies with the revolving chock, or its equivalent, substantially as described.

6. The combination of the bed-die, that forms the back part of the button, with the lever L, or its equivalent, that actuates the same, substantially as described.

7. The combination with the several composite dies, of the means described, or their equivalents, for producing a yielding resistance to the change in the relative positions of their several parts, substantially as described.

8. The employment of a removable guiding-ring, in combination with the dies that receive the paper-filling piece, or its equivalent, substantially as described.

89,451.—AARON WALDRON, Milford, Mass.—*Shoe-Nail.*—April 27, 1869.

Claim.—As a new article of manufacture, shoe-nails, each made tapering or wedge-shape, and with the serrated edges, substantially as shown and described.

89,452.—LINUS WEED, Norwalk, Conn.—*Ear-Drop Suspender.*—April 27, 1869.

Claim.—An ear-clasp, or drop-suspender, constructed of a single wire, having upper and lower hooks, or clasps, *a′ c*, and the intermediate spring *b*, substantially as and for the purpose set forth.

89,453.—JOHN A. WEISSE, New York, N. Y.—*Diving-Bell.*—April 27, 1869.

Claim.—1. The combination and arrangement of

pipes, valves, and stop-cocks, Nos. 4, 5, 25, 28′, and 40, as described, and for the purpose set forth.

2. The combination and arrangement of valves and stop-cocks Nos. 31, 32, 37, and 38, with reservoir No. 30, as described, and for the purpose set forth.

3. The combination of bags of leather, or other strong and flexible material, with the necessary hoisting and lowering apparatus arranged within the bell, as described, and for the purpose of enabling the unloading of freight in mid-water, instead of from the bottom, or at the surface, through the man-holes, as heretofore.

4. The deleterious-gas decomposer, formed of sponge and non-corroding wire-cloth, arranged as described, for the purpose set forth.

5. The use and arrangement of removable weights, constructed as described, in combination with water-reservoir No. 10 of the bell, for the purpose set forth.

6. The use and application of a graduated glass tube or gauge, in combination with the water-reservoir of the bell, for the purpose described and set forth.

7. The double-threaded screw-bolt 1, and nuts 1′, in combination with man-hole cover 18, to facilitate the fastening or removal of the same by persons outside of the bell, as well as by those within, substantially as described and set forth.

89,454.—Frederick Wittram, San Francisco, Cal.—*Anchor.*—April 27, 1869.

Claim.—The combination with the anchor-shank A, of two or more pairs of arms or flukes, pivoted or otherwise secured to the shank, in such a manner that they can be swung in pairs to a limited extent on each side of said shank, in planes perpendicular to or at any other convenient angle to each other, for the purpose specified.

89,455.—Albert F. Allen, Providence, R. I.—*Hose-Coupling.*—April 27, 1869.

Claim.—1. The nipple-piece N S, constructed with a shoulder *e*, to receive the end of the hose, in combination with the sleeve and collar I, constructed with horns D, and otherwise, substantially as shown and described, to effect the purpose specified.

2. In combination with the threaded nipple N of a hose-coupling, an entering and guiding surface *m*, at the end, substantially as shown and described.

3. The combination and arrangement of the swivel-sleeve S^2, the outer fixed sleeve I′, constructed with a shoulder, S^3, to receive the end of the hose and the swivel C, constructed with horns D, and otherwise, substantially as shown and described, to effect the purpose specified.

89,456.—Albert F. Allen, Providence, R. I.—*Nozzle for Hose-Pipes.*—April 27, 1869.

Claim.—1. The combination of the nozzle of a hose-pipe and an adjustable valve, B, constructed and arranged to operate in connection, substantially as described.

2. The said valve, as arranged, with a central orifice for a body-stream, to be operated substantially as specified.

3. The said valve, as arranged, constructed in two parts, so that the orifice in its center may be stopped or readily fitted for delivering a smaller or larger diameter of steam, substantially as described.

89,457.—Arthur M. Allen, New York, N. Y.—*Reversing-Gear for Steam-Engine.*—April 27, 1869.

Claim.—1. The reversing block, or disk, provided with two forward and two reversing ports, and with one or more exhaust-ports, arranged substantially in the manner set forth.

2. The reversing-disk A, provided with forward ports *b b′*, and reversing-ports *c c′*, and revolving on the exhaust-nipple B, under the slide-valve of a steam-engine, substantially in the manner described.

89,458.—Charles Allen, Hartford, Conn.—*Hot-Air Furnace.*—April 27, 1869.

Claim.—The plates A B, in combination with the inner and outer walls *b e* of a furnace, arranged substantially as described.

89,459.—Charles L. W. Baker, Hartford, Conn.—*Blacking-Brush.*—April 27, 1869.

Claim.—One or more supporters, *d*, with a blacking-brush, *a′*, substantially as and for the purpose described.

89,460.—William E. Ball, Belmont, Ohio.—*Nut-Lock.*—April 27, 1869.

Claim.—1. The screw or bolt A, cut square on two sides for a certain distance, substantially as shown and described.

2. The combination of the screw or bolt A, washer B, and nut C, all constructed and arranged to operate substantially as and for the purposes herein set forth.

89,461.—George W. Bishop, Stamford, Conn., assignor to the New England Manufacturing Works Company.—*Wrench.*—April 27, 1869.

Claim.—The lever E, of curved or cam-formation on its biting-end or face, provided with a stop-pin, *b*, operating in a slot, *c*, and pivoted in the jaws B B, in combination with the arbor, or its disk C, all constructed and arranged for operation together, as shown and described.

89,462.—Henry A. Bowman, Worcester, Mass.—*Awning.*—April 27, 1869.

Claim.—1. The combination, with the side-braces E E and hinged pieces C C, of the wall-supports or braces G G, substantially as and for the purposes set forth.

2. The combination, with the side-braces E E and short hinged pieces C C, of the hooks or eyes 1 and cords 2, substantially as and for the purposes set forth.

89,463.—Theodore Brockmann, Davenport-Iowa.—*Heating-Stove.*—April 27, 1869.

Claim.—1. The detachable back, consisting of the plates *a*, *b*, and *d*, constructed and arranged substantially as herein shown and described.

2. The gate-frame D, formed in two parts, as described, to permit of its ready removal, in the manner set forth.

89,464.—Michael Bush, Bloomington, Ill.—*Butt-Hinge.*—April 27, 1869.

Claim.—The arrangement of the L-shaped plate *a*, and its box *b*, inclosing spring I, and the angular L-shaped plate *d*, and its pintle, when said plates *a* and *d* are each formed of one piece of metal, all constructed as and for the purposes specified.

89,465.—J. A. Caldwell and C. S. Bugbee, Springfield, Mass.—*Whip-Socket.*—April 27, 1869.

Claim.—1. As a new article of manufacture, a whip-socket, turned up of wood, substantially in the manner shown.

2. The method of fastening the same, consisting of the two straps B and B, passed around and fastened together, between the socket and support, by the rivet, substantially as shown.

89,466.—William D. Chase, New York, N. Y.—*Machine for Cutting and Threading Pipe.*—April 27, 1869.

Claim.—1. The fixed socket B, having a screw-thread, *a*, around it, the rotating-wheel C, carrying the threaded leader E, wedge M, sliding cutter-holder I, and spring L, all constructed and arranged substantially as shown and described.

2. The combination with the above, of the sliding-stock J, with its adjustable gripper or grippers *d d′*, and the removable bush H, substantially as shown and described.

3. The arrangement of the die-holder N, with its die O, supported on guide-rods P P, attached to the revolving wheel C, for operation, in combination with the fixed socket B, and sliding gripping-stock J, with its adjustable gripper or grippers, substantially as set forth, for the purpose specified.

89,467.—Frank O. Claflin, Brooklyn, N. Y., assignor to himself and A. R. Carman, same place.—*Lasting Pincers and Nailer.*—April 27, 1869.

Claim.—1. The feeding-jaws *n o*, actuated by the toggle *r s*, and slide *e*, for feeding in the material to

form the peg, by pressing upon the head *f* of the slide *e*, substantially as set forth.

2. The lever *q* and die *p*, in combination with the die *v*, and punch or driver *i*, substantially as and for the purposes set forth.

89,468.—ALFRED B. COUCH, Worcester, Mass. —*Engine-Lathe.*—April 27, 1869.

Claim.—1. The arrangement of the vertical rotating shaft, whether detachable or not, with the helical cam, or its equivalent, and pin *a*, and the slide-nut, in the manner described.

2. The construction and arrangement for joint operation of plate E, shaft D, slide-nut H, pin *a*, helical cam G, and shaft K, as and for the purposes shown and specified.

89,469.—EDWIN CRAWLEY and THOMAS L. BAYLIES, Richmond, Ind.—*Vise.*—April 27, 1869.

Claim.—1. In combination with the jaw A, a movable jaw, B, lever E, nut D, and screw C, so arranged that the movable jaw and lever shall form a compound lever, operated by the screw, for the compression of an article placed between the jaws, substantially in the manner set forth.

2. In combination with said parts set forth in the first clause of claim, the bar F, and pawl I, arranged to form an adjustable fulcrum for the jaw B, substantially as set forth.

3. The combination of the jaws A and B, screw C, lever E, and nut D, with an adjustable fulcrum and spring, H, so arranged that the movable jaw shall be actuated by the screw in closing upon an article placed between the jaws, until the increased resistance, causing the spring to yield, brings into action the united compressing force of the screw and compound lever, substantially in the manner set forth.

4. The combination and arrangement of the jaws A and B, lever E, nut D, screw C, bar P, pawl I, and tripping-toe K, substantially as set forth.

89,470.—JOSEPH C. CURRYER and WILLIAM F. CURRYER, Thorntown, Ind.—*Clod-Fender.*—April 27, 1869.

Claim.—The devices herein described and shown, for attaching a clod-fender to a plow-beam, consisting of the staples *c*, wedges *s*, bolt *u*, rods *v*, with the tube or hook, as described, when constructed, arranged, and operating substantially as herein specified.

89,471.—CHARLES DAWSON, Lanesborough, Pa. —*Steam-Engine Valve.*—April 27, 1869.

Claim.—The construction of the curved rocking-valve A, arranged to work in an upper bonnet or partial cylinder, C, and provided with independent valves *m m*, for operation, in relation to the steam-cavities *c c*, essentially as shown and described.

89,472.—FRANÇOIS DE BOWENS, Philadelphia, Pa.—*Machinery for the Manufacture of Match-Sticks.*—April 27, 1869.

Claim.—1. Making match-splints and similar sticks, by securing the wood from which they are cut to a rotating wheel, substantially as shown and described.

2. Cutting blocks of wood into match-splints and similar sticks by the hexagonal arrangement of cuts, as shown in Fig. 5.

3. The arrangement of the knife D, the rack H, pinion *t'*, ratchet *r'' r'*, pawl p^1 p^2, operating substantially as shown and described.

4. The arrangement of the rotating wheel A and splint-blocks C, with the knives D, operating substantially as herein shown and described.

89,473.—THOMAS R. EVANS, Philadelphia, Pa. —*Shoe-Tree.*—April 27, 1869.

Claim.—The combination, with a revolving shoe-tree, of a pawl and ratchet-wheel, arranged and operating substantially as and for the purpose described.

89,474.—DANIEL FITZGERALD, New York, N. Y. —*Safe.*—April 27, 1869.

Claim.—1. The fire-proof safe A, when provided with a burglar-proof safe C, inside of its lower part, and with a book-case, B, in its upper part, substantially as shown and described.

2. The arrangement of the burglar-proof C, partitioned drawer E, with the cavity F, and doors or plugs G and H, all encased in the lower part of the fire-proof A, and protected by the door I, substantially as shown and described.

3. The arrangement of the book-case B, inner door K, weight N, outer doors L M, and detachable desks O, all substantially as shown and described.

89,475.—CHESTER S. FORD, New York, N. Y. assignor to himself and LEWIS J. MULFORD, same place.—*Finger-Ring.*—April 27, 1869.

Claim.—Finishing the stone of a finger-ring on a circle and flush with the inner side of the ring, substantially as and for the purposes herein shown and described.

89,476.—ROBERT GEORGE, Denver City, Colorado Territory,—*Machine for Concentrating and Separating Ores and Minerals.*—April 27, 1869.

Claim.—1. A machine for concentrating and separating metals and mineral substances from rocks, alluvials, and other substances, contained, in combination, in their natural state, or as mats, or other metallurgic products, when constructed and arranged in the manner and for the purpose herein described.

2. The construction and arrangement of the sieves B^1 and B^2, in a machine for concentrating and separating ores and metals, in the manner and for the purpose herein described.

3. The combination of the blast-chamber E with the valves k^1 k^2 n^1 n^2, guide-rods j^1 and j^2, and coil-spring i^1 and i^2, in the manner and for the purpose herein described.

4. The combination of the lifters C^1 C^2 C^3, with the truck *d*, on the shaft *e*, and piston D, in the manner and for the purpose herein described.

5. The pitman F^1 and F^2, with the adjustable screw *o*, crank G, wheels p^1 and p^2, and the conveyer H^1 and H^2, in the manner and for the purpose herein described.

6. The combination of the wheels e^1 e^2, cords f^1 f^2, and the set-screws g^1 and g^2, in the manner and for the purpose herein described.

89,477.—GEORGE L. GIBSON, Jr., Concord, N. C.—*Cork-Extractor.*—April 27, 1869.

Claim.—The spring-claws C C, in combination with the pointed rod A, when said claws are secured at such a distance above the point E that their length will be permanently the same, or about the same, as that portion of the rod below the place at which the claws and rod are secured, all arranged to operate as and for the purpose set forth.

89,478.—ELAM HARTER, Dowagiac, Mich.—*Horse Hay-Fork.*—April 27, 1869.

Claim.—In combination with the fork-head A, the cross-head C, with its braces 1, 2, 3, 4, the bail E, and catch *x*, when constructed, arranged, combined, and operated as set forth.

89,479.—JOEL HAYDEN, Jr.—Haydenville, Mass. —*Water-Closet.*—April 27, 1869.

Claim.—1. The construction and arrangement of the hinge-rod B, running entirely across the receiver, and through the sockets J and J, in the projections K K, upon the pan, and prevented, by the bearings D D, upon each side of them, from having any lateral motion, while, by loosening the screw in the socket, the rod B may be readily drawn out, the parts all being combined and arranged together substantially as shown and described.

2. The construction of the crank-arm O with the stop *b*, when combined and arranged with the dumping-pan, in the manner and for the purpose set forth.

3. The plane F, upon the hinge-rod B, constructed as described, and for the purpose set forth.

89,480.—JAMES C. HERVEY, Cincinnati, Ohio.—*Machine for Molding and Working Butter.*—April 27, 1869.

Claim.—A butter worker and molder, having box A, aperture *a*, axle C, shafts *b*, cross-bar *c*, compressing-boards D and E, staples *d* and *e*, slides G and H, and molding-box I, constructed, arranged, and operating substantially as specified.

89,481.—William Hibbert, Manchester, England.—*Medical Compound.*—April 27, 1869.

Claim.—The use of chloride of magnesium and bromine in combination, for the prevention or cure of contagious and other diseases arising from fermentation and decomposition, whether in human beings or animals.

89,482.—E. H. Hull, Warren, Ohio.—*Device for Winding Watches and Clocks.*—April 27, 1869.

Claim.—The smooth wheel B, provided with a flange, D, as arranged in combination with the friction-click E, when applied to winding watches and clocks, in the manner substantially as specified.

89,483.—John Humphreys, Chicopee Falls, Mass.—*Bench-Hook.*—April 27, 1869.

Claim.—The combination of the post A with the piece B, having the inclined projection C, and the guide-piece D, substantially as shown and described.

89,484.—Alfred Hutchinson, Philadelphia, Pa.—*School-Desk.*—April 27, 1869.

Claim.—The combination of the bar F, brackets H, and lugs *j*, when the whole are adapted for the retention and support of the adjustable seats B and B′ of a school-desk, as herein described.

89,485.—Peter Johnson, Wauconda, Ill.—*Flour-Cooler.*—April 27, 1869.

Claim.—1. The fan-blower B, in combination with the deflecting cone C, partitions C^1 C^2, and case A, substantially as and for the purpose set forth.

2. The shaft D and cones D^1 D^2, in combination with the fan-blower B, spout *e*, and conveyers d^2, the whole arranged and operating substantially as and for the purposes set forth.

89,486.—Charles B. Kerr, Columbus, Ind.—*Plow-Point.*—April 27, 1869.

Claim.—The cavity or recess D′, in the cast portion of the plow-point, for the purpose of facilitating the removal of the steel portion of such point, substantially as shown and described.

89,487.—Gamaliel King, Westfield, Mass.—*Whip.*—April 27, 1869.

Claim.—The combination of the grooved bolt A with the cap B, having the shoulder *b*, and cast in one piece of metal, for the purpose shown and described.

89,488.—William S. Lukenbach, Newport, Pa.—*Apparatus for Flowing and Sensitizing Photographic Paper, &c.*—April 27, 1869.

Claim.—The frame A, for the purpose of sensitizing photographic paper or other material, either albuminized or plain, by the use of a solution of "nitrate of silver," in the flowing process, or for flowing with other solutions, substantially in the manner and for the purposes set forth.

89,489.—Lucius Lyon, New York, N. Y.—*Sewing-Machine.*—April 27, 1869.

Claim.—The sleeve *k*, stud *l*, and thread-controller K, in combination with the globe-shaped stud *j*, needle-bar G, and lever H, all as set forth.

89,490.—Benjamin K. Maltby, Cincinnati, Ohio.—*Coffee-Roaster.*—April 27, 1869.

Claim.—The oscillating cylinder, furnished with oblique channels and movable slides for adjusting the position of the cylinder, and a pendulum, the whole constructed and arranged to operate substantially as described, and for the purpose specified.

89,491.—J. J. Marcy, West Meriden, Conn., assignor to himself and E. Miller & Co., same place.—*Machine for Spinning Metal.*—April 27, 1869.

Claim.—1. The arrangement of the guide-block P, with the longitudinal carriage G, combined with the lever N, so as to operate the tool on the transverse guide L, through the shaft H^2, substantially in the manner herein set forth.

2. The carriage G, and transverse guide L, with the rod I, when the said carriage and guide are made adjustable thereon, substantially as set forth.

3. In combination with the mandrel E, in the head E^1, the spirally grooved wheel E^5, arranged so as to operate the said mandrel, substantially as set forth.

89,492.—James McCann, St. Louis, Mo.—*Retort for Preparing Charcoal for Rectifying Spirits, &c.*—April 27, 1869.

Claim.—The combination, with the retort A, of a forked rod, C, or its equivalent, when constructed and operating substantially as and for the purpose specified.

89,493.—Joshua Merrill, Boston, Mass.—*Manufacture of Rosin-Oil.*—April 27, 1869.

Claim.—The within-described rosin-oil, produced and deodorized substantially as described.

89,494.—M. Ohmer, Dayton, Ohio.—*Spring Bed-Bottom.*—April 27, 1869.

Claim.—1. A reversible spring-slat, E, supported upon the pointed projections *f′* of the sockets F, substantially as and for the purpose set forth.

2. The combination of a spring-slat, E, supported upon the pointed projections *f′* of the socket F, and the rails D and sockets *d*, when the rail is arranged to oscillate within the socket, substantially as and for the purpose set forth.

89,495.—Joseph Olmsted, Galesburgh, Ill.—*Electro-Magnetic Car-Brake.*—April 27, 1869.

Claim.—1. The insulated grooved rings *k″ k*, the wires W″ W, having arms with two or more bearings on the rings *k*, springs *h h*, and shaft U, arranged substantially as described, and for the purpose set forth.

2. The arrangement of the pinions *e* and *d*, shaft 2, and revolving armature *a*, for transmitting motion to the friction-plate Z and shaft U, substantially as described.

3. The arrangement of the shaft U, friction-plate Z, and the insulated magnets *y y*, all constructed and operating in the manner and for the purposes herein set forth and described.

4. The revolving armature plate *a*, loosely attached, as described, to the shaft 2, so that the plate *a* may be held firmly in the direction of its revolutions with the shaft 2, and be allowed freedom in other directions, for the purpose of allowing it to always adjust itself exactly to the face of the friction-plate Z.

89,496.—James W. Owen, New Haven, Conn., assignor to himself and Edward M. Coe, same place.—*Fabric for Chair-Seats, &c.*—April 27, 1869.

Claim.—The fabric for chair-seating, herein described, consisting of the fabrics united by the cement, as herein set forth, as an article of manufacture.

89,497.—William S. Owen, Council Bluffs, Iowa.—*Churn-Dasher.*—April 27, 1869.

Claim.—The cone-shaped dasher A, provided with neck B and perforations *c c*, *d d*, in combination with the staff E, all arranged to operate as and for the purpose set forth.

89,498.—Seneca H. Parish, Chicago, Ill.—*Shears.*—April 27, 1869.

Claim.—Shears provided with an adjustable bolt for setting the blades A B together, when they become worn, as set forth.

89,499.—Horatio L. Pierce, Taunton, Mass.—*Belt-Hook.*—April 27, 1869.

Claim.—A fastener for belting and banding, consisting of a connecting-bar combined with two buttons, the axes of the shanks of which are at right angles to the bar, as described, the faces of said buttons, when applied to the belting, being about flush with, and so as not to project from the inner surface of the same, as and for the purposes set forth.

89,500.—Joseph I. Peyton and Charles N. S. Wallach, Washington, D. C.—*Bag-Holder.*—April 27, 1869.

Claim.—The combination, in the bag-holder, of the suspending-frame, the flaring band, and the clamping-ring, these parts being constructed, arranged, and operated as herein set forth.

89,501. — GEORGE M. PRATT, Middletown, Conn., assignor to FINKLE & LYON MANUFACTURING COMPANY, same place.—*Feed-Wheel for Sewing-Machines.*—April 27, 1869.

Claim.—In combination with the wheel-feed of a sewing-machine, the ring C, within the flange B, combined with the lever D and wheel E, with the pins *a* and *d*, and spring B, operating substantially as set forth.

89,502.—THOMAS PROSSER, New York, N. Y.—*Pin-Drill.*—April 27, 1869.

Claim.—The combination of the hub A, and its bits B, with the spirally guided center-pin, all constructed and arranged substantially as set forth.

89,503.—C. R. RAND, Dubuque, Iowa.—*Trunk.*—April 27, 1869.

Claim.—1. A trunk, consisting of an outer shell, B, with a hinged front, D, arranged to slide vertically on a bureau-body, A, so as to be extended and held by bolts *b*, substantially as herein described, for the purpose of being converted into a wardrobe, book-case, and writing-desk, as set forth.

2. In combination with the outer shell B and the bureau-body A, the corner-pieces *a*, and bolts *b*, or their equivalents, when constructed and arranged substantially as described, and for the purpose set forth.

3. The combination of the cover C, having a compartment provided with hooks *p*, with the sliding-shell B, having bar *o*, provided with hooks, and arranged to receive removable shelves and partitions, as herein described, and for the purpose set forth.

4. The bureau-body A, with drawers *c d e*, till *s*, and drawer *f*, with hinged cover, in combination with the outer shell B, provided with partitions, shelves, and hooks, constructed and arranged as described.

89,504.—EVERETT P. RICHARDSON, Lawrence, assignor to himself and FRANCIS W. CARRUTH, Boston, Mass.—*Manufacture of Boots and Shoes.*—April 27, 1869.

Claim.—1. The notches or indentations *a*, applied to or produced in an unchanneled sole before piercing the same, substantially as set forth.

2. Bending or griping the sole at the time and place of sewing, substantially as and for the purpose set forth.

89,505.—THOMAS P. ROSSITER, Cold Spring, N. Y.—*Base-Burning Cooking-Stove.*—April 27, 1869.

Claim.—1. The combination with the reservoir A with its flues *s* and *f*, the fire-pot B, arranged to extend beyond the reservoir, and the top-plate D, provided with suitable apertures, *c*, in it, for the reception of cooking-utensils, substantially as specified.

2. The combination of the oven E, having openings *u* in the top plate *j*, covering it with the reservoir A and fire-pot B, essentially as described.

3. The arrangement of the reservoir A, fire-pot B, and roasting-chamber or oven I, with its grate G and slide H, essentially as described.

4. The combination of a central fire-place supplied with fuel, as described, oven E, grated roasting-chamber I, hot-air chamber or water-back L, and ovens or oven-chambers K K′, substantially as specified.

89,506.—AUGUSTUS L. RUMPFF, Dansville, N. Y.—*Guide for Sewing-Machines.*—April 27, 1869.

Claim.—The guide B, constructed as described, and provided with an elongated slot, *a*, hole *b*, and slot *c*, all substantially as shown and specified.

89,507.—CYRUS W. SALADEE, Circleville, Ohio.—*Envelope.*—April 27, 1869.

Claim.—The card B, serving as an advertisement, and as a superscription to an answering letter, in combination with the envelope A, when formed separate from the envelope, and attached to its face, substantially as and for the purpose set forth.

89,509.—JUDSON W. SHAW, Concord, N. H.—*Harvester.*—April 27, 1869.

Claim.—1. The way, or guide-plate O, provided at either or both ends with elastic buffers, for the purpose set forth.

2. Adjusting the position of the cutters relative to the finger-bar and guard-fingers, by changing the point at which the vibrating-bar M′ is pivoted, relatively to the cam.

3. The latch P′ and arm P, in combination with the rock-shaft *m*, for the purpose set forth.

4. The spring-latch H, in combination with the foot-treadle Q and link *q*, constructed and operated substantially as set forth.

5. The shoe E, provided with the pivot-head E′ cast in one piece with the shoe, and constructed and operating substantially as set forth.

89,510.—THOMAS SIM and ELIAS S. HUTCHINSON, Baltimore, Md.—*Manufacture of Starch, Dextrine, and Glucose.*—April 27, 1869.

Claim.—As an improvement in the manufacture of starch, or any of the products of starch, the employment or use of bisulphide of carbon, or any equivalent chemical, to separate oil from meal or other material containing starch, in order to release or expose the said starch, substantially as set forth.

89,511.—JAMES F. SIPPLE, Fredrica, Del.—*Bolt for Shutters, &c.*—April 27, 1869.

Claim.—The use of the two disks D D′, in combination with the bolt B, plates *b c*, and shutters *s s′*, the whole constructed and arranged substantially as and for the purposes set forth.

89,512.—EUGENE SLOSSON and EDWIN C. SLOSSON, Vienna, Ill.—*Corn-Planter.*—April 27, 1869.

Claim.—1. The caster-wheel E, when applied to the corn-planter's frame, in the manner substantially as and for the purposes herein shown and described.

2. The raising and lowering device, consisting of frame H, bar I, arm L, and bar M, as also segment N, chain O, and pulley P, or their equivalents, all arranged and operating substantially as set forth.

3. The dropping-device, consisting of plates *d d′*, cam *g*, and slide *l*, arranged and operating as herein described and specified.

4. The manner of attaching scrapers U U to the machine, and operating the same, substantially as set forth.

89,513.—CYRENE SMITH, Louisville, Ky.—*Abdominal Corset.*—April 27, 1869.

Claim.—The corset-body A, with side-gussets C C and elastic strips D D, back-gusset B, and elastic strips J J, and short whalebones F K, all being constructed and used substantially as and for the purposes specified.

89,514.—FRANCIS B. STEVENS, Weehawken, and WILLIAM BROWN, Hoboken, N. J.; said STEVENS assignor to said BROWN.—*Iron Cleat and Chock.*—April 27, 1869.

Claim.—An iron cleat or chock, inlaid with brass or soft metal, in the manner and for the purpose herein set forth and described.

89,515.—ELIZABETH MARY STIGALE, Philadelphia, Pa.—*Method of Preserving Flowers.* — April 27, 1869.

Claim.—The preservation of flowers from the effects of exposure, by preparing them as described, and confining them in air-tight cases, as set forth.

89,516.—B. L. STONE, San Francisco, Cal.—*Toy-Target.*—April 27, 1869.

Claim.—The combination of target, letter A, with the dart, letter E, by the means of the elastic India rubber cord, letter C, and the piece of twine, letter D, in the manner herein described, and for the uses and purposes hereinbefore mentioned.

89,517.—GEORGE C. TAFT, Worcester, Mass.—*Wrench.*—April 27, 1869.

Claim.—The arrangement herein shown and described, of the screw E, rosette-nut F, jaw C, and bar D, when constructed and operating substantially as herein specified.

89,518.—EPHRAIM B. TALBOTT, Knoxville, Tenn.—*Saw-Mill.*—April 27, 1869.

Claim.—The arrangement, herein described, of

the mandrel B, standards E, racks F, pinion G, clamp I, shaft L, and arms P and *m*, when all the parts are constructed and operate as specified.

89,519.—J. PATTON THOMPSON, Philadelphia, Pa.—*Spool Reservoir or Case.*—April 27, 1869.

Claim.—The case A, with its vertical front glass B and back board C, vertical partitions *b*, and strip *d*, arranged, in respect to the lower edges of the front and back boards, substantially as and for the purpose described.

89,520.—NATHAN THOMPSON, Brooklyn, (E. D.,) N. Y.—*Lantern.*—April 27, 1869.

Claim.—The securing-bail, or loop E, pivoted as at *b b*, to an upper ring, C, of the guard B, and provided with a set-screw, *c*, or other suitable locking-device, in combination with the lantern-cap D, made removable from said guard, substantially as specified.

89,521.—WILLIAM H. TRIMBLE, Hillsborough, Ohio.—*Fence.*—April 27, 1869.

Claim.—1. A fence-post, constructed, as described, of the base A, braces B B, mortised board C, and with or without the mortised board E, substantially as shown and described.

2. In combination with the above, the rails D D, beveled at both ends, and the rails D′ D′, beveled at one end, and the other end cut square, with a shoulder, *a*, all substantially as and for the purposes herein set forth.

89,522.—HIRAM TUCKER, Newton, Mass.—*Plating Metals.*—April 27, 1869.

Claim.—1. The improvement in coating metals with metals, substantially as described.

2. Articles of manufacture in which metals are coated with metals, substantially as described.

3. The process consisting in covering a metal base, surfaced by electro-deposit, with a fluid or semi-fluid coating, afterward hardening said coating, and then removing portions of such coating, when hardened, and then coating the surfaces so exposed, by electro-deposit.

89,523.—HIRAM TUCKER, Newton, Mass.—*Mode of Ornamenting Metal Surfaces.*—April 27, 1869.

Claim.—1. The process, and its modifications, substantially as set forth, by which contrasted surfaces are produced on a metal base.

2. As a new manufacture, articles of metal, surfaced by my described process, or any of its described modifications, substantially as set forth.

89,524.—AARON H. VANCLEVE, South Amboy, N. J.—*Railroad Revolving Time-Table.*—April 27, 1869.

Claim.—1. In combination with a clock or other time-keeper, and operated by the same, one or more pointers, representing a train or trains running in one direction, and one or more pointers representing a train or trains running in the contrary direction, and a number of station-studs or their equivalents, representing stations on the road, and arranged in accordance with the graduations of the clock-dial and with the running time of the trains, all substantially as and for the purpose herein set forth.

2. The train-pointers, made adjustable on rings or plates operated by the clock, and graduated in accordance with the dial of the same.

89,525.—WILLIAM V. WALLACE, New York, N. Y.—*Car-Coupling.*—April 27, 1869.

Claim.—1. The construction and arrangement of a car-coupling, in the manner and for the purpose herein described.

2. The combination of the link C and hook B, in the manner and for the purpose herein described.

3. The link C, when constructed as herein shown and described, with a hook, weighted at its upper end, and pivoted centrally within the opposite bunter, as herein specified.

89,526.—BENJAMIN F. WATSON and CHARLES H. TINKEL, Bridgeport, Ill.—*Machine for Screening Grain and Seed.*—April 27, 1869.

Claim.—The combination and arrangement of the slide A, wires B, screens C, and boards M M, in the manner and for the purpose set forth.

89,527.—H. A. WEBER, Columbus, Ohio.—*Composition for Roofing Pavements, Floors, &c.*—April 27, 1869.

Claim.—The composition, or chemical cement, composed of the ingredients herein mentioned, in the proportions and manner substantially as herein described, and for the purposes set forth.

89,528.—ALLEN WEBSTER, Farmington, assignor to himself and N. C. HUBBELL, New Haven, Conn.—*Machine for Making Screws.*—April 27, 1869.

Claim.—1. The reciprocating and rotating carrier-wheel C′, provided with the milling-tool *a*, and threading-die *h*, combined with the mandrel E′, for revolving the wire, and the cutter *f*, operating as and for the purpose specified.

2. In combination with the subject-matter of the first clause of claim, the nicking and milling tool G, operating as and for the purpose set forth.

3. In combination with the subject-matter of the first and second clauses of claim, the screw-driver *m*, arranged so as to operate as and for the purpose specified.

4. The combination of the wheels P and R, stops L and *s*, with the pawl S, so as to operate as and for the purpose set forth.

89,529.—ASA WEEKS, Minneapolis, Minn.—*Heater and Ventilator for Railroad-Cars.*—April 27, 1869.

Claim.—1. The within-described arrangement of the deflector P, opening *c*, register R, rod I, fire-chamber F, and chamber E, as and for the purpose specified.

2. Providing the door *i e* i^2, to allow the box K to be cleaned, when employed in combination with my improved car-heater, in the manner described.

3. The supplementary heater M, constructed and adapted to operate in connection with my improved heater for the double purpose of heating and ventilating the cars, in the manner substantially as herein set forth.

4. The opening *w*′ and plate *w*, when arranged in the front wall of the furnace, with relation to the open ends of pipes C C, in the rear wall, substantially as and for the purpose described.

89,530.—E. WEISSENBORN, Hudson City, N. J.—*Device for Polishing Pencils.*—April 27, 1869.

Claim.—1. The combination of the guide-pieces B B, having recesses for separating and retaining the ends of the pencils, and the traveling bed C, for supporting and turning the pencils, substantially as herein described.

2. The traveling platform C, provided with raised edges *i i*, and parallel ridges *e*, substantially as and for the purpose herein set forth.

89,531.—WILLIAM M. WELLING, New York, N. Y.—*Composition for Artificial Ivory.*—April 27, 1869.

Claim.—The composition herein specified, prepared substantially as set forth.

89,532.—WILLIAM M. WELLING, New York, N. Y.—*Composition Resembling Ivory.*—April 27, 1869.

Claim.—The composition herein specified, having the appearance of ivory.

89,533.—ALONZO WHITCOMB, Worcester, Mass.—*Corn-Husker.*—April 27, 1869.

Claim.—1. The rubber-covered rolls H and J, arranged in the same horizontal plane, or nearly so, with a balance-wheel applied to the shaft of one of them, and both having motion imparted to them, for the purpose of stripping the husks from ears of corn, substantially as described.

2. In combination with said stripping-rolls, the concave P, arranged substantially as set forth.

3. The combination of the rolls H J, the revolving wings C, and concave P, when arranged substantially as described.

4. The use, in a corn-husking machine, of a concave, P, so constructed and arranged as to cover one

of the stripping-rolls, and keep the ear from resting upon said roll while being husked, substantially as described.

89,534.—JOSEPH C. WIGHTMAN, Newton, assignor to CHARLES HOUGHTON, trustee, Roxbury, Mass.—*Steam-Pump.*—April 27, 1869.

Claim.—1. The apparatus, substantially as herein first described, for raising and forcing water, substantially as set forth.

2. The construction of the main water and steam chamber *a*, with a dome or supplemental chamber, *b*, substantially as shown and described.

3. The plug or obstruction *m*, when pierced with the aperture *n*, and arranged in the pipe *k*, to operate substantially as described.

4. The arrangement of the pipes *c*, *f*, and *k*, valves *e d*, and cocks *u*, with the common water-back or coil and its connected tank and pipes, substantially as described.

89,535.—JOHN WALL WILSON, New York, N. Y.—*Game Entitled "Talisman."*—April 27, 1869.

Claim.—1. The game entitled "Talisman," substantially as herein described.

2. The combination of the wickets B B^1 B^2, with their posts C C^1 C^2, balls D D^1 D^2, and pins F^1 to F^{10}, and rings G, arranged essentially as specified.

3. The scoop H, constructed substantially as represented in fig. 2, for use by the player, as herein set forth.

4. The mallet I, constructed as represented in fig. 4, for use as described.

5. The combination of the wicket B^1 and central post C, substantially as and for the purpose described.

89,536.—JOSEPH S. WOOD, Plainfield, N. J.—*Lamp.*—April 27, 1869.

Claim.—1. The lamp-body G, in combination with the tubes L M, and flame-spreader P, for the purpose shown and described.

2. The combination of the globe G, containing an absorbent, S, with pipes L, M, and N, and burner O, arranged and operating substantially as described.

3. The adulterating pipe M and valve *m n*, for the purpose shown and described.

4. Heating the impelled current of air, at or near the point of combustion, as it passes on its way, through the absorbent S, to the burner.

89,537.—GEORGE M. PULLMAN, Chicago, Ill.—*Dining-Car for Railways.*—April 27, 1869.

Claim.—1. The provision-chamber E, located at or near the center of the car, in combination with the kitchen, substantially as shown.

2. The arrangement of closets or cupboards in the panels between each pair of windows, substantially as and for the purpose described.

3. The combination, in a dining-car, of kitchen A, water-tank B, range and provision-chamber E, when the latter is located below the floor of the car, substantially as described.

4. The combination, in a dining-car, of a kitchen, A, tables G, cupboards K K, wash-room and water-closet, substantially as described.

89,538.—GEORGE M. PULLMAN, Chicago, Ill.—*Hotel-Car for Railways.*—April 27, 1869.

Claim.—1. A state-room or rooms, located on one side of a railway-car, with passages on the opposite side of the car, and also longitudinally through the room, so that the room may be isolated or thrown open as part of the car, as may be desired.

2. A kitchen, provided with a cooking-apparatus, in combination with a sleeping-car, for the purpose described.

89,539.—AARON LONGSTREET, Chicago, Ill., assignor to GEORGE M. PULLMAN, same place.—*Lighting Railway-Cars.*—April 27, 1869.

Claim.—1. The lamp A, in combination with the recess D, in the panel of a railway-car, substantially as described.

2. The lamp A, in combination with the recess D, and sliding-panel B, substantially as and for the purposes described.

3. The combination with each set or pair of seats in a railway-car of a lamp, candle, or burner, located between the windows, substantially as described.

89,540.—RICHARD MONTGOMERY, New York, N. Y.—*Corrugated-Metal Building.*—April 27, 1869.

Claim.—An iron building, composed mainly of corrugated-metal columns, A A′, connected substantially as described, studs E E′, beams D D′, and metallic plates or sheets N, inserted within the grooves in said studs or columns, the whole being constructed substantially in the manner herein specified.

89,541.—RICHARD MONTGOMERY, New York, N. Y.—*Elevated Railway.*—April 27, 1869.

Claim.—1. Standards C C, in combination with the cross-tie beams A A, and continuous lateral guard-rails D D, of an elevated railway or railway-bridge, substantially as herein set forth.

2. Friction-wheels E E, when combined with a car or car-truck, F, running between the lateral guard-rails D D of an elevated railroad, substantially in the manner herein set forth.

89,542.—T. C. THEAKER, Bridgeport, Ohio.—*Railroad-Car Seat and Couch.*—April 27, 1869.

Claim.—1. The lower or outer frames A A, when constructed and operating substantially as shown and described.

2. The upper or inner frames B B, substantially as and for the purpose set forth.

3. The frames A, in combination with the frames B, constructed to slide in or upon each other, when operated by scrolls or other suitable device or devices, as and for the purpose set forth.

4. The shaft E, in combination with the double-worm or scroll-wheels D D, constructed and operating substantially as and for the purpose shown and described.

5. The combination of the oscillating seat-frame G with the frames B, of the described construction, as and for the purpose described and shown.

6. The combination of the shaft I, worm or screw-pinion *i*, segment H, and oscillating seat-frame G, all substantially as and for the purpose set forth.

7. The combination of the frame G, horns *o*, and back K, all substantially as and for the purpose set forth.

8. In combination with a reversible back, made to be held by hinged pins or horns, at its lower end, the head-rest *a a*, the supporting-pins of which fit into the holes in each end of the back, made for said hinged pins, all substantially as shown and described.

9. The arms L, with their grooves *c″*, provided with a channel having double-acting stops *p*, all substantially as and for the purpose set forth.

10. The combination of the slides *l* and pawls *m m*, all constructed and operating substantially as and for the purpose set forth.

11. The combination of the arms L and their grooves, as described, with the slides *l* and their pawls *m*, as and for the purpose shown and described.

12. The combination of the arms L with their grooves *c″*, slides *l*, connecting link or bar M, and back K, all substantially as and for the purpose set forth and described.

13. The extension foot-rest, when the whole is made substantially as shown and described.

14. An improved extensible rest, composed of the pieces O O and pieces S S, the latter being suitably braced and sliding on the former, when held together by open guides *t t*, all as and for the purpose set forth.

15. In combination with a foot-rest for a seat or chair, the arm P and notched bar R, all constructed and operating as set forth.

16. In combination with the pieces S S, suitably connected, the foot-board T, hinged as described, on a fixed rod or pivots, and operating in its connection, as set forth.

17. The foot-board T, constructed as described and shown, when supplied with a heel-board, *w*, all as set forth.

89,543.—H. CLAY LAURENCE, Canandaigua, assignor to WARREN H. MOAK and BENJAMIN JANSEN, Brooklyn, N. Y.—*Velocipede.*—April 27, 1869.

Claim.—1. The rising and falling seats *o m*, in

connection with cranks for operating a velocipede, by the assistance of the rider's weight, substantially as described.

2. In combination therewith, the slotted guide-rods *f*, for the purpose described.

3. The double cranks *c*, in combination with the pitman-rods *e*, and the slotted guide-rod *f*, substantially as and for the purpose described.

4. The double cranks *c*, in combination with the rising and falling frame *l*, substantially as described.

5. The double cranks *c*, in combination with the rising and falling reach, substantially as described.

89,544.—DAVID DOLMAGE WRIGHT, Oakville, Ontario, Canada.— *Railway-Car Coupling.*—April 27, 1869.

Claim.—1. The clamping cross-bars I I′, arranged in connection with the draw-head in such a manner as to sustain the coupling-pin E, and the solid swinging-gate G, and admit of the attachment of these parts to the open-sided draw-head, substantially as described.

2. The swinging-gate G, and cross-bar I′, constructed with stops *b c d*, operating substantially as described.

89,545.—CHARLES E. MILLER, Indianapolis, Ind.—*Wash-Boiler.*—April 27, 1869; antedated October 27, 1868.

Claim.—The combination of the false bottom C, perforated hinged flaps D D′, columns F, and nozzles G G′, all constructed and arranged to operate substantially as and for the purposes herein described.

89,546.—BENJAMIN F. BARNEY, Pontiac, Ill.—*Corn-Harvester.*—May 4, 1869.

Claim.—The combination and arrangement of the inclined knives J, guards K, reels L, hinged dropper-box P, and lever Q, in the manner described, for the purpose set forth.

89,547.—LAFAYETTE L. BETTYS, Ontario, N. Y.—*Potato-Digger.*—May 4, 1869.

Claim.—1. The hanger K, brace E, chain *h*, lever a^2, in combination with the scoop F, as and for the purpose herein shown and described.

2. The adjustable brace *e* and hangers K, in combination with the scoop F and sieve D, as and for the purpose set forth.

3. The crank-shaft A, connecting-rods B, vibrating-arms C, in combination with the longitudinally reciprocating screen D, arranged and operating as herein shown and for the purpose set forth.

89,548.—EZEKIEL BLAKE, Chicopee Falls, Mass.—*Spindle-Step for Spinning-Machines.*—May 4,1869.

Claim.—The spindle-step A, having the portion *a* elongated and enlarged, and having the seat *e*, oil-chamber E, and rim *f* formed therein, in combination with the cap C, having the central opening *c*, and the inner sides thereof conical in section to fit the tapering sides a^1 a^2 of the step, all constructed and arranged substantially as set forth.

89,549.—NATHANIEL A. BOYNTON, New York, N. Y.—*Hot-Air Furnace.*—May 4, 1869.

Claim.—The radiator A B E F G, when constructed substantially as set forth, and arranged and combined with a hot-air furnace, in the manner herein described.

89,550.—JOHN BOWLES, Augusta, Ga.—*Corn-Sheller.*—May 4, 1869.

Claim.—1. In combination with the shelling-cylinder A^* a^*, the equidistant and equiprominent points or projections a^{*1} a^{*1} a^{*1}, three or more, as and for the purposes specified.

2. The shield or funnel B, constructed and arranged substantially as described, in combination with the shelling-cylinder $A^{*\prime}$, for the purpose set forth.

3. In combination with the shelling-cylinder A^* a^*, the spring C, arranged between the jaws A′ A, substantially in the manner described, for the purposes specified.

4. The rigid arm or bar E, projecting rigidly from one of the jaws, and so engaging with the other as to prevent the longitudinal or edgewise displacement of the parts of the shelling-cylinder, substantially as and for the purpose described.

89,551.—JOHN N. BUNNELL, Unionville, Conn.—*Mouse-Trap.*—May 4, 1869.

Claim.—Constructing the body of an ordinary mouse-trap with rings or bands around its circumference, substantially as described.

89,552.—MARTIN BURNELL, Arundel, England.—*Boot-Blacking Machine.*—May 4, 1869.

Claim.—The construction and arrangement of the blacking-reservoir G, valve T, and spout *t*, with the distributing-brush *s*, and blacking-wheel F, as a whole, operating as set forth.

89,553.—EDWARD BURNHAM, Framingham, Mass.—*Rope-Guide for Window-Weights.*—May 4, 1869.

Claim.—The improved window-weight rope-guide, made as described, viz, as a cylinder having a flange, *a*, at one end, a projection, *b*, at the other, and a rope-channel, *c*, arranged as specified.

89,554.—ROBERT BUSTIN, St. John, New Brunswick, assignor to himself, JACOB D. MCDONALD, and GEORGE BEDELL, same place.—*Snow-Plow.*—May 4, 1869.

Claim.—The snow-plow, consisting of side-boards A A′, attached to the front cross-beam B of the locomotive and to the hanging-posts E E of said cross-beam, together with the eye-straps and pins D, and brace-rod F, the whole constructed and arranged as and for the purpose substantially as herein described.

89,555.—JOSEPH BOHNER, Alden, N. Y.—*Horse-Rake.*—May 4, 1869.

Claim.—The rake-head F, standards E, hinged to the main frame C, and provided with brace-hooks *i*, in combination with the hinged thills D, having rearward extensions and locking-pins *u*, arranged and operating substantially as and for the purpose herein described.

89,556.—JOHN CASSON, Sheffield Parish, England.—*Machinery for Planing.*—May 4, 1869.

Claim.—1. The compound carriage and fence hereinbefore described, and illustrated in the accompanying drawings, that is to say, a compound sliding-carriage, the upper part of which can be set at an angle to the lower part, so as to present the wood obliquely to the plane, and a fence jointed to the said upper part of the said carriage, and provided with the means herein described, so as to hold the wood to be planed at any required angle.

2. The combination with the parts named in the preceding clause, of the disk-plane, as hereinbefore described, and illustrated in the accompanying drawings.

3. The "dogs," as adjusted in manner hereinbefore described, and illustrated in the accompanying drawings.

4. The combination with the adjustable fence of the means hereinbefore described, and illustrated in the accompanying drawings, for planing wood into a cylindrical or other like forms, substantially as set forth.

89,557.—WILLIAM A. CASWELL, Providence, R. I.—*Blind-Stop.*—May 4, 1869.

Claim.—1. The blind-slat fastening herein described, consisting of the curved finger C, the plate D, and spring G, or their mechanical equivalents, arranged and operating substantially as set forth, for the purposes specified.

2. In combination with the plate D and finger C, the button H, constructed and operating substantially as described, for the purposes specified.

89,558.—J. W. CLEVELAND, North Tunbridge, Vt.—*Tire-Machine.*—May 4, 1869.

Claim.—The arrangement of the bed and uprights A A, dogs or clamps B B, and levers or springs C C, as shown and described.

89,559.—Edward Colson, Fort Wayne, Ind., assignor to himself and Chauncey B. Oakley, same place.—*Saw-Teeth.*—May 4, 1869.

Claim.—The tooth A, made straight on its forward side, with a semicircular notch, *x*, beveled at the top, from *y* to *z*, and straight from *z* to B, where there is an inclined shoulder, and straight from said shoulder to its horizontal base, D′, all as shown in Fig. 2, and connected to the blade in an inclined manner, substantially as shown and described.

89,560.—Howell, Cooper, Watertown, N.Y.—*Cheese-Hoop Follower.*—May 4, 1869.

Claim.—A cheese-hoop follower, having a metallic face or head, which is enameled, or treated in an equivalent manner, so as to be anti-corrosive and non-adhesive, substantially as and for the purposes shown and set forth.

89,561.—Jesse D. Cothrell, Hopedale, Mass.—*Weft-Stop Mechanism in Looms.*—May 4, 1869.

Claim.—The filling-fork G, as constructed, not only as a bent and fulcrated lever, supported on a pivot or fulcrum, *d*, as described, but as disconnected from and with its horizontal arm disposed underneath and against an arm or lever, I, combined with mechanism as explained, or its equivalent, for operating the shipper, the whole being substantially as specified and represented, and to enable the filling-fork, when a shuttle, during its flight, may be caught in the warp and borne against the backs of the prongs of the fork, to move, so as to allow the shuttle to pass it without causing breakage of the fork or any part of the mechanism for actuating the shipper.

2. The combination of the cammed arm L, or its mechanical equivalent, applied to, and so as to be operated by, the filling-fork, in manner and by means substantially as described, with the shelf or bracket M, the reciprocating pitman N, and its eccentric O, or their equivalent, and with the bent lever P, applied to the harness-operative mechanism, the "take-up mechanism," the "let-off mechanism," and the "drop-box operative mechanism," or either of the said mechanisms, substantially in manner as specified.

3. The arrangement of the tension-spring *s′*, of the "whip-roller," or "warp guide," on the upright rod *m′* of such guide, and within the worm-shaft *y*, and against a shoulder, *n′*, therein, the whole being substantially as, and to effect advantages as hereinbefore explained.

89,562.—Johnston D. Curl and John D. Bartlett, Mokena, Ill.—*Medical Compound.*—May 4, 1869.

Claim.—The combination of the ingredients described, in the manner and proportion as and for the purposes set forth.

89,563.—George Henry Daw, London, England.—*Cartridge.*—May 4, 1869.

Claim.—The construction of the cartridge-case, with a tubular body, composed of a strip of thin sheet-metal, soldered at its overlapping edges, and combined with a base-cup, containing the percussion-arrangement, and a wad or filling of paper-pulp, as hereinbefore set forth.

89,564.—James M. De Witt, Chicago, Ill.—*Fastening Handles to Tools.*—May 4, 1869.

Claim.—The chisel B, constructed as shown and described, as an article of manufacture.

89,565.—James M. Dormon, Claiborne Parish, La.—*Plow.*—May 4, 1869.

Claim.—The peculiarly formed plowshares F F′, in combination with the articulating and adjusting braces E E′, when said plowshares and said braces are constructed and operate as herein described.

89,566.—John R. Dunn, Queens County, and George B. Burroughs, Brooklyn, N. Y.—*Automatic Fan.*—May 4, 1869.

Claim.—The vibrating stem *e*, in combination with the handle A, segmental cog or escapement-wheel *c*, and spiral spring *d*, all arranged and operated in the manner and for the purpose set forth.

89,567.—Elijah Eaton, Hartford, Conn.—*Toy-Velocipede.*—May 4, 1869.

Claim.—A toy-velocipede, constructed and operating substantially as shown and described.

89,568.—Charles E. Evard, Leesburgh, Va.—*Freeing-Tool, Screw, and Jewel-Setter Combined.*—May 4, 1869.

Claim.—The combination of the improved tool, with the series of cutting, setting, and burnishing instruments, all constructed as and for the purposes described.

89,569.—Joseph Fanyon, Providence, R. I.—*Combined Measure and Funnel.*—May 4, 1869.

Claim.—The arrangement of the graduated funnel A, transparent plate *a*, faucet C, hollow tube *b*, notched rod *c*, and springs *d* and *f*, all substantially as herein shown and described.

89,570.—James H. Fellows, Alba, Pa.—*Device for Fastening Wagon-Seats.*—May 4, 1869.

Claim.—An automatic seat-fastener, consisting of a seat-iron, A, body-plate E, and eccentric or cam-lever F, constructed and arranged substantially as herein shown and described.

89,571.—W. A. Field, Schuylkill Haven, Pa.—*Potato-Digger.*—May 4, 1869.

Claim.—The combination of the share D, stationary screen E, and rotary clearer *i j*, when these several parts are constructed and arranged as herein specified.

89,572.—Stephen Fisk, Winchester, Ind.—*Wash-Boiler.*—May 4, 1869.

Claim.—The arrangement of the oval, perforated bottom B, curved bars *e e*, shields *i i*, tapering tube C, and cap D, with its slotted flange *b* and rims *c c*, all substantially as shown and described.

89,573.—W. Garrison and Charles H. Stevens, Syracuse, N. Y.—*Holdback.*—May 4, 1869; antedated December 8, 1868.

Claim.—The swinging platform *f* and spring *g*, in combination with a flat-headed hook C *h* and thill-iron A, as and for the purpose herein shown and described.

89,574.—J. H. Giles, New York, N. Y.—*Enameling Stone and Earthenware.*—May 4, 1869.

Claim.—The process of enameling, substantially as herein described and set forth.

89,575.—John Goodin, Centralia, Ill.—*Wrench.*—May 4, 1869.

Claim.—1. The arrangement of the handle A, having a flat, broad portion, B, which is slotted and grooved as described, the stationary jaw C, raised surface *a*, pawl *b*, spring *c*, and flanges *d* and *e*, all substantially as shown and described.

2. In combination with the handle A, flat portion B, and stationary jaw C, the slide D, movable jaw E, and notched cam-wheel F, all constructed and operating substantially as and for the purposes herein set forth.

89,576.—George H. Gregory, North Milton, Conn.—*Whip-Socket.*—May 4, 1869.

Claim.—The combined arrangement of the vertical serrated rod D, the oblique lever E, sliding bolt and spring F, and spiral spring G, in the manner and for the purpose substantially as herein described.

89,577.—John A. Haase, Philadelphia, Pa.—*Floor-Clamp.*—May 4, 1869.

Claim.—1. The construction of the jaw A with a supporting shoulder, *a′ a″*, substantially as described, and for the purpose set forth.

2. The construction of the jaws A and A′ with the slotted elbow *d* and lug *c*, substantially as described, and for the purpose specified.

3. A floor-clamp, composed of the retaining-jaws A and A′, retaining-screws B B, clamping-head D, guiding and supporting shaft F, and forcing-shaft C, when the several parts are constructed and arranged for joint operation, substantially in the manner and for the purpose set forth.

89,578.—Samuel Hodkinson, Louisville, Ky.—*Automatic Switch.*—May 4, 1869.

Claim.—The combination of the slotted lever E and spring G, the cranks I K, connecting-links J, J, and O, and shifting-bar M, all constructed, arranged, and operated in the manner and for the purpose set forth.

89,579.—William Wheeler Hubbell, Philadelphia, Pa.—*Flux for Extracting Precious Metals from their Ores.*—May 4, 1869.

Claim.—The use and application of sulphate of baryta to a furnace to form a flux, with which to separate the metals of gold or silver-ores from the other quartz or earthy matter and sulphur in them, substantially as described.

89,580.—H. S. Hudson, Selma, Ala.—*Automatic Feed-Regulator for Lamps.*—May 4, 1869.

Claim.—1. An adjustable automatic feeder or regulator, applied to a pipe leading from a supply reservoir to a burner, and constructed so as to operate substantially as described.

2. The combination of an automatic feeder, constructed substantially as described, with an apparatus which will regulate the supply to and pressure in a distributing-pipe leading to said feeder, substantially as and for the purposes set forth.

3. The well G, made adjustable upon pipe D, and so constructed as to expose to view the fluids into which the end of this pipe dips, substantially as described.

4. The lower end of pipe D, reduced to a knife-edge, and arranged within the well, substantially as described.

89,581.—Reuben K. Huntoon, Boston, Mass., assignor to himself and J. Augustus Lynch, same place.—*Governor for Steam-Engines.*—May 4, 1869.

Claim.—1. The combination of the cylinder W and piston X, with the screw-propeller G, its shaft F, and case A.

2. The combination and arrangement of the auxiliary shaft M and the toggles K L, with the propeller G and its shaft F, and mechanism for revolving the said auxiliary shaft M, such mechanism, as represented and described, being the gears O P, the shaft Q, and the pulley S.

3. The combination and arrangement of either or both the series of channels *o x*, with the seats *r* and passages *n q'* of the wheel-valve V, and its case B, applied together, and made in other respects substantially as set forth.

4. The arrangement and combination of the wings *a'* with the case A, the passages *m*, and the cylinder W, to be used with a piston, and the propeller and shaft, arranged in such case, substantially in manner, and to operate as described.

89,582.—John W. Hyatt, Jr., Albany, and David Blake, Spencertown, N. Y.—*Compound of Ivory-Dust and other Materials.*—May 4, 1869.

Claim.—1. Agglutinizing ivory-dust, or other pulverized material, by combining collodion therewith, and subjecting the composition to pressure during the evaporation of the volatile elements, substantially as described.

2. The evaporation of the alcohol and ether by means of heat, substantially as described.

89,583.—Isaac Ickelheimer, New York, N. Y.—*Watch-Winding Device.*—May 4, 1869.

Claim.—1. The combination, with a ratchet-wheel of the main-spring arbor and its retaining-pawl, of the winding-plate, with its square stem and its spring-click, for engaging with the said ratchet-wheel, all constructed and arranged for operation, substantially as herein shown and set forth.

2. The combination, with the parts named in the preceding clause, of the cover or cap, so constructed as to extend over and hold the winding-plate, and to constitute a socket for the protection of the winding-square, as and for the purpose shown and set forth.

89,584.—John H. Irwin, Philadelphia, Pa.—*Mode of Guiding Velocipedes on a Single Track.*—May 4, 1869.

Claim.—A velocipede, connected with a truck, acting as a counter-weight, as set forth, to operate under control of the rider, as described.

89,585.—John Johnson, Saco, Me.—*Sun-Dial.*—May 4, 1869.

Claim.—A translucent hollow globe, having an aperture at the top, through which a pencil of rays from the sun may pass, to mark time, the globe being rendered opaque at the top, and on the side next to the sun, for the purpose of giving a perfect delineation of the bright spot, as it traverses the surface of the globe.

89,586.—C. F. Keller, Nevada, Ohio, assignor to himself, William Balliet, and H. A. King, same place.—*Locking-Nut.*—May 4, 1869.

Claim.—A plate, E, provided with a suitable number of holes, as described, in combination with the plate B, having one or more staples attached for securing the plate E in place, by means of the pins J, to prevent the nuts turning or becoming loose, as and for the purpose set forth.

89,587.—George King, Frederick, Md.—*Sash-Lock.*—May 4, 1869.

Claim.—The knuckle-catch *b*, in combination with the spring C, the whole constructed and arranged with relation to the sash A, as shown and described.

89,588.—Hiram S. Maxim and James Radley, New York, N. Y.—*Apparatus for Making Illuminating Gas from Gasoline.*—May 4, 1869.

Claim.—1. The apparatus for making illuminating-gas from gasoline or other hydrocarbon-fluids and atmospheric air, in which the gas-fluid is forced from the tank or chamber in which it is held, to the heating and vaporizing chambers by the action of the compressed air, or its equivalent, in such tank or chamber, substantially as described.

2. Heating and vaporizing the gas-fluid in a small continuous stream, of sufficient volume only for the required light or lights, by forcing the fluid through the heating and vaporizing chambers by the action of compressed air, or its equivalent, upon such fluid, substantially as described.

3. Drawing atmospheric air into the apparatus, for the purpose of carbureting the same, so as to produce an illuminating-gas, by forcing the hydrocarbon-vapor through a contracted vent into the perforated air-tube, by the action of the compressed air or its equivalent upon such vapor, substantially as described.

4. The combination of the fluid and air chamber A, pipe B, and the heating and vaporizing chambers F and G, constructed and operating in the manner and for the purpose substantially as described.

89,589.—E. McLane, Young America, Ill.—*Corn-Separator.*—May 4, 1869.

Claim.—1. The arrangement of the frame A, spring-bars E E, shoe D, loops *a a*, and crank-shaft *b*, all substantially as and for the purposes herein set forth.

2. The shoe D, provided with cross-bars *c c*, and riddles I I, placed so as to form stair-steps, substantially as shown and described.

3. In combination with the shoe D, and riddles I I, the adjustable bars H H, substantially as specified.

89,590.—Henry N. Meeker, Smith's Mills, N. Y.—*Machine for Washing Hides and Leather.*—May 4, 1869.

Claim.—The rotating slatted cylinder B, when provided with inwardly-projecting ribs or shelves *e e*, for lifting portions of the water from the tub or vat A, constructed, arranged, and operating substantially in the manner and for the purpose set forth.

89,591.—Charles E. Miller, Indianapolis, Ind.—*Wash-Boiler.*—May 4, 1869.

Claim.—The combination of the false bottom C, perforated hinged flaps D D', columns F, and nozzles G G', all constructed and arranged to operate substantially as and for the purposes herein described.

89,592.—PETER MUNZINGER, Philadelphia, Pa.—*Straddle-Pipe for Hydraulic Gas-Mains.*—May 4, 1869.

Claim.—The interior pipe I, chamber J, neck M, and the diaphragm or weir N, the whole composing the straddle-pipe H, substantially as and for the purpose shown and described.

89,593.—JAMES H. MURRILL, Baltimore, Md., assignor to MURRILL and KEIZER, same place.—*Forming-Machine for Square Tin Cases.*—May 4, 1869.

Claim.—1. In a forming-machine, the direct attachment of the grooving-roller to the treadle without the intervention of joints.

2. The yielding fulcrum G, or its equivalent, for the purpose specified.

3. The spring goose-neck or yoke E, operating substantially as described.

4. In a forming-machine, as described, the use of the counterweight G, or its equivalent, for returning the working parts to a position of rest.

89,594.—EDWARD W. OWEN, Brooklyn, N. Y.—*Inhaling-Apparatus.*—May 4, 1869.

Claim.—One or more jars or chambers, 1, 2, 3, with the connection-tubes T and T′, ingress or air tubes N and N′, with flexible (or other) pipe M, and mouth-piece H, all suitably arranged, and operating in the manner and for the purpose set forth.

89,595.—WILLIAM SAMUEL PAGE and RICHARD EAST, Nine Elms Wharf, Nine Elms, England.—*Steam-Generator.*—May 4, 1869.

Claim.—The series of perforated cylinders, arranged to separate the water and other extraneous matters from the steam before it enters the steam-pipe leading to the engine, substantially as above described.

89,596.—EMERY PARKER, New Britain, Conn.—*Door-Key.*—May 4, 1869.

Claim.—A key for a lock, whose bow *a*, shank *b*, and bit *c*, made from sheet or plate metal, are combined with a stem, B, made separately therefrom, the article being constructed substantially as described.

89,597.—SAMUEL B. PARMENTER, Lewiston, Me.—*Spinning-Frame.*—May 4, 1869.

Claim.—The combination of the head C and the adjustable bar D, when constructed as described, with the lifting-rods B and ring-rails E, substantially as described, for the purpose set forth.

89,598.—ELIJAH S. PIERCE, Hartford, Conn., assignor to NATIONAL SCREW COMPANY, same place.—*Apparatus for Conveying Screw-Blanks.*—May 4, 1869.

Claim.—1. The combination and arrangement of the devices D, E, F, G, and S, and spring-levers P, for the purpose of moving and operating the rotating block H, substantially as described.

2. The combination and arrangement of the rotating carrier-block H, the spring-finger I, and the part A′, with the conducting-ways K, for the purpose of conveying the blanks, substantially as described.

3. The combination of the cam L, lever M, spring N, and spring-pin V, all arranged and operating together substantially in the manner set forth.

4. The combination and arrangement of the rotating-mechanism, moved by the cam D, and the pushing-mechanism, operated by the cam L, with the stationary rest A, for the purpose of conveying a blank from the ways to the jaws, substantially as herein set forth.

89,599.—JOHN PIPER, Utica, N. Y.—*Metal-Binding for Oil-Cloth, Carpet, &c.*—May 4, 1869.

Claim.—The sheet-metal edging, or binding, when attached to floor or other cloths, substantially in the manner stated.

89,600.—JOHN F. SANFORD, Keokuk, Iowa.—*Lamp.*—May 4, 1869.

Claim.—The position of the cog-wheels, or beveled gearing, with their shaft, placed on the outside of the wick-tube, the wheels working, together with their connections and thumb-piece, above the level of the oil in the reservoir, substantially as described.

89,601.—JULIUS SHELDON, New York, N. Y.—*Hat-Blocking Machine.*—May 4, 1869.

Claim.—In combination with a hat stretching or blocking machine, the continuous rubber cap *a*, applied substantially as and for the purpose set forth.

89,602.—GOTTLIEB SCHREYER, Columbus, Ohio.—*Axle-Skein.*—May 4, 1869.

Claim.—The screw-thread *g*, formed upon the cylindrical end of the axle-skein, substantially in the manner and for the purpose set forth.

89,603.—R. A. SMITH, Washington Mills, N. Y.—*Horse Hay-Fork.*—May 4, 1869.

Claim.—The sliding-catch S, when constructed with the slots G and I, and notch K, and used in combination with the pins *e* and *f*, spring H, rope F, and lifting-tine head M, with notch J therein, the several parts being arranged as and for the purpose herein specified.

89,604.—WILLIAM STEWART, Hartford, Conn.—*Carriage-Sash Fastener and Supporter.*—May 4,1869.

Claim.—The cams F F, springs G G, stops H H, guides C C, when arranged and used for supporting the sash of carriage-windows, as herein described.

89,605.—SUMNER STOUGHTON, Windsor, Ohio, assignor to himself and LEVERETT GROVER.—*Horse-Rake.*—May 4, 1869.

Claim.—The lever M and strap *n*, in combination with the arms F, as shown and for the purpose set forth.

89,606.—JOHN H. STRINGFELLOW, Richmond, Va.—*Seeding-Machine.*—May 4, 1869.

Claim.—1. The seed-distributing sash E, adjustable bridges g^2, seed-slides g g^1, roller *e*, adjustable cams *f*, spring S, rolling-bar H, and connecting-device h^2, combined substantially as and for the purpose described.

2. The combination of the rolling-bar H, arm *h*, rod H′, suspension-attachment h^1, drill-teeth J, sliding-sash E, and connecting-device h^2, substantially as and for the purpose described.

3. The combination of the laterally adjustable drag-bars D, the laterally adjustable hoppers G′, and the laterally reciprocating seed-distributing sash E, all substantially in the manner and for the purpose described.

4. The combination of the sash E, spring S, fixed block *v′*, and movable block *v*, all arranged and operated substantially in the manner described.

5. The lugs *p* on the drill-tubes J, pins *j* on the drag-bars, in combination with the pivoted coverers K K′, all arranged and operating as described.

6. The arrangement of the oblique and inclined supports *a a*, upright A^4 of the axle-tree B′, and the seat A^3, all in the manner and for the purpose described.

7. The tubular drill-tooth J, constructed with the wing J^4, and vertical plane-face J^3, in combination with the blades L and L′, substantially as and for the purpose described.

89,607.—CHARLES B. THAYER, Syracuse, N. Y.—*Toy-Gun.*—May 4, 1869.

Claim.—1. The spring D, combined with the barrel A, and arranged so that it is held in the position for discharging by the contact of one end thereof with the interior surface of the barrel, and may be discharged by pulling on the part H, substantially as and for the purpose described.

2. The combination, with the spring D and the barrel, of a hammer, I, when actuated by the said spring, substantially as and for the purpose specified.

89,608.—SAMUEL R. THOMPSON, New Market, N. H., assignor to himself and JOSEPH PINKHAM, same place.—*Plow.*—May 4, 1869.

Claim.—1. The combination of the tongue with the plow-beam.

2. The coulter A, as separate from the beam and supported by an arm, C, or its equivalent, projecting from the plowshare.

3. The combination of the bar G, the forked spanner H, the lever F, and their screws, with the plow-beam pivoted to the share, so as to operate therewith, substantially as described, the lever F being applied to the handles of the plow, as set forth.

89,609.—ALMON THWING, Hopedale, and CHARLES H. FOWLER, West Roxbury, Mass.—*Grinding-Mill.*—May 4, 1869.

Claim.—1. The circular-grooved cap-plate, arranged so as not only to rest on the outer series of balls, supported by the grooved runner, but to have its inner groove over the inner series of balls out of contact therewith, or disposed with a narrow space between it and them, the same being constructed as herein described and as represented.

2. The combination of one or more springs, *m*, or the equivalent thereof, with the circular-grooved cap E, and the circular-grooved runner D, and its series of balls F, such spring or springs being to enable the cap-plate to yield or move from the balls, or to hold and press them down upon the runner, while they may be in operation, substantially as herein shown and described.

3. The arrangement and combination of the concentric peripheral groove or channel *d*, of the runner, and the scraper *i*, guide *h*, and opening *g*, with the circular-grooved cap and runner, and their series of balls, arranged to operate together as set forth.

89,610.—WILLIAM D. TITUS, Brooklyn, N. Y.—*Hot-Air Furnace.*—May 4, 1869.

Claim.—Two or more heating-apparatus in one jacket, separated their entire width and height by a vertical air-flue, F, in combination with the inverted cone-shaped reflector R, reflecting-hood D, and air-flues 1, 2, 3, 3′, 4, 5, 6, 7, and dampers in flues 5, to regulate the flow of hot air from either furnace, A A′, all arranged and operating in the manner and for the purpose set forth.

89,611.—JOSEPH WADLEIGH, Chebanse, Ill.—*Machine for Raking and Cocking Hay.*—May 4, 1869.

Claim.—1. The pressing-box B, arranged to act automatically, as set forth.

2. The combination of the box B, bar 7′, rollers 28, pinion *h*, shaft *d*, pulleys *g* 29 *i*, bar *l*, clutch-wheel 41, pulley *n*, springs *m* 8′, ratchet 14′, and pawl 15′, as specified.

3. The combination of the box B, wheels H, bars O C, friction-rollers E G, hoop V, bevel-wheel 24, shaft 32, and wheels 31 54, shaft 7′, pinion *h*, and pulleys *i* 29, and weighted ropes 12′, 13′, as set forth and shown.

4. The drum 3′, provided with projecting bands 11, in combination with the housing A, provided with prongs 16, which operate between said bands, as set forth.

5. The combination of the shafts 23, 60, crank S′, arms *n*′, wheels 17 18 4′, prongs 12, bars K′, drum 3′, and carrier *y* 2, as specified.

89,612.—JOHN S. WALLIS, New Orleans, La.—*Cotton-Bale Tie.*—May 4, 1869.

Claim.—The buckle A, when constructed of plate-iron, one side being thicker than the other, and having two slots B B, and cleft C, as and for the purpose herein described.

89,613.—BENJAMIN WARDWELL, Providence, R. I.—*Culinary-Apparatus.*—May 4, 1869.

Claim.—A boiler for culinary purposes, made substantially in the manner herein described, so that there shall be a space or chamber, E, formed between the bottom of the boiler and the stove-plate, into which the steam, passing from the boiler through the pipe or conduit G, is discharged, as and for the purposes shown and set forth.

89,614.—SHEPHERD H. WHEELER, Dowagiac, Mich.—*Draught-Equalizer.*—May 4, 1869.

Claim.—1. The construction of a three-horse equalizing-draught lever, by uniting two concentric semicircles, A A, of different diameters, as and for the purpose specified.

2. In a three-horse equalizing-draught lever, formed of two semicircles, A A, the construction and arrangement of the lugs P P, the link L, and the recess O, substantially as described.

3. In a three-horse equalizing-draught lever, formed of two semicircles, A A, the use of a single chain, C C, provided at one end with the link L, and at the other end with the hook K, and fastened to the lugs P P, by means of the bolt or rivet F, in the manner and for the purpose set forth.

89,615.—BAXTER WRIGHT, Cardiff, N. Y.—*Root-Digger.*—May 4, 1869.

Claim.—So constructing and arranging the blades, by placing them at an inward angle, as that they will follow the root to be extracted, and prevent the drawing up of earth, substantially as described.

89,616.—S. S. ALLEN, Belvidere, N. Y.—*Churn.*—May 4, 1869.

Claim.—The tube H, having two spiral grooves formed in it, and the pin I, in combination with the swiveled and pivoted dasher-handle G, lever K, uprights C and D, and detachable horizontal bar E, substantially as herein shown and described, and for the purpose set forth.

89,617.—JAMES S. BALDWIN, Newark, N. J.—*Method of Controlling the Flow of Liquids under Pressure.*—May 4, 1869.

Claim.—1. Utilizing the power of outflowing currents, as described.

2. The equalizing device represented in Fig. II.

89,618.—CHARLES T. BARBER and BENJAMIN T. LOOMIS, New York, N. Y.—*Needle-Setter and Thread-Pincer.*—May 4, 1869.

Claim.—The combination, with a needle-setter, of thread pincers or clamps, substantially as described.

89,619.—ANGELINE BAYLEY, Battle Creek, Mich., administratrix of the estate of ALDEN C. BAYLEY, deceased.—*Hay-Rack.*—May 4, 1869.

Claim.—A hay-rack, when provided with the floor-timbers A and diagonal braces B, arranged as herein shown, and for the purposes described.

89,620.—ABNER G. BEVIN, East Hampton, Conn.—*Metallurgic Furnace.*—May 4, 1869.

Claim.—Constructing the flue of two parts, B B′, connected by a deflecting arch, *a*, arranged relatively with the partition *b*, and the chamber or spark-receptacle *e*, substantially as and for the purpose herein set forth.

89,621.—HORATIO N. BLACK, Philadelphia, Pa.—*Spring.*—May 4, 1869.

Claim.—The relative arrangement and combination of the series of springs or sections, substantially as described herein.

89,622.—W. I. BLACKMAN, Columbus, Miss.—*Book-Binding.*—May 4, 1869.

Claim.—In combination with a book, the slits B B, made in the back for receiving the fastening-twine or thread, and securing the tapes E, substantially as and for the purposes herein shown and described.

89,623.—ROBERT BLAKE and ANSEL CARPENTER, Scranton, Pa., assignors to ROBERT BLAKE.—*Machine for Swaging Ax-Polls.*—May 4, 1869.

Claim.—1. The combination with the lug or stop on cam-shaft or other part moving in unison therewith, of the hinged clutch-lever and its vibrating latch, arranged to engage with said lug or stop, substantially as and for the purposes shown and set forth.

2. The combination of the clutch, formed of two parts, as described, and cam-shaft, on which the said parts are mounted, and the clutch-lever and latch of the stop on the male portion of the clutch and corresponding stop on the machine-frame, and the lug on the said cam-shaft or other part moving in unison therewith, arranged for joint operation as herein shown and specified.

3. The combination with the punching-pin and squeezing-dies of an ear-forming center-piece or die, constructed and arranged to operate substantially as herein described, so that when the metal is punched from the one edge, the two ears on the other

edge of the poll will be formed in said die from the metal forced into the same by the punching operation, as set forth.

4. The employment, with the squeezing-dies, of a sliding center-piece, constructed and operated as described, so as to receive either the plain edge of the poll or that upon which the ears are formed, as and for the purposes set forth.

5. The employment, with the squeezing-dies, of the gauge, placed in rear of the dies and hinged to and moving with the cross-head, a spring for holding said gauge in position, with a yielding pressure, and an inclined block or stop for gradually withdrawing the gauge from between the dies, as the cross-head descends, and the poll is grasped by the dies, substantially in the manner herein shown and set forth.

6. The combination, with the squeezing-dies, of the center-piece or die, provided with a gauge-pin or permanent gauge, substantially as and for the purposes shown and set forth.

89,624.—JAMES E. BOYLE, New York, N. Y.—*Machine for Trimming Cue-Leather.*—May 4, 1869.

Claim.—The employment, in combination with a cutting mechanism or device, adapted to cut or shave around the circumference of the leather, of a rest or stop-surface, against which the leather may be forced and held to insure its retention on the cue while being revolved, substantially as set forth.

89,625.—WILLIAM H. BROCK, Bridgeport, Conn., assignor to himself and CHARLES H. HUNTOON, same place.—*Adjustable Center-Square.*—May 4, 1869.

Claim.—1. The combination of the tongue F with the legs A and B, at right angles to each other, the said legs provided with a guide, C, to receive the base, D, of the tongue, the said tongue made adjustable, so as to be moved to or from the angle of the two legs, and at an angle equally dividing the angle of the two legs, all substantially as set forth.

2. In combination with the subject-matter of the first clause, the pointer G, made adjustable, substantially as set forth.

89,626.—ELISHA BROWN, Wayne, Mich.—*Animal-Trap.*—May 4, 1869.

Claim.—The movable chamber G, suspended with the door C, by means of the cord E, when operated by the devices described, in the manner and for the purpose set forth.

89,627.—JOHN H. BROWN, Brockport, N. Y.—*Miter-Machine.*—May 4, 1869.

Claim.—1. The arrangement of two cutters, E, and their adjustable frames C, at angles to each other, and relatively to the V-shaped table H, as shown, and for the purpose described.

2. The arrangement upon the miter-table H, of the fixed clamp *g*, and the movable clamp *g'*, with its sliding handle, when the parts are adapted to operate as herein described.

89,628.—MYRON S. BROWNELL, Adrian, Mich.—*Caster.*—May 4, 1869.

Claim.—In a caster, of substantially the described construction, the traversing frame *a*, provided with journals H and friction-wheels F, when arranged to revolve upon pin I, in the manner and for the purpose described.

89,629.—JAMES M. BUCHANAN, Lawrenceville, Ill.—*Churn-Dasher.*—May 4, 1869.

Claim.—The improved churn-dasher herein described, when constructed substantially as specified.

89,630.—STEPHEN CARLTON, Lynn, Mass.—*Drain-Pipe.*—May 4, 1869.

Claim.—The perforated pipe A B, with its coupling C, in combination with the flanged cap D, so arranged that an open space, E, is formed between said cap and the pipe, for the admission of the surrounding water, all constructed as herein described and shown.

89,631.—EDMUND R. CARTER, Medina, and CORODON D. W. GIBSON, Bay City, Mich.—*Upsetting-Machine.*—May 4, 1869.

Claim.—An improved upsetting-machine, consisting of bed-plate A, provided with slots B, ribs F and pivot H; the sliding jaws C, provided with lugs D, serrated eccentries J, flanges L, serrated racks K, slots E, links I, and the lever G, when constructed, arranged, and operating substantially as herein specified, and for the purpose set forth.

89,632.—JOSEPH CONWAY, Harrison, Md.—*Balance-Line for Mast-Hoops.*—May 4, 1869.

Claim.—In connection with the cords *e e*, extending between the several mast-hoops, arranging the lifts *a a* in such a manner that they run from the side or forward part of the upper hoop obliquely back to a point upon the gaff under the throat-halyard, substantially as and for the purposes set forth.

89,633.—PATRICK CULLEN, Bridgeport, Conn.—*Boot-Jack.*—May 4, 1869.

Claim.—The boot-jack herein described, consisting of the parts A and B, the hinge, with the rest D, formed upon the two parts, and the said rest constructed so as to hinge the two parts together, in the manner herein set forth.

89,634.—J. M. CULVER, Gilbertsville, Iowa.—*Garden-Cultivator.*—May 4, 1869.

Claim.—The improved cultivator herein described, when constructed and arranged as specified.

89,635.—GEORGE H. DAVIS, Stony Brook, N.Y.—*Steering-Apparatus.*—May 4, 1869.

Claim.—In combination with the steering-wheel and windlass C D, or their equivalents, the chain-pulley E, constructed as described, and for the purposes set forth.

89,636.—G. W. DAVIS and ALBERT E. SMITH, Providence, R. I.—*Car-Starter.*—May 4, 1869.

Claim.—1. The method of starting street-cars, by means of a hand-crank, H, and intermediate toothed gearing, I E, or any suitable number of such gear-wheels and pitmen D D, cranks B B B B, arranged at right angles, and parallel rods C C, all substantially as shown and described, and for the purpose set forth.

2. The pinion I, when provided with the means of throwing it out of gear, substantially as described, in combination with the wheel E, pitmen D D, rods C C, and cranks B B B B, on the axles A, all as set forth.

3. In combination with the crank-axles A, connecting-rods C D, disks *b*, and shaft *d*, the boss or wheel *k*, and spring-band *m*, operated substantially as described, for the purpose specified.

89,637.—E. A. DAYTON, Richmond, Va.—*Bearing for Vertical Shafts.*—May 4, 1869.

Claim.—1. The box A, journal-bearing E, segmental bearings F, and shaft, all combined and arranged substantially as and for the purpose specified.

2. The box A, provided with the fixed bearing H and vertical tubular extension D, the tapered adjustable journal-bearing E, and shaft, all combined and arranged substantially as and for the purpose specified.

89,638.—JULIE DIETTRICH, Hoboken, N. J.—*Sad-Iron.*—May 4, 1869.

Claim.—1. The detachable sad-iron handle D, when supported in the posts B C, that are fixed to the sad-iron, and when locked by means of a hook, *g*, formed on a pivoted plate, F, substantially as herein shown and described, to operate as set forth.

2. The slotted plate F, pivoted to one of the posts that project from a sad-iron, and arranged to lock the removable handle D, substantially as herein shown and described.

89,639.—GEORGE B. DOUGLAS, Sedalia, Mo., assignor to himself and J. H. SCHEER, same place.—*Brake for Wagons.*—May 4, 1869.

Claim.—The combination and arrangement of the eccentric brake-blocks E, bar or shaft D, arm F, connecting-rod G, lever H, and guard I, having a catch *i*, formed upon it, with each other, operating as herein shown and described, and for the purpose set forth.

89,640.—William R. Dunn, Alton, Ind.—*Boot-Crimping Machine.*—May 4, 1869.

Claim.—1. The hinge E, in connection with lever C, rod *m*, guide-bars D D and F, and pins *f f*, or any other device substantially the same.

2. The latch *s*, in connection with the lever C and guide-bar F, or their equivalents.

89,641.—Robert S. Dunning, Fall River, Mass.—*Key-Fastener.*—May 4, 1869.

Claim.—The key-fastener, constructed and applied substantially as herein set forth.

89,642.—Felix J. Emery, Chicago, Ill.—*Manufacture of Metal Ornaments.*—May 4, 1869.

Claim.—Ornaments for architectural and other purposes, when made of wire, substantially as described.

89,643.—Le Roy Farnham and John Mosher, Delta, Mich.—*Fanning-Mill.*—May 4, 1869.

Claim.—In a grain-feeder of substantially the described construction, the slide E, held by the cam H, in the manner described, for the purpose set forth.

89,644.—John E. Finley, Memphis, Tenn.—*Bee-Hive.*—May 4, 1869.

Claim.—1. The removable comb-frames B B B, with the top and bottom bars made with four flanges each, as described, and for the purpose specified, with their projecting ends Q Q.

2. The combination, with sliding-frames, of the grooved bottom and grooved honey-board, as described.

3. In combination with the elements above claimed, the bee-hive casing, constructed as described.

89,645.—John E. Finley, Memphis, Tenn.—*Churn.*—May 4, 1869.

Claim.—1. The combination, of frames *m* and *n*, constructed with notches, and arranged as described.

2. The combination of the frames *n* and *m*, with the frame or casing P, cog-wheels B, D, and C, rod E, tube or thimble F, nut *d*, and pivots *e* and *s*, the whole constructed and arranged substantially as described, and for the purpose herein set forth.

89,646.—C. J. Fisher, Waukon, Iowa.—*Neck-Pad for Horses.*—May, 4, 1869.

Claim.—The neck-pad, having an inner lining of crimped leather, and provided with straps *b c*, to allow its being fastened to the collar, as herein shown and described, for the purpose specified.

89,647.—E. J. Fraser, Erie, Pa.—*Uterine-Supporter.*—May 4, 1869.

Claim.—1. The bell-shaped and oval ring *e*, with the bows *f*, either double or single, constructed and operating substantially as herein shown and described, for the purposes specified.

2. Supporting the uterus by an expanded ring, made to fit the base of the uterus, and allowing the mouth to be inclosed thereby, substantially as described.

89,648.—Theophilus Fravel, Westville, Ind.—*Apparatus for Treating Diseases by Vacuum.*—May 4, 1869.

Claim.—The combination of the case A with the rubber cap C, hinged cap D, band B, and catches *d d d*, all arranged to operate substantially in the manner and for the purpose described.

89,649.—Francis P. Furnald, Jr., New York, Remick W. Champion, Brooklyn, N. Y., and Isaac N. Davies, Bergen City, N. J.—*Paint-Brush.*—May 4, 1869.

Claim.—Packing the ferrules A, above the bristles, with cut bristles, grass, hair, or other substance having similar form, cut into the required lengths, and inserted and packed in the manner described.

89,650.—Alpheus C. Gallahue, Morrisania, N. Y., assignor to himself and David Gillispie, New York City.—*Rotary Steam-Engine.*—May 4, 1869.

Claim.—1. The arrangement of cam I, arm J, pivoted bar L, with the abutment G, and flanged cylinder C, and the piston D, as herein set forth.

2. The arrangement of the flanged cylinder C, carrying the piston D, with reference to the construction of the case B, as herein set forth.

3. The arrangement of the steam-chest P, with its slide-valve, and the ingress and egress ports, whereby the abutment G is enabled to move at the proper given time, so as to avoid the pressure of steam therein, as herein set forth.

89,651.—George L. Gerard, New Haven, Conn., assignor to himself, Thatcher B. Carpenter, and James E. Carpenter.—*Spring Bed-Bottom.*—May 4, 1869.

Claim.—The spring C, constructed with the turned-up end D, in combination with the strap or loops E and slats A, the said strap passing over each slat and secured to the cross-bar B, between each two of the slats, and the slat perforated to receive the end D of the spring, and so that the slat may be reversed as set forth, and the whole constructed and arranged so as to operate substantially as set forth.

89,652.—J. Goodrich and H. J. Colburn, Fitchburgh, Mass., assignors to Rollstone Machine Works, same place.—*Self-Oiling Pulley.*—May 4, 1869.

Claim.—1. The combination, with the hubs B and C, of the wooden bushing G, and hub-nut F, substantially as and for the purposes set forth.

2. The combination, with the rim A, hubs B and C, flanges or webs D E, of the wooden bushing G, and hub-nut F, substantially as and for the purposes set forth.

89,653.—Harmon Goodwin and Charles H. Bennett, 2d, South Berwick Junction, Me.—*Dough-Rolling Machine.*—May 4, 1869.

Claim.—The combination of the crank-roller B, supported at one end on the screw-spindle *a*, with the roller G, laterally adjustable by means of the bent bars H and the table I, when made removable, as set forth.

89,654.—Joseph L. Halliman, Grand Rapids, Mich.—*Medicated Cracker.*—May 4, 1869.

Claim.—A medicated cracker, when composed of the ingredients and substantially in the proportions herein set forth, for the purpose described.

89,655.—Robert Ham, Troy, N. Y.—*Cooking-Stove.*—May 4, 1869.

Claim.—1. A hot-water reservoir, A, having a flue, B, both at the bottom and back, indented throughout its whole extent, into the body of the reservoir, and arranged so as to receive the draught directly through the back plate of the stove, substantially as and for the purpose herein specified.

2. Casting the entire reservoir, except the covers, in two parts only, one part forming the body of the reservoir and the inside of the flues, and the other part, C, being an angular plate, covering the whole outside of the flues, as herein set forth.

89,656.—Thomas Harbottle, Brooklyn, N. Y.—*Hydraulic Press.*—May 4, 1869.

Claim.—The arrangement of the passage I, passages *h*, check-valves G, adjustable stops B B′, passages *b b′ a*, and the relief-valves C, as herein described, whereby each press is relieved independently, the pulsation of the liquid upon the relief-valves reduced, and one block provided for a number of presses, for the purpose specified.

89,657.—William Haslup, Sidney, Ohio.—*Water-Wheel.*—May 4, 1869.

Claim.—1. The wheel C, provided with the buckets *f f′*, constructed substantially as described, in combination with the plate F, provided with the conduit-openings *g g*, of different sizes, arranged and operating substantially as described.

2. Cylinder A, openings a^1 a^2, cap B, shafts *e e*, provided with cogged segments, rings, or bands B B′, on which are formed segments *b b′*, and openings, wheel C, and shaft J, all combined, constructed, arranged, and operated substantially as and for the purpose set forth.

89,658.—G. W. Hatch, Parkman, Ohio.—*Sleigh-Runner.*—May 4, 1869.

Claim.—Casting the runner, shoe, and knees in one piece, and with grooves, or recesses, to receive wooden strengthening-timbers, substantially as herein shown and described, and for the purpose set forth.

89,659.—James W. Hazelton and Alvin A. Southard, Drayton Plains, and Oliver Merwin, Elba, Mich.—*Nut-Locks for Fish-Plates.*—May 4, 1869.

Claim.—The spring nut-lock D, constructed substantially as described, and operating for the purpose specified.

89,660.—George W. Helt, Alma, Mich.—*Stove-Pipe Thimble.*—May 4, 1869.

Claim.—The conical flange or funnel F, in combination with a double-walled cylinder, constructed substantially as shown and described, and operating for the purpose specified.

89,661.—Thomas N. Henderson, Jackson, Mich.—*Potato-Digger.*—May 4, 1869.

Claim.—1. Movable grate I, with its shaking apparatus, and wheel E, ratchet-pins F, and levers G and H, constructed and operated substantially as and for the purpose aforesaid.

2. In combination with above, plow-point A, sides B B, handles C C, and beam D, constructed, arranged, and operated substantially as and for above-named purpose.

89,662.—D. P. Henry, Windsor, Ill.—*Pump.*—May 4, 1869.

Claim.—The pump-tube E, so constructed at its upper end above the discharge-spout K as to receive between its sides the gear-wheels *f g*, and carrying at its lower end the pump-barrel A, in which the solid plunger D is operated from the crank-shaft of the gear-wheel *g*, by means of the jointed connecting-rod I, all arranged and operating as described, for the purpose specified.

89,663.—Joseph Héroux, St. Paul, Minn.—*Propelling Boats.*—May 4, 1869.

Claim.—1. The cross-bar D, or its equivalent, by means of which, through suitable mechanism, motion can be imparted to the oars, by the feet of an oarsman, substantially as shown.

2. The levers E E, when pivoted to the boat, and connected with the cross-bar D, or its equivalent, and with the inner ends of the oars C C, substantially as and for the purpose specified.

3. The cross-bar D, and levers E E, together with their connecting-chains *d d*, *e e*, and *c c*, in combination with the boat A and oars C C, substantially as shown and for the purpose described.

89,664.—E. Jeanjaquet, New York, N. Y.—*Bottle-Filler.*—May 4, 1869.

Claim.—1. The cock D, or its equivalent, with one or more discharge-tubes or orifices, when the same is used in combination with the air-tube C, substantially as and for the purposes herein shown and described.

2. In combination with a cock, provided with one or more discharge-tubes or orifices, the slots *j*, substantially as and for the purposes specified.

89,665.—Josiah Jonson, Toledo, Ohio.—*Apparatus for Carbureting Air or Gas.*—May 4, 1869.

Claim.—1. The arrangement of a series of chambers, A^1 A^2 A^3, pipes *e* e^1 e^2, i^2 i^3, valves *v v v*, supply-pipe C, and exit-pipes D^1 D^2 E^3, having cocks d^1 d^2 d^3, in such manner as to operate substantially as and for the purposes set forth.

2. In connection with the several parts, thus arranged and operating, the arrangement and combination of the delivery-pipe O, having two branches, O^1 O^2, and two cocks, o^1 o^2, with relation to the chamber A^4 and gasometer G, substantially as and for the purposes set forth.

89,666.—J. George Krichbaum, Youngstown, Ohio.—*Ear for Water-Pails.*—May 4, 1869.

Claim.—The twisted ear, with prongs arranged as described, in combination with the pail, in the manner and for the purpose set forth.

89,667.—Adolph Lange, Glashëtte, Saxony.—*Device for Setting the Hands of Watches.*—May 4, 1869.

Claim.—The combination and arrangement of the spring-arm R *s*, and bent-spring lever L *c*, with the sliding cylindrical pinion-clutch H, for the purpose of engaging the hand-setting device of a watch with the stem-winding milled head, and disengaging the same automatically, by closing the outer case of the watch, substantially as shown and described.

89,668.—David S. Leavitt, Grand Rapids, Mich.—*Truss-Supporter.*—May 4, 1869.

Claim.—1. The combination of adjustable side-springs C C with supporter A and back-pads B B, substantially as and for the purpose specified.

2. The construction of the side-springs C C, with one or more holes, *e*, in combination with flat springs D, having buttons *e*, and sheaths *a*, of the supporter A, and back-pads B B, substantially as set forth.

3. The pad-plate H, or pad having a lateral movement in combination with the supporter A, substantially as and for the purpose specified.

4. The combination of an arm or lever, I, and set-screw J, with the pad-plate H, substantially as and for the purpose specified.

5. The construction of the pad-plate H, with elongated slot *n*, and nut *o*, in combination with arm I and set-screw J, substantially as set forth.

6. The construction of the arm I with hinge-joint *l*, and its attachment to the supporter by pivot screw *m*, substantially as set forth.

7. The combination of a hinge with the pad-plate and supporter, attached substantially in the manner and for the purpose set forth.

8. The construction of the side-springs C C, with hinge-joints E, substantially as and for the purpose specified.

9. The combination of elastic or rubber springs F F, with the joints of the side-springs, substantially as and for the purpose specified.

10. The combination of an elastic or rubber fastener, L, and buttons *p p*, with the back-pads, substantially as and for the purpose specified.

11. The supporter and back-pads, provided with sheaths *a*, in combination with side-springs C C, substantially as and for the purpose specified.

89,669.—George W. Lee, Sandy, Ohio.—*Feed-Cutting Attachment for Thrashing-Machines.*—May 4, 1869.

Claim.—1. The combination, with the toothed cylinder and toothed shell of a thrashing-machine, of the attachment D, provided with saws, and either permanently or detachably connected thereto, substantially as specified.

2. The aprons F G, combined with the attachment D, and the casing H, and arranged substantially as specified.

3. The plate L, combined with the apron G, the casing H, and attachment D, when arranged substantially as specified.

89,670.—Michael Lehmer, Oregon, Mo.—*Coal-Stove.*—May 4, 1869.

Claim.—An improved heater, formed by the combination of the fire-box A and drum B with each other, substantially in the manner herein shown and described—that is to say, in such a manner that a space may be left between the said fire-box and drum, for the free circulation of the air, as and for the purpose set forth.

89,671.—Joseph H. Lewis, Duxbury, Mass.—*Vise.*—May 4, 1869.

Claim.—The arrangement herein described and shown, of the screw-threaded sleeve or nut C, the screw D, and the jaws A B, all constructed as set forth.

89,672.—James H. Luddington, Bridgeport, Conn.—*Pump.*—May 4, 1869.

Claim.—1. The apertures B, in the side of the cylinder A, for admitting water, substantially as shown and described.

2. In combination with the apertures B, one or more, the piston C, valve E, and tubular piston-rod D, when constructed, arranged, and operating substantially as and for the purposes herein shown and described.

89,673.—O. E. MABIE, Camden, N. Y.—*Apparatus for Elevating Hay.*—May 4, 1869.

Claim.—1. The tackle-block, constructed of two parts, A B, the latter capable of being self-actingly detached or attached, substantially as specified.

2. The spring latch and lip E, combined with the block A B, substantially as specified.

3. The pulley H and cord G, combined with the block A B, substantially as specified.

89,674.—THEODORE W. MAHLER, Rome, N. Y.—*Gate for Water-Wheels.*—May 4, 1869.

Claim.—The gate C, in combination with the guides B and B′, all constructed and operating substantially as described.

89,675.—W. H. MANTZ, Centralia, Ill.—*Envelope-Opener.*—May 4, 1869.

Claim.—The envelope-opener and letter-clamp, constructed as described, of the cheeks A C, secured together centrally by the rivet or eyelet *a*, and the pivoted cutter B, provided with the guard *d* and cutting-point *c*, all arranged to operate in the manner described, for the purposes specified.

89,676.—WILLIAM D. MCKINNEY, Marion, Ind.—*Ditching-Machine.*—May 4, 1869.

Claim.—1. The vaulting-plow T^1, arranged and operating substantially as described.

2. The vaulting-plow T^1, connected to the machine by the rods *v v*, in the manner herein described.

3. The spring-clearers *p q r*, at the end of the conductor V, operated by the motion of the endless chain of buckets Z, as described, and for the purpose set forth.

89,677.—JAMES F. MCNEE, Philadelphia, Pa., assignor to himself and MARTIN MCNEE, same place.—*Non-Freezing Rain-Lead.*—May 4, 1869.

Claim.—1. The chamber E, having the removable door G and discharge-opening H, in combination with the spout A and interior pipe B, as herein described, for the purpose specified.

2. The rain-spout, constructed, as described, of the vertical spout A, formed with the enlarged chamber E at its base, and containing the pipe B, provided with the conical cap C, all arranged as described, for the purpose specified.

89,678.—C. L. MERRILL, Watertown, N. Y.—*Horse-Power.*—May 4, 1869.

Claim.—1. The arrangement of the sliding spring-bed L with the rotating arms E, for the purpose of producing on the machine a strain, when there is not any, substantially as herein shown and described.

2. The combination of the arms E E, on the rotating shaft D, said arms having the friction-rollers *e*, with the lever J, chain *e*, lever I, and chain G, all arranged and operating substantially as herein shown and described.

3. The plate L, provided with the grooved edges *h*, when fitted over the ends of the fixed bed M, and over the adjustable keys *i i*, substantially as herein shown and described.

4. The fixed guide-pins *l*, working with their enlarged heads *m*, in the plate L, substantially as described, in combination with the springs *g*, to operate as specified.

5 The windlass N, having the rope O, when arranged and operating substantially as specified.

89,679.—HIRAM T. METZGAR, Salem Cross-Roads, Pa.—*Velocipede.*—May 4, 1869.

Claim.—1. The rods R R′, in combination with the shaft E, double cranks *e e*, and treadles P P′, when constructed to operate as described, and adapted to be used as the motive apparatus of vehicles, substantially as and for the purposes specified.

2. Providing the rods R R′, when constructed to operate as above described, with the expanded lower end *r*, shaped like a horse's hoof, and having brads on its under surface, substantially as and for the purpose specified.

3. The steering-apparatus, consisting essentially of the standard D, handle *d*, pulley d^2, arm *e′*, sheaves *s s*, and cord, in conjunction with the spring d^1, all constructed and operating substantially as and for the purposes set forth.

4. The lifting-rod F, lever L, and connecting-rods, when adapted to raise or lower all the rods R R at once by a single movement of the lever, substantially as described and for the purposes specified.

89,680.—ASA MORGAN, Cedar Bayou, Texas.—*Brick-Machine.*—May 4, 1869.

Claim.—The presses N, constructed as described, and operated through the medium of the levers O P, the arms Q of the shaft A, and the springs R, all arranged as and for the purpose herein described.

89,681.—L. MORRISON and A. G. HARMS, Allegheny City, Pa.—*Muley-Saw Mill.*—May 4, 1869.

Claim.—1. The inclined guides D, when provided with curved slots at their ends, and when pivoted to the fixed plates B, as described, so that they can be adjusted by means of a screw, E, substantially as herein shown and described.

2. The pitman-straps J, connected as described, with slotted upper ends, for the reception of the wrist-pins *r*, of the slides *s*, arranged above the pivot *t*, as herein described, for the purpose specified.

3. The sleeves *y*, carrying the front guide-bars M, adapted to be moved laterally, as described, in the grooves *z* of the guide-carrying plates, for the purpose specified.

89,682.—JOHN N. MORRISON, Philadelphia, Pa.—*Spittoon Footstool.*—May 4, 1869.

Claim.—1. In combination with a spittoon footstool, the elastic cones *e f*, for closing the orifices in the spittoon, substantially as described.

2. The spring G, and the spring-lever J, with the hook *i*, plate *n*, and knob *m*, arranged and operating substantially as and for the purposes set forth.

89,683.—SAMUEL T. NIGH, Leitersburgh, Md., assignor to himself, J. W. NIGH, and UPTON BELL.—*Horse Hay-Fork.*—May 4, 1869.

Claim.—1. The curved bar *a*, central key-rod *b*, and suspended forks A B, so combined as to lock the forks apart, for the purpose described.

2. In combination with the curved bar *a*, central key-rod *b*, and suspended forks A B, the latch-devices *e d d′* and chains *i i*, when constructed and arranged in the manner and for the purpose specified.

89,684.—CHARLES F. POLLOCK and NICHOLAS TRICKEY, Tiieresa, N. Y.—*Milking-Stool.*—May 4, 1869.

Claim.—The combination of the device D E with the hoop B and stool A, as and for the purpose specified.

89,685.—LOOMIS E. RANSOM, Trenton, Mich.—*Apparatus for Tempering Clay.*—May 4, 1869.

Claim.—The perforated top B, provided with hoes or cutters E, spurs F, and ribs G, when combined with the box A, and operated substantially as described, for the purpose set forth.

89,686.—EDWIN P. RICHARDSON, Manchester, N. H.—*Fire-Escape.*—May 4, 1869.

Claim.—The combination of the sectional staff A, staff-head G, pulleys D and F F, with the sliding-frame E, and basket B, when constructed as described, and for the purpose set forth.

89,687.—H. D. RICHARDSON, East Hampton, Mass., assignor to himself and J. W. WILSON, same place.—*Tool for Turning Centers.*—May 4, 1869.

Claim.—The shank D and the bed-piece A, constructed of one piece, and of the form described, in combination with the sliding-plate B, having a tool-socket therein, and the feed-screw H, the whole arranged and operating substantially as set forth.

89,688.—H. D. RICHARDSON, East Hampton, Mass., assignor to himself and J. W. WILSON, same place.—*Tool-Holder.*—May 4, 1869.

Claim.—A tool-holder, A, having a tool-socket formed therein, in combination with the curved clamping part, B, having one end fastened to A, and having its free end shaped so as to bear against the tool, the whole applied and operated substantially as set forth.

89,689.—F. C. RICHER, Gilmer, Texas.—*Buckle.*—May 4, 1869.

Claim.—1. A self-fastening buckle, consisting of four transverse slots and five cross-bars, of which two are provided with teeth, substantially as herein shown and described.

2. A self-fastening buckle, whose ends, *c c'*, are horizontally perforated, to admit the straps through them, substantially as herein shown and described.

89,690.—F. C. RICHER, Gilmer, Texas.—*Wrench.*—May 4, 1869.

Claim.—The combination of the hollow handle E, screw-plug *e*, screw-nut *d*, the lips *f*, formed on the inner end of said handle, and the jaws D and A, the latter having the graduated shank B, all constructed and arranged as specified.

89,691.—ANDREW ROSEWATER, Omaha, Nebraska.—*Railway-Switch.*—May 4, 1869.

Claim.—1. The plate of the switch-chair A, cast with the groove X, and the raised rails *a b v*, and provided with the movable rail *r*, all arranged as described, for the purpose specified.

2. The switch-chairs A′ and A, Figs. 1 and 3, as constructed, combined, and applied to one main and two side tracks, and the chairs A and A′, Figs. 2 and 4, as constructed, combined, and applied to one main and one side track, as herein set forth.

89,692.—WILLIAM ROSSETER, Accrington, England.—*Loom.*—May 4, 1869.

Claim.—1. The slotted and movable shuttle-guards *h* and h^1, supported on the yokes h^2, and combined with the oscillating arms *d* and *p*, substantially as specified.

2. The combination with the slotted and movable shuttle-guard h^1, of the slide n^2, and arm *n*, attached to the lay with the oscillating arm *p*, substantially as specified.

3. The receiving-table *l*, provided with the springs l^2, and projections l^1, and combined with the lay, having a movable shuttle-guard, substantially as specified.

4. The combination with the yoke h^2, supporting the movable shuttle-guard *h*, of the bent spring-arm *f*, lever m^1, and shuttle-box *k*, substantially as specified.

5. The shuttle-box *k*, provided with the spring-guards *m*, substantially as specified.

89,693.—WATSON SANFORD, Brooklyn, N. Y.—*Jacket for Fire-Place Heater.*—May 4, 1869.

Claim.—1. Constructing the exterior jacket of a fire-place heater in a combined semicircular back and dome-top, substantially as shown and for the purposes described.

2. The arm *d*, attached to the valve *e*, when constructed, arranged, and operating substantially as described.

89,694.—HALCYON SKINNER, Yonkers, N. Y., assignor to ALEXANDER SMITH, same place.—*Power Loom for Weaving Carpets, &c.*—May 4, 1869.

Claim.—1. The arrangement for communicating motion to the jacquard from the lay, or equivalent part of the loom, by the interposition of a rocking-shaft with two sets of arms, at an angle with each other, substantially as and for the purpose described.

2. The mechanism, substantially as described, for operating alternately the two picker-staves, or either of them, two or more times successively, for the purpose set forth.

3. The mechanism for relieving the shuttles from the pressure of the check-springs, when they are to be thrown, substantially as and for the purpose described.

4. The mechanism by which the shuttle-shelves are shifted, which mechanism consists of a cogged rack, engaged by a worm on a shaft, turned by a chain, which is actuated by either of two reciprocating hooks, thrown in or out of action by the jacquard, as and for the purpose described.

5. The mechanism, substantially as described, for elevating and depressing the shuttle-shelves.

89,695.—JOHN C. SMITH, Brooklyn, N. Y.—*Velocipede.*—May 4, 1869.

Claim.—1. The combination of the saddle D, clevis E, double bell-crank G, stirrups J, and crank-shaft H, whereby the vehicle is adapted for operation, by alternate pressure of the feet and body upon the stirrups and saddle, substantially as herein shown and described.

2. The plate P, or its equivalent, whereby the action of the saddle, or seat D, on the bell-crank, is stopped or intermitted, substantially as and for the purposes described.

89,696.—SOLOMON P. SMITH, Waterford, N. Y.—*Lamp.*—May 4, 1869.

Claim.—In a lamp, provided with a blast-apparatus, the employment of rubber, or other packing, *m m'*, inserted between the clock-work and the walls of the lamp, to deaden the sound, substantially as described.

89,697.—SOLOMON P. SMITH, Waterford, N.Y.—*Horse-Rake.*—May 4, 1869.

Claim.—1. The detachable and removable bar O, in combination with the drag-bars L′ L′, and eye-bolts *o o*, attached to the tilting-frame K, substantially as and for the purpose described.

2. The tilting-frame K, in combination with the catch M′ *m*, handle M, drag-bars L′ L′, and teeth L L, when the frame, drag-bars, and teeth are so constructed as to be nearly balanced on the hinges *k k*, substantially as and for the purposes specified.

3. The tilting-frame K, springs *i i*, drag-bars L′ L′, and teeth L L, in combination with a catch, M′ *m*, when the parts are constructed to operate together, substantially as and for the purposes set forth.

89,698.—F. STÄDTER, Plattsmouth, Nebraska.—*Stove-Drum.*—May 4, 1869.

Claim.—The conical drum A, and spiral cone E on the shaft B, arranged and operating substantially as shown and described, for the purposes set forth.

89,699.—ABIJAH C. STEVENS, Hudson, N. Y.—*Breech-Loading Fire-Arm.*—May 4, 1869.

Claim.—1. The combination and arrangement of hammer H, cock C, hook *d*, tumbler T, and wedge-block B, so that the wedge-block B may be withdrawn, the breech A opened, and the spent cartridge *b* drawn, all at once, and by the single operation of cocking the gun, as or substantially as herein set forth.

2. Locking and bracing the breech firmly against recoil just before the striker I strikes the firing-pin P, by means of the wedge-block B, attached to the main-spring G, substantially in the manner herein set forth.

3. The combination of cock C and tumbler T, both working on the same center or pin L, substantially in the manner and for the purpose set forth.

4. The combination and arrangement of tumbler T, cock C, notches *d d*, &c., and dog E, so that the lock may be operated equally well by the latter working in the tumbler, or in the cock, or in both together, substantially in the manner and for the purpose herein set forth.

89,700.—GEORGE J. STURDY and SOLOMON W. YOUNG, Providence, R. I.—*Circular Velocipede.*—May 4, 1869.

Claim.—1. The main wheel A, the driving or velocipede wheels E, the shield F, and handles H, constructed, arranged, and operating substantially as herein shown and described, and for the purposes set forth.

2. A velocipede formed of a horizontal wheel or rim, when supported on vertical wheels adapted to be rotated by means of cranks, substantially as set forth.

89,701.—DANIEL F. SWEET, Otsego, assignor to himself and REUBEN SWEET, Kalamazoo, Mich.—*Heat-Radiator.*—May 4, 1869,

Claim.—The combination and arrangement of the

removable cylinders D and E, provided with the lugs I and I′ and spiral deflectors K, and the pipes Q and R, in connection with the shaft M, provided with the segmental pinion C, and damper O, regulator-plate L, and toothed-rack *a*, when used with the case C, provided with the cup B, and movable cap P, substantially as and for the purpose aforesaid.

89,702.—George C. Taft, Worcester, Mass., assignor to Loring Coes, same place.—*Wrench.*—May 4, 1869.

Claim.—1. The combination, with the shank D, ferrule A, and nut F of a wrench, of one or more sections of a supporting-quill, substantially as and for the purposes set forth.

2. A stop or check nut L, substantially as and for the purposes set forth.

3. The combination, with the ferrule A, shank D, and rosette-screw spindle B, of a divided quill, C, and stop-nut L, substantially as and for the purposes set forth.

89,703.—Calvin Taylor, Handsborough, Miss.—*Truck for Carrying Logs.*—May 4, 1869.

Claim.—1. The wheels D, constructed with segmental rims, and in substantially the manner herein shown and described, and for the purpose set forth.

2. The brake E F G H I, constructed and operating substantially as herein shown and described, and for the purpose set forth.

3. An improved log-carrier, formed by the combination of the wheels D, axle A, whether made in one or more parts, frame B, tongue C, and brake E F G H I, said parts being constructed and operating substantially as herein shown and described, and for the purpose set forth.

89,704.—T. Chalkley Taylor, Philadelphia, Pa.—*Mode of Putting up Caustic Soda for the Manufacture of Soap.*—May 4, 1869.

Claim.—A highly concentrated or basic soap, composed of a mixture of granulated soda, or other caustic alkali, and a fatty matter or its equivalent, substantially as described.

89,705.—Lafayette Z. Terrill, Chicopee, Mass.—*Magazine Fire-Arm.*—May 4, 1869.

Claim.—1. The hammer C, constructed as described, and bearing the friction-roller *o*, in combination with the receiver E, and finger H, as herein described, for the purpose specified.

2. The receiver E, and the finger H, arranged and operating substantially as shown and described.

3. The retractor *g*, attached to the hammer C by the spring *h*, in combination with the piece J, as herein described, for the purpose specified.

89,706.—John B. Terry, Brooklyn, N. Y.—*Steam-Heating Device.*—May 4, 1869.

Claim.—1. An apparatus for generating heat, substantially as herein described, the same consisting of a closed vessel, in which the liquid from the reservoir is converted into steam by falling in drops, or in a highly divided state, upon the heating-surface, and said steam, when condensed, is returned to the reservoir, to be used anew, substantially as shown and set forth.

2. The arrangement within the heater of a liquid-reservoir, raised above the heating-surface, and provided with means for conducting the liquid, so that it shall fall in drops, or in a finely divided state, upon the heating-surface, as set forth.

3. The combination of the liquid-reservoir and distributing device, of a trough arranged around the interior of the heater, to catch the condensed steam and conduct it back to the reservoir, as shown and set forth.

4. The arrangement with the heater and liquid-reservoir, of a safety-valve, for permitting the escape of steam after it reaches a certain pressure, and a return and condensing tube, to condense and carry back said steam to the reservoir, as shown and described.

5. The arrangement with the heating-apparatus of air flues or tubes, passing through the heater, substantially as shown and specified.

6. The arrangement with the heater of an air-valve, so as to be closed against the escape of steam, but to admit air when the heater cools, as herein shown and set forth.

89,707.—G. W. Tucker, Waterbury, Conn.—*Lamp-Shade.*—May 4, 1869.

Claim.—As an article of manufacture, a lamp-shade ornamented to represent upon the surface clearly defined figures or forms, by the combination of embossing and perforating, substantially as described.

89,708.—H. B. Tuthill, New York, N. Y., assignor to himself, M. C. Ogden, and William Slawson.—*Attaching Knobs to their Spindles.*—May 4, 1869.

Claim.—The spindle A, constructed as described, with the spring D′, adapted to engage with the shoulder formed in the socket C′, arranged and operating as described, for the purpose specified.

89,709.—David K. Tuttle and Orazio Lugo, Baltimore, Md.—*Preparation of Glue-Stock and other Products from Animal Substances.*—May 4, 1869.

Claim.—The process herein described for preparing glue-stock, the same consisting in treating the glue-stock material with benzine, naphtha, or other equivalent solvent of the oils and fats, substantially as described.

89,710.—Myron Vandeusen, Oxford, Mich.—*Combined Seed-Sower and Harrow.*—May 4, 1869.

Claim.—The arrangement of the perforated cylinder B, provided with sliding-rings J and pulley Q, and the harrow E, with the frame A, axle O, wheels P, pulley C, belt D, braces F, lever G, chain H, and seat M, when operating substantially as and for the purposes herein set forth.

89,711.—John D. Van Dusen, Auburn, N. Y.—*Washing-Machine.*—May 4, 1869.

Claim.—1. The frame B, formed with recess or chamber C, the ends of said chamber being provided with screens or perforated plates, in combination with plungers *g g*, operating substantially as and for the purpose set forth.

2. A washing-machine, consisting of frame B, slide F, plungers *g g*, screens *d d*, rollers D D′, wheel E, pitmen *h h*, and crank G, all constructed, arranged, and operating substantially in the manner and for the purpose set forth.

89,712.—Henrietta Vansittart Richmond, England.—*Method of Construction for Screw-Propellers.*—May 4, 1869.

Claim.—The method of determining the form or inclination of the outer edges of the blades of a screw-propeller, relative to the form or speed of the vessel to which it is attached, as herein described.

89,713.—John Vatter, Phillipsburgh, Ohio.—*Oven.*—May 4, 1869.

Claim.—1. The pivoted door D, constructed and arranged substantially as described, and for the purpose specified.

2. The register G, arranged with reference to the flues B and C, substantially as and for the purpose specified.

3. The arrangement of the oven A, flues B C, doors D E, and register G, substantially as described.

89,714.—William W. Virdin, Baltimore, Md.—*Low-Water Indicator.*—May 4, 1869.

Claim.—1. The weighted float B, when constructed and arranged substantially as herein shown.

2. In combination with the weighted float B, the valve E, fitting into a corresponding seat, C, and operated by means of the spindle *e*, substantially as described and set forth.

3. The construction and arrangement of the seat C and cover D, with reference to the valve E and joint F, substantially as herein shown and described.

4. The within-described apparatus for indicating low water in a boiler, by the escape of steam therefrom, consisting of the weighted float B, valve E, provided with a suitable seat, C, and cover D, flexible joint F, pipe G, and plug H, all constructed and

arranged substantially as herein shown and described, and, in combination therewith, the wheel K, pivoted within a suitable case, so as to be revolved by the escaping steam though the pipe M, and, by means of the cam *k*, secured to the axis of said wheel, alternately raise and release the hammer of a bell, as herein specified.

89,715.—CHARLES VOGT and CHRISTIAN VOGT, New York, N. Y.—*Method of Producing from Printed Paper New Plates for Reprinting.*—May 4, 1869.

Claim.—1. The herein-described process of transferring printed designs directly from paper to metal plates, for the purpose of reprinting the same, substantially as specified.

2. Treating the paper in the manner specified, so that paint will only adhere to the printed portions, as set forth.

3. The composition for paint, to be applied to the paper, and to be transferred to the metal plate, as specified.

4. The composition for colophony paint, to be applied to the metal plate before etching, as set forth.

5. Heating the metal plate during the etching process, for the purpose of melting the colophony to prevent the acid from eating in a lateral direction, as set forth.

89,716.—JOHN J. WALKER, Ann Arbor, Mich.—*Cistern.*—May 4, 1869.

Claim.—The cistern A, filter-chamber B, reservoir N, pipes F, G, and *h*, when arranged as described, and used, in connection with each other, for the purpose set forth.

89,717.—PETER M. WARREN, Edenton, N. C.—*Steam-Enginery for Seine-Hauling.*—May 4, 1869.

Claim.—1. In an apparatus for hauling seines, the drums E and Ex, with bevel-wheel *e* and *ex*, in combination with the bevel-wheels *e* and *ex*, intermediate shafts C and Cx, spur-wheels D and Dx, and pinion-wheels *b* and *bx* of the crank-shaft of a steam-engine, the whole constructed and arranged to operate substantially as described and set forth.

2. The drums E and Ex, driving-wheels, and steam-engine, in combination with the hauling-lines of a seine, as herein described.

89,718.—DEVOLSON WEAVER, Anamosa, Iowa.—*Drive-Well Point.*—May 4, 1869.

Claim.—The head or point A, constructed as described, and provided with a ribbed shank, A′, in combination with tube B, perforated and furnished with strips B¹, said tube being wound with a wire, all arranged to operate as and for the purpose set forth.

89,719.—HORACE J. WICKHAM, Manchester, Conn.—*Match-Box.*—May 4, 1869.

Claim.—1. The box *a*, cover *b*, stem *f*, constructed substantially as described, as a new improved article of manufacture.

2. In combination with the above, the joint formed by elevations and depressions *d e*, substantially as and for the purpose described.

89,720.—GEORGE WILLIAMSON, Milwaukee, Wis.—*Fire-Grate.*—May 4, 1869.

Claim.—An improved fire-grate, formed by the combination of one or more bars, B, whether movable or stationary, with the main or sliding grate C, in such a way that the upper part of the said bar or bars B may project through openings in the said grate C, substantially as herein shown and described, and for the purpose set forth.

89,721.—JOHN WILLIAMS, Sullivan, Ill.—*Mill-Bush and Spindle.*—May 4, 1869.

Claim.—1. The bush A, constructed as described, with recesses for the adjustable bearings B, the openings C, and the pockets E, between the bearings, communicating with the chambers F, containing absorbent substance, all arranged as described, for the purpose specified.

2. In combination with the above, the spindle H, having its enlarged collar provided with the annular chamber G, and tube K, as herein described, for the purpose specified.

89,722.—A. J. WILLIAMS, Barnesville, Ga.—*Pea-Dropper.*—May 4, 1869.

Claim.—The arrangement of the handle G, arm F, elbow-lever E, and slide D, with the box A and blocks B C, operating as herein described, for the purpose specified.

89,723.—RICHARD A. YORK, Reading, Mich.—*Combined Lifting-Jack and Wrench.*—May 4, 1869.

Claim.—1. The lever H, provided with bail I, and jaws J and K, when constructed to operate either in combination with standard A, rack C, and pawl E, as a lever-jack, or, independently of the same, as a wrench, substantially as and for the purpose set forth.

2. The combination of the above-named lever H, provided with bail I, and jaws J and K, with the standard A, slotted rack C, and pawl E, when arranged, and constructed, and operating substantially as and for the purposes described.

89,724.—E. L. ABBOTT, JAMISON H. HARRISON, and W. P. WELCH, Boston, Mass., assignors to E. L. ABBOTT; said ABBOTT assigns to himself and S. A. WOODS.—*Machine for Grinding Saws.*—May 4, 1869.

Claim.—1. A machine organized to form or sharpen saw-teeth by grinding, when constructed and arranged substantially as described, so that the saw can be clamped, mounted, and turned on its center, to present its teeth, successively, to the action of the grinder, and so that, while said center may be adjusted toward and from the grinder, to accommodate saws of various diameters, the angles of presentation of the flat surfaces of the saw may be universally varied.

2. In combination with a machine as before claimed, a rest *q*, arranged to be adjustable to any of the varied positions in which the saw is adjusted to receive the action of the grinding-wheel, substantially as and for the purpose specified.

3. The combination of the swinging-frame *c*, and its spring-support *h*, with the bolt *t* and collar *u*, substantially as and for the purpose set forth.

89,725.—THOMAS BARFIELD, Athens, Ill.—*Device for Preventing Incrustation in Boilers.*—May 4, 1869.

Claim.—The toothed wheel *s*, with its spindle and driving-wheel, when arranged with reference to the pipes *m n o p* and the tank A, substantially as herein specified.

89,726.—CHARLES R. ARNOLD, Hamilton, Ill.—*Wash-Boiler.*—May 4, 1869.

Claim.—As an article of manufacture, the reticulated false bottom A, as above described, in combination with the spouts C C, for the purposes specified.

89,727.—EMILE VICTOR AUDIBERT, New Orleans, La.—*Water-Proof Coating for Various Purposes.*—May 4, 1869.

Claim.—A solution of native asphaltum or Cuba bitumen, combined with mineral ingredients and fatty matters, substantially as and for the purpose herein specified.

89,728.—HENRY BEAN, Schuylkill, Pa.—*Seeding-Machine.*—May 4, 1869.

Claim.—1. The seed-slide *h*, having the cells or grooves formed in its edges, in the manner substantially as described.

2. The slide *g*, with the cells or grooves, and the stirrers *i*, constructed as herein set forth.

3. The slide R, provided with the arms *u*, for adjusting the position of the same, and having a series of perforations arranged in a cluster of V-form, for regulating the quantity of seed used, as herein described.

4. The curved rod D, constructed and arranged in connection with the levers C, for the purpose of automatically engaging with the frame, and supporting the levers, as the latter are raised by the operator.

5. The hinged partition *a*, arranged between the hoppers G and H, as shown and described.

6. The lever *m*, pivoted to the frame, and having the rear bearing of the shaft I mounted thereon, so as to swing with said lever, as and for the purpose described.

89,729.—Solyman Bell and George W. Bronson, La Salle County, Ill.—*Corn-Cultivator.*—May 4, 1869.

Claim.—1. The method by which the half-cylinder shield is attached to the tongue and standards, by spring-rod and chains, as above described.

2. The adjustable collar-clevis, by which the beams are attached to the frame.

3. The manner of attaching the handles of the machine to the standards and to the frame, by means of the loose staples and bolt and socket.

4. The whole machine, as a combination of gopher and cultivator, operating as hereinbefore more particularly described.

89,730.—Henry Brackett, Valley Falls, N. Y.—*Harvester.*—May 4, 1869.

Claim.—1. The obliqne arrangement of the forward transverse bar to the main frame, in combination with the main shoe and coupling brace, for connecting the finger-bar to said frame, substantially as and for the purpose described.

2. The carrying-wheel G′, attached to the main shoe by means of a horizontal swiveling-plate or arm, for the purpose set forth.

3. The adjustable swivelling carrying-wheel G′, in combination with the main shoe, substantially as described.

4. The main clip O, provided with the spurs o^1 o^2, and guide-arms o, operating as described.

5. The arrangement of the spring-head, or plunger, which holds the vertical rack H disengaged, except when the same is held in lock by the foot or hand of the driver.

6. The adjustment of the distance apart of the main and pinion shafts, through the spurred or tongued and grooved boxes, supporting plates for effecting a change of pinions, and change of speed of the cutters, as set forth.

7. The vibrating eccentric N, for operating the shipping-lever as described.

8. The eccentric, or shifting-box M, inclosing the shipping-cam and spring, substantially as described.

9. The swiveling main shoe-box j j^1, constructed and operating as described.

10. The flanged seat and tongue-plate D, provided with perforated arms d, lugs d^1, and flanged seat d^2, all cast in one piece, substantially as and for the purpose described.

89,731.—Henry Brackett, Valley Falls, N. Y.—*Harvester-Rake.*—May 4, 1869.

Claim.—1. The removable rake-frame D, provided with the several bearings for the horizontal and vertical rake and crank-shafts, arranged substantially as described.

2. The curved horizontal way or track K, provided with the gate or latch k, and the adjustable and spring-tops a a', substantially as described.

3. The horizontal semicircular track, or way K, mounted upon the removable rake-frame, substantially in the manner shown and described.

4. The pivoted rake-arm, provided with the arm and spur h h', operating in combination with the curved track K, gate or latch k, and incline k', as set forth.

5. The vertical rock-shaft E, in combination with the horizontal rake-arm shaft or pivot e, sleeve g^2, and beveled segments g g^1, arranged substantially as described.

6. Mounting the rake-shipping devices upon the removable rake-frame in such manner that said devices shall be removed from or applied to the machine with said rake-frame.

7. The vertical rake-shaft, provided with the shipping-cam for automatically throwing the rake out of gear.

8. The reciprocating shipping-box L, in combination with the rake-shaft and shipping-levers for automatically throwing the rake out of gear.

9. The arrangement of shipping-levers, dog, and springs, in combination with the sliding-box L or its equivalent, substantially as described.

10. Pivoting the rake-arm G upon a horizontal arm or shaft, keyed to and turning with the vertical rock-shaft.

11. Pivoting the rake-handle to the swinging end of the vibrating rake-arm, to adapt the rake-head to conform to the position of the hinged platform, substantially as described.

12. The rake-handle H, in combination with the adjustable plate or sleeved extension of the rake-arm, for adjusting the rake-head, as described.

13. The pivoted reel-guide standard V, in combination with the yielding or spring-brace or support, substantially as and for the purpose set forth.

14. The combination of the pivoted reel-guide standard with the lifting-lever, for the purpose set forth.

15. The adjustable connection of the grain-wheel with the platform, by means of the ribbed slotted plate Q′, axle-sleeve q, and through-bolt q^1, combined and operating as described.

89,732.—Henry Brackett, Valley Falls, N. Y.—*Harvester-Dropper.*—May 4, 1869.

Claim.—1. A dumping, or tilting platform, adapted to reciprocate in a path parallel, or thereabout, with the path of the machine, and to discharge the grain behind the machine, out of the way of the team and machine on the succeeding round.

2. The inclined track or way h, in combination with arm j, on the platform, or the equivalent thereof, for automatically tilting the platform in its backward movement.

3. A guide-rod and pivotal support H, and inclined track, h, in combination with the reciprocating and dumping platform, for the purpose set forth.

4. The combination of a platform reciprocating in a path parallel with the path of the machine, and a cut-off operated by said platform.

5. The combination of a reciprocating platform and spring, with the cut-off for operating the same, substantially as described.

6. The combination of crank-wheel P, connecting-rods K K^2, vibrating arm K^1, and rod H, or equivalent devices, for giving to the platform a reciprocating and dumping-movement, substantially as described.

7. The cam, on the crank-wheel, in combination with the spring-bolt and shipping-arm, or lever, or their equivalent, for throwing the mechanism, which operates the platform, out of gear, as set forth.

8. The combination of lever R with the spring-bolt Q, for releasing the same from the retracting-cam, as set forth.

89,733.—Henry Brackett, Valley Falls, N. Y.—*Dropper for Harvesters.*—May 4, 1869.

Claim.—1. Mounting the rock-shaft, which supports the dropping or tilting platform, and, by means of which, said platform and the cut-off are operated upon the reel-post, substantially as described.

2. The adjustable bracket or bearer P, provided with bearings for the rock-shaft p, in combination with the reel-post, as set forth.

3. The single overhung reel-post, carrying the devices for operating the dropping or tilting platform and cut-off, in combination with the straddling-standard L, substantially as described.

4. The treadle R, shaft p, and adjustable links q q^1 q^2, for sustaining and operating the platform and cut-off, when arranged and operating substantially as described.

5. The single-pivoted reel-post, in combination with the arched straddling-standard L, arranged on the pivoted main shoe, in front of the inner drive-wheel, substantially as described.

89,734.—John M. Bryan, Lincoln, Cal.—*Self-Discharging Blanket Ore-Concentrator.*—May 4, 1869.

Claim.—1. The adjustable swinging-frame B, rollers D, E, and G, canvas belt L, and tank K, the whole arranged substantially as and for the purpose herein described.

2. The frame B, rollers D, E, and G, and swinging-bar N, in combination with the ratchet-wheel F and pawl e, the whole arranged to operate substantially as and for the purpose herein described.

3. Passing the pulps across a revolving canvas belt from side to side, substantially as described.

89,735.—H. M. Burrows, Norwich, N. Y.—*Pattern, Measuring, and Laying Out Ladies' Dresses.*—May 4, 1869.

Claim.—The chart, diagram, or design for cutting

and fitting ladies' and misses' dresses, substantially and for the purposes above described and set forth.

89,736.—William Carr, St. Louis, Mo., assignor to himself and Charles P. Ford, same place. —*Spring-Seat for Chairs, Wagons, Cars, &c.*—May 4, 1869.

Claim.—The bands D, passing under the loops *c* of the springs C, and the tongues *d* passing over the same, (or the reversed arrangement,) when combined with the springs *c'* and hooks E, substantially as set forth, and for the purposes specified.

89,737.—James Christie, Pittsburgh, Pa.—*Machine for Making Horse-Shoes.*—May 4, 1869.

Claim.—1. The combination of the dies, secured to the vibrating sectors, the former I alternately elevated and depressed in the manner described, the presser-arms P and catches *s*, or their equivalents, the whole being arranged and operating together as and for the purpose herein set forth.

2. The combination of the bending levers P, reciprocating former I, catches *s s*, and the lower vibrating sector, all arranged as set forth.

3. The arrangement of parts, whereby the former I is reciprocated at the time and in the manner specified.

89,738.—Charles Cowan, New York, N. Y.—*Preparation of Copying-Paper.*—May 4, 1869.

Claim.—1. The within-described compound for preparing copying-paper, made of the ingredients herein specified, mixed together substantially in the manner set forth.

2. Treating paper first with a compound of boiled linseed oil, spirits of turpentine, and copal varnish, then with a coloring-compound levigated with a mixture of oil, turpentine, and beeswax, substantially as described.

89,739.—George H. Crocker, Marysville, assignor to himself and David L. Smith, San Francisco, Cal.—*Seed-Sower.*—May 4, 1869.

Claim.—1. The rock-shaft D and fingers *e e*, in combination with the peculiarly constructed cam *h* and lever *l*, and the connecting-rod *n*, substantially as set forth.

2. The detachable pole R, provided with the opening *r*, band X, and ring *v*, substantially as and for the purposes set forth.

89,740.—John Cyester, Osborn, Ohio.—*Feather-Renovator.*—May 4, 1869.

Claim.—The construction of a double cylinder, the inner one, H, being perforated and stationary, admitting steam at one end and hot air through an outside funnel-mouthed pipe, M, at the other end, while the outside cylinder E is revolved by the drum C and outside belt D, when arranged, combined, and operated as herein described and for the purpose set forth.

89,741.—Addison Davis, Boston, Mass.—*Sash-Holder.*—May 4, 1869.

Claim.—The combination of the pendent stop *f*, engaging with the bead-notches *e*, with the incline, or dog *l*, slide-rod *m*, and spring *v*, arranged to operate together, substantially as described.

89,742.—Loyal M. Doddridge, Henry Reitenour, and Jacob B. Swhier, New Mount Pleasant, Ind.—*Corn-Dropper.*—May 4, 1869.

Claim.—1. The combination of the cylinder B, crank G, seed-box A, and delivery-passage C, substantially as shown and described.

2. The combination of the seed-scatterer *b*, spring *c*, spring-plate E, and plate or frame D, substantially as and for the purpose set forth.

3. The combination of the spring-plate E, spring *o*, and frame or plate D, substantially as and for the purpose set forth.

4. The arrangement of the spring-plate E, spring *e*, bell-crank G, rods H and F, with reference to cylinder B, for the purpose of moving the same, substantially as shown and described.

89,743.—Jules George Dreyfus, New York, N. Y.—*Cap for Lamp-Chimney.*—May 4, 1869.

Claim.—A porcelain or enameled chimney-cap, *b c*, with perforations *a*, constructed as shown and described, as a new article of manufacture.

89,744.—L. E. Dugas, Warren, Ill.—*Velocipede.*—May 4, 1869.

Claim.—The combination of the suspended treadles D E, crank-shaft F H, seats U T, brake J J, rod B', bars A A, bar Z, bail N P, and bolster B, as described.

89,745.—James B. Eads, St. Louis, Mo.—*Bridge.*—May 4, 1869.

Claim.—1. The thrust-bars D D' and compensating-lever E, when applied to prevent oscillations of the pier C, substantially as set forth.

2. Giving to bridge-piers, which are supported and held at their foundations, and which resist the thrusts of arches, an additional support by rods connecting their upper ends with each other and with the abutments, substantially as set forth.

89,746.—John Ebling, New York, N. Y.—*Lock.*—May 4, 1869.

Claim.—1. The key K, made in two parts, and provided with bits *q*, said parts being hinged together, and made to open by pressing the handle *m*, substantially as and for the purpose described.

2. The tumblers G, hinged to a stud, *d* and provided with pins *i*, and hooked tails *c*, in combination with the socket F, key K, and bolt B, substantially as and for the purpose described.

3. The spring E, acting simultaneously on the bolt and on the latch, as shown and described.

89,747.—Henri Robert Ekegrén, Geneva, Switzerland.—*Stop-Watch.*—May 4, 1869.

Claim.—The spring I, in combination with the pin *i*, and disk *x'*, having teeth constructed with inclined sides, so as to operate on the pin, substantially as specified.

89,748.—Charles Louis Fleischmann, Washington, D. C.—*Process for Ageing Liquors and Spirits, and for Producing Aromatic Ethers.*—May 4, 1869.

Claim.—The process of impregnating porous substances with alcoholic liquors containing fusil-oil, and exposing it to the influence of oxygen to be aromatized and concentrated, for the purpose and in the manner above described.

89,749.—Charles Louis Flieschmann, Washington, D. C.—*Distilling-Apparatus.*—May 4, 1869.

Claim.—The method of distributing the liquid on the sides of the vessel by means of a revolving disk, I, the wings H H, for accelerating the evaporation, the ream P, as well as the general arrangement of the pipes, as herein described.

89,750.—Charles Louis Fleischmann, Washington, D. C.—*Process of Extracting Oil from Cotton-Seeds.*—May 4, 1869.

Claim.—The process, substantially as herein described, of extracting the oil from seeds.

89,751.—Charles Louis Fleischmann, Washington, D. C.—*Cotton-Gin.*—May 4, 1869.

Claim.—1. The grate, in combination with the feeding-roller A, as above described.

2. The grate-bars *a a a*, &c., when constructed and arranged as described.

3. The roller D, in combination with the grate.

4. The holder F, when actuated by the devices shown, or equivalent means, for producing the vertical and horizontal motion herein described.

5. The stripper P, in combination with the roller D, and holder F, substantially as herein described.

89,752.—Addison C. Fletcher, New York, N. Y.—*Railway-Car Wheel.*—May 4, 1869.

Claim.—A car-wheel, consisting of the hub-portion B, to be keyed upon the axle, and the tread or body-portion C, having an interposed yielding substance, D, and a central orifice slightly larger than the axle, so connected as to be capable of radial motion to the extent of the difference in diameter of

the axle and the orifice in the center of the body of the wheel, substantially as shown and described.

89,753.—Monroe B. Foote, Northampton, Mass., assignor to himself, William M. Gaylord, and E. N. Foote.—*Door-Lock.*—May 4, 1869.

Claim.—1. The combination of the lever *l*, cam-stop *f*, the spring-catch *k*, and the slotted bolt and cylindrical case, as described, with a latch-head or hook, *x*, on the front of such lever, and with a ward-block or a stud for the hook to catch upon, such ward-block or stud being projected from the case.

2. The ward-block or case, as constructed in two separate parts, *p q*, and having one of such parts attached to the cover, and the other to the case of the lock.

3. The ward-block, as made with the annular wards and the bolt-rib passage *o* going through it, as set forth.

89,754.—Philander S. Foster, Richmond, Me.—*Edge-Plane for Boots and Shoes.*—May 4, 1869.

Claim.—An edge-plane and channeler, for shoemakers' use, having block A, bit *d*, gauge *h*, screws *e*, *i*, *s*, and *y*, and knives *n* and *u*, constructed and arranged substantially as specified.

89,755.—Dan P. Foster, Waltham, Mass.—*Bit-Stock.*—May 4, 1869.

Claim.—Securing the head D to the stock A, by means of the tubular pieces B C, constructed, arranged, and operating substantially as described.

89,756.—George A. Fountain, Newark, N. J.—*Refrigerator.*—May 4, 1869.

Claim.—In a refrigerator, the combined peculiarly shaped drawer-bottom, and trough or gutter under the same, and automatic acting support, when constructed, combined, and arranged as hereinabove specified.

89,757.—J. B. N. Fournier and C. A. Lemaire, Paris, France.—*Electro-Magnetic Temperature-Alarm.*—May 4, 1869.

Claim.—The within-described combination of the compound metallic bar *b*, a pointer, *x*, operated by the bar, a graduated arc, *c*, and adjustable ribs or blocks, *x x'*, so constructed as to permit the pointer to pass over, but in contact with the same, when the said pointer and blocks are connected to the wires of the battery, as set forth.

89,758.—S. L. Fremont, Wilmington, N. C.—*Apparatus for Changing Car-Trucks.*—May 4, 1869.

Claim.—An apparatus for changing the trucks of railroad-cars, and transferring the same from one track to another of a different gauge, constructed, arranged, and operated in the manner substantially as shown and described.

89,759.—John W. Gosling, Cincinnati, Ohio.—*Carriage-Step and Wheel-Fender.*—May 4, 1869.

Claim.—1. The fixed step D *d* F F', flap E, pad or cushion G, and connections H I, constructed, arranged, and operating as and for the purpose set forth.

2. The arrangement of flap E, having the combined pivoted and hinged connection to the carriage-door, and sliding connection to the step, substantially as and for the purpose set forth.

3. The pad or cushion G, when used in combination with the fixed step D *d* F, and flap E, in the manner and for the purpose described.

89,760.—Carl Julius Graf, Chicago, Ill.—*Rocking-Chair.*—May 4, 1869.

Claim.—The bellows C, connecting-rod G, and arm H, in combination with a rocking-chair, A, having one of its side-brackets tubular, all constructed and arranged as herein described, for the purpose of sending a current of air through the tube L, as set forth.

89,761.—Abraham Havens, Trenton, N. J.—*Washing-Machine.*—May 4, 1869.

Claim.—The combination of the frame B, hung to the box A, and the frame C, hung to the upper end of the frame B, and carrying a series of conical elastic rollers, which may be detached separately from the shafts, for the purpose specified.

89,762.—Edward Herbster, Chicago, Ill.—*Alarm-Lock.*—May 4, 1869.

Claim.—A lock, A, provided with a rotating eye-cylinder, F, flange Y, ratchet M, spring K, and spring-stop D E, so operating as to give an alarm, and hold the key in the lock, as set forth.

89,763.—Charles Hewitt, Trenton, N. J.—*Method of Constructing Piles for Beams.*—May 4, 1869.

Claim.—Improved method of arranging piles for rolling bars of the general character herein pointed out, which method consists in composing the pile of a series of pieces, formed with ribs and grooves, and secured by wedges, substantially as described.

89,764.—William Heylman, Peoria, Ill.—*Device for Bending Plow-Handles.*—May 4, 1869.

Claim.—1. The formers *m n*, when constructed as herein described and for the purpose set forth.

2. The adjustable horizontal bars *a b c*, and *d*, *e*, and *f*, operated in the manner and for the purpose as described.

3. The combination of the formers *m n* with the bars *d* and *g* of the frame-work, substantially as described.

4. The adjustable bar or slide X, lever Z, uprights *y y*, box M, arm K, adjustable clamp L, balanced hook *u*, and adjustable beam *i*, combined and operated as described.

5. The formers *m* and *n*, strap *o*, bar *p*, holder *q*, hinged bar *r*, holdfast *t*, and catch *s*, combined and operated as described.

6. The combination of the levers *b b* with the iron uprights *l l* and cross-bars or supports, and uprights B B, for holding up strap, bar, and holder *q*, substantially as described.

89,765.—Alonzo Hitchcock, New York, N. Y.—*Rock-Breaker.*—May 4, 1869.

Claim.—The combination of the segmental cams *a* and *b*, the crank-shaft *g*, and yoke *k k*, arranged together, to produce a differential movement of said cams, substantially as shown and described.

89,766.—Carl Hofmann, Elkton, Md.—*Fourdrinier Paper-Machine.*—May 4, 1869.

Claim.—The combination, substantially as described, of one or more revolving brushes, with the wire-cloth apron of a Fourdrinier paper-machine, for the purpose herein set forth.

89,767.—David Brown Hunt, San Francisco, Cal.—*Divided Axle for Railway-Cars.*—May 4, 1869.

Claim.—The collar C, secured on the end of one part of the axle, in combination with the sleeve-piece B, secured to the other part of the axle, as a means of keeping the divided axle together.

89,768.—Walter Hunt, New York, N. Y., assignor by mesne assignments to William E. Lockwood, Philadelphia, Pa.—*Compound Fabrics for the Production of Shirt-Collars.*—May 4, 1869.

Claim.—A fabric for making shirt-collars, composed of two or more thicknesses of muslin, cambric, or other suitable cloth, united and finished by the web or quantity, substantially as herein described, whereby the necessity of sewing or stitching the collars, and of subsequent washing, starching, and ironing, is dispensed with.

89,769.—S. T. Hyde, Piasa, Ill.—*Hedge-Trimmer.*—May 4, 1869.

Claim.—1. The adjustable hinged cutter H, arranged relatively to the fixed vertical cutter, substantially as shown and described.

2. The extensible pitman, constructed as described, in combination with the adjustable hinged cutting-apparatus, for the purpose set forth.

3. The employment of the friction-brake *l*, and the locking-lever or latch *j*, arranged as described, for enabling the attendant to control and turn the machine, as set forth.

4. The fixed and adjustable cutters G and H, in combination with the crank-shafts *f* and *c* and the

bevel and spur-wheel F, all arranged and operating as described.

89,770.—JOHN H. IRWIN, Chicago, Ill.—*Lantern.*—May 4, 1869.

Claim.—1. The combination of the concave plate I, rim *g*, or its equivalent, tubes H and F F, and the base A B of the lantern, substantially in the manner specified and shown.

2. The combination of the globe G, concave plate I, tubes H and F, and base A B of the lantern, arranged and operating substantially as and for the purpose shown and set forth.

3. The combination of the plate I, tubes F, flange *t*, upon the top of the wick-tube, and the globe G, arranged to operate as set forth.

4. The combination of the perforated plate E, plate I, tubes H F, and the base A B of the lantern, arranged to operate as described, and for the purpose set forth.

89,771.—JOHN WILLIAM JARBOE, Brooklyn, (E. D.,) N. Y.—*Coal-Scuttle.*—May 4, 1869.

Claim.—A coal-scuttle, or other vessel, as a new article of manufacture, having its body made of sheet-metal, and its bottom of paper, substantially as specified.

89,772.—EBENEZER JENNINGS, Jr., New York, N. Y.—*Suspender.*—May 4, 1869.

Claim.—1. The combination of the shoulder-straps A A′, connecting-links C C′, and button-hole straps B B′, all constructed and arranged to operate substantially as shown and described.

2. In combination with the shoulder-straps, connecting-links, and button-hole straps, constructed as described, the hook *d′*, to connect the button-hole straps with the connecting-links, as shown and described.

89,773.—WILLIAM S. JESSUP, Newark, N. J.—*Trunk-Clamp.*—May 4, 1869.

Claim.—The cast malleable clamp, having a projecting hollow bead, *a*, which extends across the face of the plates constituting the clamp, in the direction of the angle thereof, as a new article of manufacture, for the purpose set forth.

89,774.—JONATHAN JOHNSON, Lowell, Mass.—*Horse-Shoe,*—May 4, 1869.

Claim.—1. The adjustable and removable calk-plate A and calk *b*, constructed so as to be capable of adjustment to any portion of the plate-shoe, in the manner and for the purpose specified.

2. The removable and adjustable calk-plate G, and the angle-calk b^2, which is adapted for a side-calk or a heel-calk.

89,775.—JONATHAN JOHNSON, Lowell, Mass.—*Horse-Shoe.*—May 4, 1869.

Claim.—1. The sole C, in combination with the inner sole F, the outer sole G, the metal sole J, and the bolts K and *m*, in the manner and for the purpose substantially as described.

2. The method, substantially as described, of securing the sole C to the shoe, viz, by means of plain or calked plates, as set forth.

3. The heel-pad H and straps *a* and *b*, in combination with the sole F, arranged and applied in the manner and for the purpose specified.

4. In combination with the soles C, F, and G, the absorbent S, for the purpose and substantially as described.

5. The arrangement of the bolt *m* beneath the inner sole F, directly or partly under the frog M, in the manner and for the purpose specified.

6. The universal plates and calk E, as described, and which are adapted to any part of the shoe, and changeable to any other part or position thereon.

89,776.—WILLIAM B. JONES, Cincinnati, Ohio.—*Sofa, Lounge, and Table.*—May 4, 1869.

Claim.—1. The rear standards B B′, on the seat-frame A, and having the open T-formed sockets or bearings *b*, for the headed pivots I of the back K, which back forms or is provided with a table, M, which, with said back, is capable of being folded down upon the arms in the manner stated.

2. In combination with the elements of the preceding clause, or their equivalents, the butt-hinged and depressible arms F G, having the bolts or catches H, as set forth.

3. Making the table proper and the back, or either of them, separable, in the manner and by the means herein designated.

89,777.—ALFRED C. LOUD, San Francisco, Cal.—*Propeller.*—May 4, 1869.

Claim.—A propelling-wheel, so constructed as to exert its propelling power against the water, by means of four or more rings or rims, *b* b^1 b^2 b^3, arranged obliquely with reference to the shaft, and intersecting each other, as described.

89,778.—WILLIAM LOWDEN, Thornapple, Mich.—*Scythe.*—May 4, 1869.

Claim.—The extension of the blade of the scythe back of the heel, in the form of an arc, which will cut the grass or grain that would, without such extended blade, slip by the heel, and remain uncut, as herein described.

89,779.—SAMUEL MACFERRAN, Philadelphia, Pa.—*Seat for Parks and Gardens.*—May 4, 1869.

Claim.—A seat, having parts A B, constructed of terra-cotta or terra-cotta and wood combined, substantially in the manner above described, and for the purpose specified.

89,780.—JEREMIAH AVERY MARDEN, Boston, Mass., assignor to GEORGE M. GIBSON and THOMAS A. JOHNSTON, same place.—*Governor for Steam and other Enginery.*—May 4, 1869.

Claim.—1. The construction and arrangement of the vanes G G′, in combination with the weight *f*, substantially as herein made known.

2. The combination of the vanes G G′, spindle L, bell-crank *b*, with the weight *f*, whereby to regulate steam and other enginery, substantially as herein set forth.

3. The combination and arrangement of the vanes G G′, rods H H, pallets J J, and spindle L, substantially as before explained.

89,781.—BENJAMIN GREEN MARTIN, New York. N. Y.—*Stop-Valve.*—May 4, 1869.

Claim.—The valve-plug B B′, consisting of the valve-plate B, and the wedge B′, whereby the plug, when seated, is expanded by the downward movement of the wedge, substantially as herein described,

89,782.—EDWIN MAY, Indianapolis, Ind.—*Fire-Proof Building.*—May 4, 1869.

Claim.—1. The furring or clamp B, to seize over the lower edge of the joists, and hold the metal arch C, when constructed and arranged substantially as herein described.

2. In combination with the above, the sheet-metal arch C and fastenings D, when arranged and constructed substantially as herein described.

89,783.—S. T. MCDOUGALL, Brooklyn, N. Y.—*Velocipede.*—May 4, 1869.

Claim.—The combination of the uprights F, provided with the pins or rounds *f*, placed as shown, with the cranks E, wheel D, reach A, and seat or saddle B, constructed and operating substantially as and for the purpose set forth.

89,784.—FREDERICH WILLIAM MILLER, Cincinnati, Ohio, assignor to FARES & MILLER, same place.—*Wash-Boiler.*—May 4, 1869.

Claim.—1. The plate H, when adapted to operate as set forth.

2. The clamp K, constructed and adapted to operate as set forth.

3. The general arrangement and combination, substantially as herein described, of the wash-boiler A, inclined longitudinal partitions D D′, perforated false bottom E *e*, channels F F′, slits *g g′*, deflecting-plates G G′, lid I J *j*, plate H, and clamp K, for the purpose specified.

89,785.—WILLIAM MILLER, Chicopee, Mass.—*Weather-Strip.*—May 4, 1869.

Claim.—A weather-strip, composed of boards A

A′, roller-socket B B′, and spring D, all arranged substantially as herein described.

89,786.—JOHN H. MILLS, Boston, Mass.—*Steam-Generator.*—May 4, 1869.

Claim.—1. As my improvement in the cast sectional boiler, the construction of the sections whereby the lower arm or branch water-pipe of each section shall form the grate-bar, and contain water, substantially as before explained.

2. In a steam-generator, composed of cast multitubular sections, the construction and arrangement of different pipes thereof, having gradual and easy curves, as hereinbefore set forth and explained.

3. The construction of the sections of the steam-generator, whereby the union of a series of sections is affected at two points only, the upper serving as the steam-circulating passage, and the lower one as the water-passage, substantially as explained.

4. The arrangement for effecting the union of two adjacent sections of the steam-generator, of tubular plugs, having right and left screws, substantially as before explained.

5. The construction and arrangement of the fuel-chamber and furnace-grate, whereby the water-legs of the outer pipe are prolonged, and the series of points, essentially as herein shown and described.

89,787.—D. H. MUNDY and H. W. HOFFMAN, Camden, N. J.—*Meat-Cutter.*—May 4, 1869.

Claim.—The sliding-frame J, in combination with the reciprocating cutter H, when constructed and arranged, in respect to each other, upon a suitable frame, substantially as and for the purpose set forth.

89,788.—MAURICE MURPHY, Vacaville, Cal.—*Gang-Plow.*—May 4, 1869.

Claim.—1. In combination with the arm or lever C, rigidly fixed upon the crank for raising the plow-frame, the adjustable connection of the crank E to the axle, by a polygonal pin and corresponding eye, substantially as and for the purpose set forth.

2. The low convexed share F, having the extended point *c*, and the eye or socket H, constructed substantially as and for the purpose described.

3. The mold-boards J, when constructed with the surface curved, as described, and having the convexed edge *d*, substantially as herein described.

89,789.—ALBERT W. PRATT, Salem, Mass., assignor to himself, WILLIAM A. PERKINS, and DAVID H. BURBANK, same place.—*Machine for Buffing, Whitening, Glassing, Polishing, and Stoning Leather.*—May 4, 1869.

Claim.—Placing the knives or tools used in this machine at an angle with the shaft of the revolving cylinder, in combination with forming the seat to which the knives or tools are fastened at an acute angle with a tangent of the periphery of the cylinder, projecting inward.

89,790.—NATHANIEL PURDY, Milwaukee, Wis.—*Wood-Bending Machine.*—May 4, 1869.

Claim.—A wood-bending machine, consisting of the stationary back-set B, the lever or support C, with its shoulder Q, sliding clevis D, rope E, shoulderless windlass F, pulley G, frame H, and flexible band K, substantially as set forth.

89,791.—JOHN A. QUICK, South Danville, N. Y.—*Cultivator.*—May 4, 1869.

Claim.—A cultivator having one or more rotary harrows, mounted in a frame, journaled at its front end, on the axle of the bearing-wheels, said harrows being rotated, by means of shaft H, with bevel-wheels J G, engaging with the bevel-wheel F, on the axle, substantially as shown and described.

89,792.—AMOS RANK, Salem, Ohio.—*Harvester-Dropper.*—May 4, 1869.

Claim.—1. A counterpoised vibrating platform, on which the grain falls when first cut, and from which the gavels are automatically discharged by their own weight, substantially as set forth.

2. The combination of a vibrating platform, on which the grain falls when first cut, with an adjustable counterpoise, to vary the size of the gavels, substantially as set forth.

3. The combination, substantially as set forth, of a vibrating platform, a vibrating lever, and a counterpoise traveling on the lever, to insure a quick vibration of the platform, in both its upward and downward movements.

4. The combination, substantially as set forth, of a vibrating counterpoised platform with a cut-off, automatically operated by a counterpoise.

5. The combination, substantially as set forth, of a reel-post, a counterpoise mounted thereon, a platform, and a cut-off.

89,793.—L. D. ROBERTS and C. C. ROBERTS, Cleveland, Ohio.—*Coal-Chute.*—May 4, 1869.

Claim.—1. Two or more aprons, C C′, hinged to each other, so that the upper end of the lower apron shall be elevated above the lower end of the upper apron, in the manner as and for the purpose set forth.

2. The aprons C C′, as arranged in combination with the chute B, and operating conjointly as and for the purpose specified.

89,794.—THOMAS F. ROWLAND, Greenpoint N. Y.—*Submarine-Drilling Apparatus.*—May 4, 1869.

Claim.—1. The telescopic drill-frame, forming or carrying a working platform, and made up of tubular legs and plungers or rods projecting therethrough, in combination with hydraulic attachments, or devices for forcing water, under the control of suitable valves, into the legs, substantially as and for the purpose or purposes herein set forth.

2. The combination of a floating steam-pump or engine, an auxiliary water-pressure engine, carried by an independent stationary frame or support, a flexible tubular connection, for transmitting power, through hydraulic pressure, or action from the one engine to the other, and a drill operated by the auxiliary or stationary engine, essentially as specified.

3. The combination of the floating steam-pump B, the stationary water-pressure engine F, for operating the drill, flexible tubular connections H J, and a working platform, made up of a table and telescopic legs, for action, substantially as described.

89,795.—FRANK SAUNDERS, Aberdeen, Miss.—*Safety-Lamp.*—May 4, 1869.

Claim.—1. The arrangement of the vent D, passing through the bottom of the lamp-reservoir, and forming a free communication between the air-space therein and the external air through the stem and base of the lamp, substantially as shown and described, for the purpose set forth.

2. The feed-tube *a*, with its piston-valve *e*, and funnel *b*, in combination with the oil-reservoir A, all constructed, arranged, and operating substantially as shown and described, for the purpose specified.

89,796.—IVES SCOVILLE and HIRAM H. SCOVILLE, Oakland, Cal.—*Side-Hill Plow.*—May 4, 1869.

Claim.—1. The angularly placed removable axes *a a*, arms *b b* and *c c*, for elevating and lowering the mold-boards, and holding their positions, substantially as described.

2. The lever C, hooks *e e*, rod *g*, and bar *h*, operating in the slotted standard E and slots *i*, the whole arranged substantially as and for the purpose described.

3. The two plows A and B, operating independently of each other, and turning up against opposite sides of the beam, and mounted on the angularly placed axes *a a*, substantially as described.

89,797.—GEORGE SEIBERT and JOHN SEIBERT, Ashley, Ill.—*Gang-Plow.*—May 4, 1869.

Claim.—1. The staples F and G, when arranged and operating substantially as and for the purposes described.

2. The hook *h* and perforated bar *n*, when combined with the plow herein described, and operating as and for the purposes mentioned.

89,798.—JOHN B. SIAS, Beverly, assignor to H. S. VROOMAN, Boston, Mass.—*Machine for Skiving and Channeling Soles.*—May 4, 1869.

Claim.—1. In combination with the feed and presser wheels and edge-guide, the skiving and slit,

or channel-forming knives or cutters, arranged to operate together, substantially as described.

2. In combination with the feed-wheels and edge-guide, a skiving-knife, attached to the arm or frame, upon which the presser-wheel is journaled, but acting upon the opposite surface of the sole, substantially as described.

89,799.—WILLIAM J. SIMMONS, Chariton, Iowa.—*Quilting-Frame.*—May 4, 1869.

Claim.—The described arrangement of mortised posts A C F, rails B E, and winches D, as and for the purpose stated.

89,800.—AMOR SMITH, Baltimore, Md.—*Machine for Desiccating Fertilizers.*—May 4, 1869.

Claim.—1. In combination with the oven B, a revolving tube, D, open at both ends, when arranged to operate substantially in the manner and for the purpose set forth.

2. The combination and arrangement of the oven, the tube, the pipe L, gearing G H I, shaft I′, and clutch K, substantially as set forth.

3. The revolving tube D, open at both ends, and constructed with internal ribs or fins; but this I claim only when said tube is arranged within an oven, to operate substantially as set forth.

89,801.—PHILANDER SPRAGUE, Peeatonica, Ill.—*Cultivator.*—May 4, 1869.

Claim.—1. The arrangement of the forked tongue A, axles B B, wheels C C, semicircular braces D and *f*, seat E, and bent rod or bar *g*, with its hooks *h h*, substantially as herein set forth.

2. The arrangement of the forked tongue A, plow-beams F F, handles P P, and adjustable brace T, all constructed and operating substantially as and for the purposes herein set forth.

3. The arrangement of the plow-beams F F, stationary shins I I, pivoted shins K K, and adjustable cross-bar M, to which a center-shin, N, is secured, substantially as herein set forth.

89,802.—T. G. SPRINGER, Clinton, Iowa.—*Producing Gas for Heating and Lighting.*—May 4, 1869.

Claim.—1. Connecting the wings or heaters of a gas-burner with the generating-chamber, or at some point between the generating and the mixing chambers, substantially as and for the purposes herein set forth.

2. Filling the generating-chamber of a gas-machine with perforated plaster Paris, or its equivalent, substantially as and for the purposes herein set forth.

3. Providing a gas-pipe with an inside funnel-shaped tube, for the purpose of preventing a flickering or unsteady light, substantially as herein set forth.

89,803.—GREENLEAF STACKPOLE, New York, N. Y.—*Mop-Holder.*—May 4, 1869.

Claim.—The cam-lever A B, spring I, and piston L, in combination with the wire frame E, and clamp D D, substantially as and for the purpose set forth.

89,804.—EBEN T. STARR, New York N. Y.—*Skate.*—May 4, 1869.

Claim.—1. The dovetailed guide-piece C, transversely arranged, and clamping the runner A, and secured to the sole-plate B of a skate, and constructed with lugs *f f*, for the reception of adjusting-screws *d d*, for operating clamping-jaws or strap-rings, substantially as herein described.

2. The sliding-clamps D D, having jaws with curvilinear serrated inner surfaces, substantially as specified.

3. The combination of the clamps D D and guide-piece C, extending all across the foot-plate, substantially as herein specified.

4. The attachable and removable heel-plate E, constructed independently of the heel-plate of the skate and of the boot-heel, and arranged for operating substantially as herein set forth.

5. The centrally pierced concave-headed adjusting-screws *d d*, *k k*, substantially as described and for the purposes herein set forth.

89,805.—EDWARD T. STEEN and WILLIAM B. MAY, San Francisco, Cal.—*Process of Removing Soluble Matters from Artificial Stone.*—May 4, 1869.

Claim.—Purging soluble substances from artificial stone, in the manner substantially as above described.

89,806.—DANIEL STIRN, Milwaukee, Wis.—*Piano-Forte.*—May 4, 1869.

Claim.—1. The combination of a concavo-convex sounding-board, B, with a cast-iron frame, F F′, having the part F′ arched, to correspond to the shape of the board below, substantially as and for the purpose set forth.

2. The use of the pieces b^2 b^2, in connection with an arched sounding-board, B, substantially as and for the purpose described.

89,807.—ALBERT STOCKWELL, Providence, R. I., assignor to CHARLES W. GREENE, trustee, and said GREENE, as trustee, assigns to ALBERT STOCKWELL and WINSOR STONE.—*Mule for Spinning.*—May 4, 1869.

Claim.—1. The combination of the spindle-bearing carriages A, with the mechanism for shifting the point of attachment of the spindle-driving chain A′ to the quadrant-lever B, by means of the yielding bar F, or its equivalent, and a suitable lever-connection, E L, for operating the same, substantially as described, for the purposes specified.

2. The combination of the cop-shaping mechanism with the levers *h h′*, or equivalent devices, for putting into action the hereinbefore-described mechanism, which shifts the point of attachment of the spindle-driving chain to the quadrant-lever, and with the vibrating levers *p p′*, and the yielding supporting-block *r*, substantially as described, for the purposes specified.

89,808.—H. A. STREETER, Worcester, Mass., assignor to J. P. STREETER & BROTHER.—*Horse-Rake.*—May 4, 1869.

Claim.—1. The combination, with the axle, rake-head, and clearer-finger bar, of the curved metallic bearing-arms G G, which carry the rake-head, finger-bar, and clearing fingers, when said arms are constructed with an open bearing for the rake-head and a support for the clear-finger bar, and are held to the axle, so as to project from the rear of the same, in the manner shown and described.

2. The arrangement, in connection with the shaft L, of the rotating shaft O, and treadle and fork, which it carries, and the spring 6 and pin 5, as and for the purposes shown and described.

3. The combination and relative arrangement, with the main frame and supporting-wheels of the driver's seat F, rake-head H, curved metallic arms G G, clearer-finger bar J, shafts O and L, treadles 9, 10, and fork 11, said parts being constructed and arranged with relation to each other, as and for the purposes set forth.

4. The combination, with shaft L and pin 5, of spring 6, made in the form and applied in the manner described and shown in the drawings.

89,809.—JOHN S. STUART, Philadelphia, Pa.—*Locomotive Steam-Engine.*—May 4, 1869.

Claim.—1. A locomotive-engine in which the cylinders are provided with a single valve-chest, C, arranged between and communicating with the said cylinders, substantially as herein set forth.

2. The valve-chest C, divided by a partition, *a*, into two equal compartments, *x* and *y*, provided with oscillating valves H and H′, all substantially as specified.

3. The slide-box F, with its valve *d*, arranged in respect to the valve-chest C and ports *e e′* and *f*, substantially as herein described.

4. The combination of the slotted valve-arms *l* with the eccentric rods *j*, when the latter are connected with devices by means of which the stroke of the valves, and the supply of steam to the cylinders, may be proportioned to the work to be performed by the locomotive, all substantially as herein set forth.

89,810.—J. B. SWEETLAND, Pontiac, Mich.—*Horse Hay-Fork.*—May 4, 1869.

Claim.—1. A two-tined hay-fork, when so constructed that the tines are standing or hanging one

above the other, substantially as shown and described.

2. The hook *d*, when constructed substantially as described, and used in connection with the adjustable handle C, as herein set forth.

89,811.—Freeman A. Taber, Baltimore, Md.—*Candlestick.*—May 4, 1869.

Claim.—1. The spring wick-holder L, for the wickless candle, when operated by the swivel-screw K, working through nut J, applied to part G, substantially as shown, and for the purpose set forth.

2. The candle-holder, constructed as described, of the support D, with guide *c*, cap E *f*, bottom piece G, connecting-wires E, spring H, spring wick-tube L, screw K, and nut J, all as herein set forth, and fitted within the casing A, as specified.

89,812.—Augustin L. Taveau, Chaptico, Md.—*Revolving Sulky-Harrow and Seeder Combined.*—May 4, 1869.

Claim.—1. A revolving sulky-harrow and seeder combined, or its equivalent, constructed and operating as herein set forth and described, to wit, the revolving spiked cylinder M, axle L, arms D, in combination with the gear-wheels B, movable pinions C, cylinder-journals *e*, clutches *m*, the spring-levers H, and spikes *g h*, in the manner specified; also, the combination of the gear-wheel B, wheel No. 5, wheel No. 2, and the entire seeding-apparatus, in conjunction with the harrow.

2. The construction and application of the jointed spikes *g h*, or their equivalent, held in position in the sockets by the iron bolt and wooden pin *v*, in the manner and for the purpose herein set forth and described.

3. The application of the rollers N, pin-drums *n*, and stay-chains *o*, in combination with the lever P, ratchets O, and construction of the foot-pawl R, in the manner and for the purpose herein set forth and described.

4. The application and combination of the double-acting spring-levers H, springs *s*, rods *a*, foot-lever K, and spring-catch Q, operating for the purpose as herein set forth and described.

5. The cylinder-comb *l*, brace-rods *x*, and spring-teeth *d*, or their equivalent, in combination with the spikes *g h*, constructed and operating as herein set forth and described.

6. The construction, combination, and arrangement of the guano and seed box to a revolving sulky-harrow and seeder combined, or their equivalent, and the application of a grass-seeder to the same, all constructed and operating as herein set forth and described.

89,813.—John I. Tay, San Francisco, Cal.—*Means for Hanging Window-Shades.*—May 4, 1869.

Claim.—The combination and arrangement of the cords *b*, *n*, and *n'*, the tension-spring *d*, and the rollers C, when applied to both ends of a curtain, so that the top may be rolled down, and the bottom rolled up, and each sustained at any desired height, by means of the weights I I', substantially as described.

89,814.—A. M. Utley, Watertown, N. Y.—*Cheese-Table, Shelving, &c.*—May 4, 1869.

Claim.—1. Forming that portion of the table, shelf, or other device upon which the cheese rests, and with which it is in contact during the process of curing, of paper, substantially as and for the purposes set forth.

2. A table-top, shelf, or its equivalent, for supporting the cheese during curing, composed of a perforated wooden base, provided with a paper covering, substantially as shown and set forth.

3. The combination of the removable table-top or shelf, the grooved uprights for supporting the same, and the detachable cross-bar connecting said uprights, constructed and arranged substantially as and for the purposes specified.

89,815.—John Van, Cincinnati, Ohio.—*Portable Laundry.*—May 4, 1869; antedated April 16, 1869.

Claim.—1. The dry-room of a portable laundry, consisting of the sectional floor A A^5, posts H', upper frame or plate B, and sections B^1 H', and provided with the metallic lining, substantially as and for the purpose set forth.

2. The metallic-lined sections B^1 C H' C^1 of the dry-room of the portable laundry, constructed in the manner described, for the purposes specified.

3. In the portable laundry, the stove D, constructed with the fire-box *c*, water-heating chambers D', air-heating drum M *m*, flues L N, and vapor-duct O, all arranged as described, in combination with the dry-house and water-reservoir, substantially as and for the purposes set forth.

4. The combined arrangement of the sectional floors A A^5, the dry-house B B^1, C H H', the clothes-frames P P^1 P^2 P^4, rails Z Z, stove D D' L M N O, and water-reservoir E, provided with the pipes *f f'*, I I, and cock *k*, substantially as described, to form an improved portable laundry.

89,816.—Fénélon Vie, Havre, France.—*Life Boat.*—May 4, 1869.

Claim.—1. The ribs B, with gore-shaped openings *a*, in combination with the covering C and lining D, and with the longitudinal braces E F, substantially as herein shown and described.

2. The double-flanged pieces *b*, in combination with the lining D, covering C, and ribs B, substantially as and for the purpose set forth.

3. The flanges *c*, in combination with the longitudinal braces E F, covering C, and lining D, substantially as and for the purpose described.

4. The air-chambers G, in combination with the longitudinal braces E, covering C, lining D, and ribs B, substantially as and for the purpose set forth.

89,817.—Ephraim Vorbe, San Francisco, Cal.—*Combination-Lock.*—May 4, 1869.

Claim.—1. The combination of the stem *c'*, holding-plate *k'*, and socket-stem D, substantially as described.

2. The stop R^1, with the catch *r*, the sliding-plate *r'*, and spring T, for holding and releasing the stop, substantially as and for the purpose herein described.

3. The tumblers N O P, with the lugs *n n n*, the arm *p*, the wheels Q R S T, and the lever Z, the whole operated from the knob E, for retreating the stop R^1, substantially as described.

4. The device for controlling and operating the bolt, consisting of the rotating case V, the plate *u*, with its arms 1, 2, and 3, the spring V', the stems *k k*, and the key M, together with the slotted segment *w*, the whole connected and operated substantially as herein described.

89,818.—Henry S. Vrooman, Boston, Mass.—*Sole-Channeling and Feather-Edging Machine.*—May 4, 1869.

Claim.—1. In combination with the smooth-surfaced upper feed-wheel, the toothed-surfaced lower feed-wheel, and the cutter or cutters, arranged to operate upon either surface of the sole, a stationary rest-plate, for supporting the sole and edge to be skived or channeled, substantially as shown and described.

2. So constructing this rest-plate that the skiving-cutter or its shank can pass through or by the plate from the arm *d*, so as to bring the cutter to the under surface of the sole, substantially as described.

3. In combination with the feed-wheels and cutter or cutters, arranged to operate as described, an adjustable edge-guide, substantially as described.

4. In combination with the feed-wheels, stationary rest, and cutter or cutters, arranged to operate on either side of the sole, an adjustable edge-guide, substantially as described.

5. In combination with the lower feed-wheel, an upper feed or presser wheel, made adjustable relatively to the edge-guide and the arm by which it is supported, substantially as described.

89,819.—Samuel Wagner, Galion, Ohio.—*Door Catch and Cushion.*—May 4, 1869.

Claim.—A protective knob and spring door-holder, in combination with a base, A, adapted to be secured to the wash-board or wall.

89,820.—Bernard Peard Walker, Wolverhampton, England.—*Belt-Joint.*—May 4, 1869.

Claim.—Joining the ends of driving-bands by

means of flat, thin metal plates, between which the ends of the band or strap are placed, and secured by rivets or screws passing through the two plates, and through the inclosed leather, or other material of which the band or strap is formed, as hereinbefore described.

89,821.—P. A. WILLSON, Camden, N. J., assignor to himself, MATTHEW WHILLDIN, and ALBERT ATWOOD, same place.—*Sash-Balance.*—May 4, 1869.

Claim.—A cord, F, secured at opposite ends to the frame of a window, and arranged upon a series of pulleys, D, D^1 D^2, as described, when the said pulleys rotate in a recess in the sash, and are so adjusted as to prevent the cord from being forced against the frame, as set forth.

89,822.—SETH WILMARTH, Malden, Mass.—*Velocipede.*—May 4, 1869.

Claim.—1. The auxiliary shaft E, with its fly-wheel O, connected with the main shaft by means of described gearing, combined with a foot-lever, G, and a steering-wheel, Q, substantially as and for the purpose set forth.

2. The foot-lever G, strap *b*, drum D, with its retracting-spring *g*, pawl *e*, and the ratchet-wheel I, in combination with the auxiliary shaft E, provided with a fly-wheel, O, and connected with the main-shaft A by suitable gearing, substantially as and for the purpose set forth.

3. Limiting the motion of the foot-lever G by the shoulders *k k*, in combination with the shoulders *l l*, in the bifurcated support H, in which it is pivoted, substantially as set forth.

89,823.—ALBERT WINSHIP, Turner, Me.—*Tire-Upsetting Machine.*—May 4, 1869.

Claim.—1. The combination of the beds *a b*, having the false beds *m*, when desired, and removable dogs *i*, with the arms *d e*, and right and left screw *f*, when the bed *a* is fixed and the bed *b* removable, and when the two beds are placed near the bottom of the arms *d e*, all as and for the purposes set forth.

2. The removable or false beds *m*, secured by studs *o*, to be applied to a tire-upsetter, as herein set forth, and used in combination with dogs *i*, as and for the purposes set forth.

89,824.—REUBEN WRIGHT, Houston, Texas.—*Machine for Cutting Stalks in the Field Preparatory to Plowing.*—May 4, 1869.

Claim.—The roller A, provided with spiral knives B B, crossing each other diagonally, the cross-bar D, the shaft C, axle *e*, and wheels E E, the whole constructed and arranged to operate substantially as and for the purpose set forth.

89,825.—JAMES M. ALBERTSON, New London, Conn.—*Horse-Power.*—May 4, 1869.

Claim.—1. The arrangement of the gear-wheel C, pinion F, shaft E, and wheel G, to allow the revolution of the wheel G within the wheel C, and to bring the shaft E at such height as to engage the pinion F.

2. In combination with above arrangement, the frame D D′, consisting of two arms provided with journals for the shaft E, the whole attached to the upper end of shaft B, substantially as herein described.

89,826.—HORACE L. ARNOLD, Chicago, Ill.—*Letter-Lock.*—May 4, 1869.

Claim.—1. The combination of the bolt C, the spring E, and the abutment F, when constructed and operating as described, and for the purpose set forth.

2. The combination of the washer W with the bolt C, spring E, and abutment F, when constructed and operating as described, and for the purpose set forth.

89,827.—G. L. BADLAM and CHARLES W. LANG, Brandon, Vt.—*Foot-Rest for Chairs.*—May 4, 1869.

Claim.—The foot-rest or pedal D, in combination with the notched bar *a*, standard B, plate E, and catch *e*, when constructed and arranged substantially in the manner and for the purposes specified.

89,828.—JOHN CHAPIN, Chicopee, assignor to R. H. SMITH, Springfield, Mass.—*Ticket-Punch.*—May 4, 1869.

Claim.—A ticket-punch, wherein the die, having the bearings *e* and e^1, connected by a thin portion or blade, *c*, is operated by means of a lever having two projections *n n* thereon, one upon each side of said blade *c*, all constructed and operating substantially as herein described, and for the purposes specified.

89,829.—J. WESLEY DODGE, Malden, Mass.—*Branding-Apparatus.*—May 4, 1869.

Claim.—The arrangement and combination of the forked handle, the eye, and the bail, with a brander or branding-box, provided with branding devices, and made to receive a heater, as described.

89,830.—L. M. HAM, Boston, Mass.—*Lock for Prison-Doors.*—May 4, 1869.

Claim.—1. Combining with an ordinary latch or lock, E, the catch L, made and arranged substantially as described, and for the purpose set forth.

2. The guard N of the lock-casing B C, in combination with the bar O and catch L, constructed and arranged substantially as described, and for the purpose set forth.

89,831.—WILLIAM HOFFMAN, Pittsburgh, Pa.—*Apparatus for Rolling and Notching Rails for Railroads.*—May 4, 1869.

Claim.—Rolls constructed and applied substantially as described, for making railroad-rails with notches in them, substantially as described.

89,832.—BENNETT KINDBLADE, Geneva, Ill.—*Sash-Holder.*—May 4, 1869.

Claim.—The spurred yoke C, applied within a hollow cam, B, constructed and operating substantially as described.

89,833.—THOMAS L. LUDERS, Olney, Ill.—*Field-Skate.*—May 4, 1869.

Claim.—1. For the purposes of a field-skate, the standard A, made adjustable as set forth.

2. The arrangement of the wheel B at the side of the adjustable standard A, substantially as and for the purpose described.

3. The side-wheel B, in combination with the standard A, and a foot-rest, C, secured thereto, below the axis of the wheel, substantially as and for the purpose described.

4. The springs interposed between the over-shoe and foot-rest, substantially as and for the purpose described.

89,834.—GEORGE C. HOWARD, Philadelphia, Pa.—*Hat-Press.*—May 4, 1869; antedated November 4, 1868.

Claim.—1. The combination of the link G, crank-arm F, and crank-shaft L^2, and spiral spring T, with the treadle H, substantially as and for the purposes specified.

2. The combination of link G, crank-pin L, and crank K, eccentric catch-pin J, and lever U, with the treadle H, substantially as and for the purpose set forth in this specification.

3. The combination of the latch X, bell-lever X^1, and pin X^2, with the treadle H, cross-head S, and link G, substantially as and for the purpose specified.

4. The arrangement of the hydraulic pump P and ram E^2, with the treadle H, catch or eccentric pin J, link G, cross-heads S and C, and guide-rod D, substantially as and for the purpose specified.

5. The arrangement of the nut R, handle Y, screw Z′, and platform Z, with the treadle H, eccentric pin J, link G, cross-heads S and C, Fig. 1, substantially as and for the purpose set forth in this specification.

89,835.—VIRGIL PRICE, New York, N. Y.—*Carriage-Wheel.*—May 4, 1869.

Claim.—The corrugated metallic rim or tire C, of a wheel, when so shaped that it is higher at or near the edges than toward the middle, and when supported at or near the edges by two separate sets of spokes, projecting from the same hub, substantially as herein shown and described.

89,836.—WILLIAM M. K. THORNTON, Clinton, Wis.—*Buckle.*—May 4, 1869.

Claim.—An improved article of manufacture, consisting of a buckle, having its side-bars *e e* flanged,

and its side-loops *f f* arranged so that their outer surfaces *a* are flush with the corresponding surface *a* of said bars and their cross-bars *b b*, as herein set forth.

89,837.—ZACHARIAH WALSH, Newark, N. J., assignor to himself and CORNELIUS WALSH, same place.—*Trunk-Lock.*—May 4, 1869.

Claim.—1. The studs K, arranged to operate in connection with the hinge-plate G, face-plate A, and hasp Q, substantially as and for the purposes described.

2. The construction and combination of the sliding-bolt *e*, the recessed projection L, and hinged-plate G, substantially as and for the purposes described.

89,838.—JACOB WEAVER, Jr., Pittsburgh, Pa.—*Washing-Machine.*—May 4, 1869.

Claim.—The combination of the roll A with the India rubber R, the spring N, the frame C, and rollers B, and springs O, as and for the purposes specified.

89,839.—RUFUS SIBLEY, Greenville, Conn.—*Journal-Box.*—May 4, 1869.

Claim.—1. The combination with a shaft or bearing designed to run in a journal-box, of one or more scoops, of any desired shape or section, formed on the exterior of either a shaft or of a collar thereon, substantially as and for the purposes set forth.

2. The combination of one or more of the sediment-chambers H, with one or more of the longitudinal channels G, substantially as and for the purposes described.

89,840.—GEORGE ADAMS, Jr., Alexander, N. Y.—*Scaffold.*—May 11, 1869.

Claim.—1. The standards B, platform A, bails *e*, pawl-hooks *g*, ratchets *b*, and hoisting-cable *h*, when arranged and combined to operate substantially as herein set forth.

2. The crank *l* and chain-pinion *m*, supported above the platform, in combination with the windlass K, and chain-wheel Q, below the platform and the connecting chain, guiding-pulleys *j*, and cable *h*, arranged to operate as and for the purpose described.

3. The arrangement of the crank and chain-wheels *x* and *x'*, pitmen *y y*, and foot-rests *y' y'*, as described.

4. The combination and arrangement of the brake-lever and strap L *a*, with pawl and ratchet-wheels *q n*, as and for the purpose specified.

5. The combination of the ropes *s*, angle-levers *t*, rope *s'*, arms *u w*, and pull-rod *w'*, with the hook-pawls *g*, for disengaging the latter, as set forth.

6. The combination and arrangement of the ratchet-standards B, braces *c*, and pulleys I, with the platform A, supporting-pawl hooks *g*, and hoisting-rope *h*, substantially as and for the purpose set forth.

7. The pulley I, provided with hooks *i* and eye i^1, constructed in the manner and for the purpose described.

8. The adjustable guard-arms D, provided with friction-rollers *z'*, arranged and operating as set forth.

89,841.—THOMAS ATKINSON, Memphis, Tenn.—*Bee-Hive.*—May 11, 1869.

Claim.—The entrance formed of the sloping encased tubes B B, in combination with the inclined bottom A A, when provided with the sliding ventilators, as set forth.

89,842.—ISAAC W. BARNUM, New York, N.Y.—*Tuck-Creaser for Sewing-Machines.*—May 11, 1869.

Claim.—1. The combination of the spring-arm B, hammer or notch D, and yielding arm E, with a non-adjustable base-plate, A, and toothed plate G, substantially as specified.

2. In combination with the above, the smoother H, for the purpose set forth.

89,843.—ELIAS BARTO, Tiffin, Ohio.—*Corn-Marker, Planter, and Cultivator.*—May 11, 1869.

Claim.—The cut-off slide *g*, with hole or bucket *h*, discharging tube *j*, spring *i*, elbow I, lever H, bail G, and gum-elastic strike *k*, together with the hopper F, for the use and purpose as specified and herein set forth.

89,844.—GEORGE N. BEARD, St. Louis, Mo.—*Cotton-Bale Tie.*—May 11, 1869.

Claim.—The tongue-lever B B', in combination with the buckle A, so shaped as, when drawn down by the band C, to cause the end C' of the band to bend about the end-rail A', forming, by the counter-pressure of the compressed bale, an S-shaped curve, substantially as herein described.

89,845.—LOUIS R. BOYD, New York, N. Y.—*Cap for Preserve-Jars.*—May 11, 1869.

Claim.—The within-described cap, for jars and other articles, formed partly of metal and partly of glass, or other vitreous substance, permanently secured to the metal, whether such cap is or is not provided with a rubber gasket, or equivalent, between the glass, or vitreous substance, and the metal.

89,846.—HIRAM R. BOZORTH, Philadelphia, Pa.—*Refrigerator.*—May 11, 1869.

Claim.—The combination of the ice-box T, drum D, drip-pan N, pipes P P^1 P^3, and siphon S, with the water-cooler W, and inner and outer casings B C, the whole arranged and operating substantially as and for the purposes set forth.

89,847.—GEORGE B. BRAYTON, Boston, Mass., assignor to "THE NOVELTY EYELET COMPANY," same place.—*Composition Metal for Eyelets.*—May 11, 1869.

Claim.—The use of a metal for eyelets, composed of the elements and of the character substantially as described.

89,848.—JOHN G. BRESLIN, Lancaster, Ohio.—*Spark-Conveying Device.*—May 11, 1869.

Claim.—The combination of the bell-mouthed sections of the continuous discharge-pipe, and the short adjustable connecting-sections E, substantially as described.

89,849.—SAMUEL BRILLINGER, Clarence Centre, N. Y.—*Pump.*—May 11, 1869.

Claim.—1. The combination and arrangement, with cylinder A, having side-passages C D, of the rock-chamber B, provided with ports *c d*, and reciprocating plunger E, the whole operating in the manner and for the purpose specified.

2. The combination and arrangement, with rock-chamber B and plunger E, of the forked lever J, arms H I, and the lever F, operating as described, and for the purpose herein specified.

89,850.—D. L. CADY, Mason, Michigan.—*Sheep-Shearing Table.*—May 11, 1869.

Claim.—The double-leaves B B', having mortises F F, the middle boards C', straps D D, having loops C C, the levers G G, having plates H, and the notched plates H', on the legs *a a*, all made to operate substantially as and for the purpose herein specified.

89,851.—WILLIAM CHURCHILL, St. Louis, Mo.—*Punching-Machine.*—May 11, 1869.

Claim.—1. The hinged and weighted take-off K, and its prongs k^2, operating with the slide D to hold the plate when being punched, substantially as set forth.

2. The die *h*, straightening-plates I, punch F, and take-off K, arranged and combined substantially as set forth.

89,852.—GEORGE W. CILLEY, Norwich, Conn.—*Combined Lock and Latch.*—May 11, 1869.

Claim.—The combination, with the tumblers, arranged to operate also as a shield or shields to the key-hole, of a locking-bolt, or catch, so constructed and applied as to hold the tumblers in unlocking line or position when raised, and to secure them when down, substantially as described.

89,853.—GEORGE W. CILLEY, Norwich, Conn., assignor to himself and WILLIAM P. ADAMS, same place.—*Combined Lock and Latch.*—May 11, 1869.

Claim.—1. In combination with the latch and

bolt, the dogs C and G, so constructed that they may connect the two former when the key is made to act on the bolt-dog, substantially as and for the purpose set forth.

2. The case, when constructed with projections I, K, L, and M, in combination with tumblers having a shoulder formed on the back, and so arranged in relation to the projections, that when the bolt has been projected, and is then pressed against the tumblers, said shoulders shall engage the projection I, and prevent the raising of the tumbler, substantially as set forth.

89,854.—Isaac W. Clarke, Providence, R. I. —*Stopping-Mechanism for Machine for Doubling Yarn.*—May 11, 1869.

Claim.—1. The combination of the weighted tension-lever M, the link-connection *k* P, and the spool-unseating spring-plate *e*, or the equivalents thereof, substantially as described, the apparatus operating, upon the fall of such lever M, to disconnect the spool E from its source of motion, as herein set forth.

2. The combination with a spool, E, seated upon a flange, *d*, upon the spindle of a spring-plate, *e*, or equivalent device for unseating the spool, substantially as described.

89,855.—André Couturier, Trinidad, Cuba.— *Vegetable Fiber to Imitate Hair.*—May 11, 1869.

Claim.—As a new article of manufacture, the fiber produced from the leaf of the Corojo palm, by the process and means herein described.

89,856.—Hugh H. Craigie, New York, N. Y. —*Cock for Water-Closets.*—May 11, 1869.

Claim.—1. The ring *i* and elastic washer 15, in combination with the diaphragm seat *c* of the valve, the parts being constructed and applied substantially as set forth.

2. The cylindrical projection 8 of the valve *e*, in combination with the elastic washer 15 and valve-seat, for the purposes set forth.

3. The combination of the elastic washer 15, valve *e*, cylindrical projection 8, piston *k*, cylinder *h*, and washer 4, to control the closing of the valve, substantially as set forth.

89,857.—Hugh H. Craigie, New York, N. Y.— *Water-Closet.*—May 11, 1869.

Claim.—1. The movable cover *g*, forming a portion of the support for the basin, in combination with the flange *d*, formed as a part of the hopper *a*, and constituting the other portion of the support for the basin, substantially as set forth.

2. The bearing-lug 6 on the under side of the cover *g*, and the divided bearings at 7, in combination with the axis *i*, pan *c*, and arm *k*, as and for the purposes set forth.

3. The screw-thimble *t*, formed as specified, in combination with the bridge *u* and socket *s*, substantially as set forth.

4. The inclined-plane washer *c*, combined with the hooked stud 5, as and for the purposes specified.

5. The cover *w*, applied to the inner end of the hollow projection *q*, for the purposes set forth.

89,858.—Hugh H. Craigie, New York, N. Y. *Waste-Trap for Wash-Basins.*—May 11, 1869.

Claim.—1. The trap *d*, screwed upon the ferrule *b*, and acting as a nut to clamp the ferrule *b* and washer to the basin, substantially as set forth.

2. The ferrule *b*, trap *d*, stop-plate *g*, and trap-screw *f*, the parts being combined and arranged substantially as set forth.

3. The ferrule *b* and plug *c*, in combination with the trap *d*, connected directly to said ferrule *b*, substantially as set forth.

4. The trap *d*, intervening between the screw-coupling of the waste-pipe and the ferrule and plug of the basin or sink.

89,859.—Hugh H. Craigie,, New York, N. Y. —*Water-Closet.*—May 11, 1869.

Claim.—1. The plates *c c'*, formed with the downward flanges 7, on their under sides, and secured to the hopper by the action of wedges, substantially in the manner set forth.

2. The arm *f*, socket *e*, and hopper *a*, connected together by wedges, substantially in the manner specified, so as to allow of adjustment, as set forth.

3. The projecting arm *p*, on the side of the hopper *a*, with a movable cover, for receiving the valve or cock, in combination with the shaft *r* and arms *s* and *t*, for the purposes and as specified.

4. The weight *n*, ring *l'* and wedge-bolt *o*, in combination with the link *k*, for the purpose and as specified.

5. The bolt 5, passing through a hole in the plate *c*, in combination with the hopper *a*, having a notch, into which said bolt passes, so that the parts can be separated without detaching the bolt 5 from the plate *c*, substantially as set forth.

89,860.—Harry A. Crossley, Cleveland, Ohio. —*Stave-Jointer.*—May 11, 1869.

Claim.—The hollow cylinder B, concave on its outer surface, in combination with the knives D D, when the latter are arranged so as to cut in opposite directions from the center of the stave, all the parts being constructed and arranged to operate as set forth.

89,861.—William Doyle, Albany, N. Y.— *Combined Stove Lid and Damper.*—May 11, 1869.

Claim.—The construction of a stove-cover, having a circular rim, A, attached to its under side, in combination with flue-strips C C and B, or their equivalents, substantially as herein shown and set forth.

89,862.—Jonathan G. Dyer, Chicago, Ill.— *Self-Indicating Weighing-Scale.*—May 11, 1869.

Claim. — 1. The balancing-lever D, having a weighted end, E, a screw-rod, F, and ball, G, for adjusting the scale to a standard weight, and weight H, made adjustable in the slot *c*, for fixing the starting-point, substantially as set forth.

2. The combination of the balancing-lever D, having arms J, with beam 5, connecting-rod N, multiplying-lever O, having a cogged segment, P, pinion, Q, pivot, T, and indicator, 7, the whole being arranged and constructed as herein described.

89,863.—William Hailes, Albany, N. Y.— *Stove-Grate.*—May 11, 1869.

Claim.—1. A tripod or bipedal bearer for a circular grate, consisting of a grooved ring, G, perforated at *n*, a central socket, *g'*, and arms *g d*, made of one piece, substantially as described and for the purposes set forth.

2. The concentric ring B', formed on the plate B, with the ring of a bearer, G, and with friction-rollers or balls between them, substantially as described.

3. The manner, substantially as described and shown, of combining a circular grate wtih a tripod or bipedal bearing, anti-friction rolling-bearings *s s s*, and divisions *t*, substantially as set forth.

89,864.—Alfred Hasbrouck, Ithaca, N. Y.— *Machine for Cleaning Hair from Hides.*—May 11, 1869.

Claim.—The above-described machine, with all its parts, as arranged, combined, and operating.

89,865.—John W. Hewitt and Robert Hewitt, Allegheny City, Pa.—*Lubricator.*—May 11, 1869.

Claim.—The arrangement of the plug A with the passage A^2, aperture A^3, and crevice A^4, lid B, and apertures B^1 and B^2, with the reservoir C, cock C^1, and plug C^3 when constructed, combined, arranged, and operating substantially as herein described, and for the purpose set forth.

89,866.—P. L. Higley, Cincinnati, Ohio.—*Machine for Molding Metal Disks, Rivets, &c.*—May 11, 1869.

Claim.—1. The above-described machine for molding metal disks, substantially as shown and described.

2. The movable plate G, perforated as described.

3. The double series of wires O O, attached to the stationary plate at one end, penetrating the molds, serving as guides to the mold-plate, and acting as cores for the holes, or slots in the castings, substantially as shown.

89,867.—Stephen Hull, Poughkeepsie, N. Y.—*Harvester-Rake.*—May 11, 1869.

Claim.—1. The bevel-wheel M, constructed with pins *y*, or their equivalents, extending up from the top of the bevel-wheel, whereby the armed hub O can be rigidly connected to the bevel-wheel by simply setting it down upon said wheel, and also whereby it can be disconnected therefrom by simply lifting it up from said wheel, substantially as described.

2. The vibrating grain-compresser E, applied upon a grain-platform, and operated by the rake during the act of raking off the grain, said compresser being constructed to operate substantially as described.

3. The tubular journal-box P, constructed with two bearings, *i i*, and adapted to serve the purposes described.

4. The construction of the shoe L, with an arched recess, L^2, substantially as described.

5. The construction and arrangement of the guide-plate G′, of the cam-rail G, and the adjustable bearing-pieces O′ of the rake or reel-arms, all in the manner and for joint operation substantially as described.

6. The rod D^2, extending backward and upward from the rear of the outer divider D^1, as described and shown, arranged with a combined rake and reel, which has arms of different lengths, so that the rake-arms, during their revolution, will move clear of the rod D^2, and the reel-arms will be lifted by said rod, substantially as specified.

7. Rocking-shaft S, constructed, arranged, and applied substantially as described, and the devices *p t* t^1 t^2, or the equivalents thereof, in combination with the ordinary cam-rail G, and with the independently hinged rake and reel-arms of a combined revolving rake and reel, for the purpose set forth.

8. The supporting-beam C^1, extended inward, and suspended from the draught-frame by means of an adjustable connection, Y, said beam supporting the platform and bearings of the finger-beam, and being secured to the shoe L, substantially as described.

9. The arrangement and combination of the washers P′, hub P, shaft I, bevel-wheel M, hub O, cam-plate H, cam-rail G, and independently hinged rake and reel-arms, substantially in the manner shown and described.

10. The device *p*, or its equivalent, applied to the crown-wheel M, or hub of the rake and reel, for automatically operating the device *t*, which suddenly elevates the rake and reel-arms, substantially as described.

89,868.—Leonard J. Johnson, Norwich, Conn., assignor to himself, Charles B. Stodder, and Harvey Chapman, same place—*Invalid Bedstead.*—May 11, 1869.

Claim.—The combination and arrangement of the operative spring *r*, screw *s′*, and nut *t*, and the clutches, as described, with the single crank *o*, and the main and auxillary shafts *e* and *g*, combined with the back-rest and leg-frame, by means of mechanism for operating them, substantially as set forth.

89,869.—Robert Kent, Brooklyn, N. Y., assignor to Thaddeus Fowler, Seymour, Conn.—*Die for Drawing and Reducing Wire.*—May 11, 1869.

Claim.—The herein-described apparatus for reducing wire, when constructed and operating substantially as set forth.

89,870.—Gideon King, Eminence, Ky.—*Clothes-Drier.*—May 11, 1869.

Claim.—The frames A A, rod *c*, bevels *d d d d*, arms *e e e e*, plates *h h h h*, arms K, tube *l*, and braces *i i*, when combined, arranged, and constructed substantially as and for the purpose specified.

89,871.—Edward M. Lang, Portland, Me.—*Lantern.*—May 11, 1869.

Claim.—1. The combination of the annular air-space formed by the base of the chimney, slightly elevated above the disk *e*, the unperforated disk *e*, the two cones, with the flaring or wider slot of the outer and the narrower slot of the inner, all as and for the purposes described.

2. In combination with the unperforated disk *e*, the deflector and chimney-base, the outwardly pressing spring-hooks, as and for the purposes described.

3. The unperforated disk *c*, in combination with the annular air-space, as and for the purposes set forth.

4. The cap *o*, when provided with the conical piece of metal *q*, and hinged cap *r*, as and for the purposes set forth.

89,872.—H. B. Leach, Philadelphia, Pa., assignor to E. C. Penfield, same place.—*Combined Suspender and Shoulder-Brace.*—May 11, 1869.

Claim.—1. The combined shoulder-brace and suspender, having a metallic buckle-plate, A, as represented in figs. 4 and 5 of the accompanying drawings, constructed substantially as and for the purpose herein described.

2. The combination of the bent wire loops *k k′*, with the buckles *c c′*, substantially as shown and described.

89,873.—George Leman and George W. Beals, Springfield, Mass.—*Vegetable-Slicer.*—May 11, 1869.

Claim.—The table B, with the guide E thereon, and the feed-bar C, operated in the guide D and ways *c*, by means of the spring *a* and guide-block F, in combination with the rotating-plate A, having the adjustable knives *a* thereon, the whole constituting a vegetable-slicer, constructed and operating substantially as and for the purposes herein specified and described.

89,874.—John McAuliffe, New York, N. Y.—*Umbrella.*—May 11, 1869.

Claim.—An umbrella-frame, in which a loop at the upper end of each rib works in a notch in the grooved crown-plate, and is embraced by a ring in said groove passing through the loops of all the ribs, and in which umbrella the divided or bifurcated upper end of the stretcher operates by means of an intermediate lap between it and the ribs, all substantially as described.

89,875.—J. L. McAlemy, Memphis, Tenn.—*Truss.*—May 11, 1869.

Claim.—The combination of the cover D, elastic cushion E, and pad C, constructed, arranged and operating substantially as described.

89,876.—Hugh McDonald, Pittsburgh, Pa.—*Manufacture of Steel-Faced Iron Plates.*—May 11, 1869.

Claim.—The hereinbefore-described mode of making compound metallic plates, by welding together two or more plates, slabs, bars, or ingots of iron of different relative capacities for taking carbon, or of iron and a low quality of steel, and then subjecting the face or faces of such compound plates to the process of cementation, substantially as described.

89,877.—Robert R. McDonald, Syracuse, N. Y.—*Shoe-Knife and Gauge.*—May 11, 1869.

Claim.—The knife-blade B, gauge C, screw D, wedge E, and thumb-screw F, when arranged substantially as and for the purpose set forth.

89,878.—Joseph C. McKenzie, Adrian, Mich.—*Tile-Machine.*—May 11, 1869.

Claim.—1. The adjustable mold E, surrounding the core C, in combination with the screws F F F, operating substantially as and for the purposes set forth.

2. In combination with the tapering angular trough A, the swing-bolts H, operating as and for the purposes set forth.

3. The combination of the tapering angular trough A, the shaft B, when supplied with the knives *b*, and screw *b′*, and the screws F, and mold E, and core C, substantially as and operating in the manner set forth.

89,879.—S. M. Meyenberg, New York, N. Y.—*Veil-Holder.*—May 11, 1869.

Claim.—A self-fastening veil-holder, *b*, made of spring material, having its ends terminated by eyes or knobs, as described.

89,880.—Glendy Moody, Falmouth, Me.—*Revolving Grate in Heating-Stoves.*—May 11, 1869.

Claim.—The improved stove, made and to be op-

erated as herein described, and having the devices herein shown, all as set forth.

89,881.—CURTIS C. CADY MORGAN, Auburn, N. Y., assignor to himself, CURTIS C. CADY, and ELMORE P. ROSS.—*Sheet-Metal from Lead and Zinc.*—May 11, 1869.

Claim.—1. The new article of manufacture, composed of lead and zinc, combined in the manner substantially as above described.

2. The process of fusing and combining other metals with zinc, by melting and fusing them while in the molten state, and cooling the mixture in oil, substantially as above described.

89,882.—WILLIAM H. NAUMAN, Dayton, Ohio, —*Seed-Drill.*—May 11, 1869; antedated April 13, 1869.

Claim.—1. A feed-wheel running in a cup under the hopper and through the hopper-bottom, when the quantity of seed is regulated by a slide, as described, as and for the purpose set forth.

2. The adjustable slide B, placed in front of the feed-wheel, in combination with the cup C, substantially as and for the purpose set forth.

3. The combination and arrangement of the feed-wheel A, slide B, and cup C, as described and shown.

89,883.—GEORGE W. NELL, Philadelphia, Pa.—*Curtain-Fixture.*—May 11, 1869.

Claim.—The combination of the S-shaped hook B with the toothed plate A, when the latter is provided with a longitudinal groove to receive the rib or pin *e*, formed upon the hook for the purpose of preventing the lateral play of the same, as herein shown and described.

89,884.—RICHARD NORRIS, Jr., Baltimore, Md. —*Hardening and Washing "Ransome Concrete Stone."*—May 11, 1869.

Claim.—An apparatus having two compartments, an open and a closed one, and with a packed and controllable diaphragm between them, of which the stone to be treated forms a part, for forcing, by artificial means, into or through what is known as the "Ransome concrete stone," either or both chloride of calcium of the proper strength to harden, or water, to dissolve and wash out the chloride of sodium formed therein, substantially in the manner herein described and represented.

89,885.—D. C. OWEN, Adams County, Ill.—*Pump.*—May 11, 1869.

Claim.—The stock-sockets C F, connecting-pipes D D, cylinders A A, pistons G G′, combined with the valves *d d*, *e e*, and chambers E E, all arranged and operated substantially as and for the purpose described.

89,886.—EMERY PARKER, New Britain, Conn. —*Key.*—May 11, 1869.

Claim.—The improvement, which consists in uniting the two parts, A and B, of the shank of a folding-key, by means of a joint, which is constructed with a slotted hole for the joint-pin, in combination with a fixed pin, *g*, and score, *f*, for locking such joint, substantially as described.

89,887.—GEORGE M. PHELPS, Brooklyn, N. Y. —*Printing-Telegraph.*—May 11, 1869.

Claim.—1. Rotating the type-wheel by means of a rotary magnetic motor, applied to a shaft that is connected with the type-wheel, substantially as set forth.

2. The governor and adjustable circuit-breaker, substantially as set forth, in combination with the electro-motor, substantially as set forth.

3. The mechanism, substantially as set forth, for giving an impression upon the type-wheel by the lever *k′*, and type-wheel actuated by the revolution of the shaft *l*.

4. The pawl 35, stops 39, collar 33, and ratchet 36, substantially as set forth, for locking the type-wheel during intervals in the transmission of words or signals.

5. The slides *v*, collar 33, and mechanism, substantially as set forth, for directing the current of electricity to the magnets o^1, as set forth.

6. The combination of the circuit-breaking lever *t* with the locking-lever and type-wheel, substantially as described.

89,888.—JESSE REYNOLDS, Philadelphia, Pa.—*Grate-Bar for Furnaces and Heaters.*—May 11, 1869.

Claim.—The combination and arrangement of the tapering or wedge-shaped piece *e* with the bearing-bars *d* of the grate, and sliding-bars *b*, whereby the bars may be pushed up to their places, substantially as described.

89,889.—WESTLEY RICHARDS, Birmingham, England.—*Breech-Loading Fire-Arm.*—May 11, 1869.

Claim.—1. The combination of the breech-lever and its stopper (constructed to be turned upward and forward to open the breech) with the hammer, through the intermediate cocking-lever *k*, the combination being and operating substantially as set forth.

2. The combination of the breech-lever and its stopper (constructed to be turned upward and forward to open the breech) with the hammer, by means of the intermediate levers interposed between the breech-lever and the hammer, the whole constructed to operate substantially as before set forth.

3. The combination of the breech-lever and its sliding-block with the plunger and the lever *i*, substantially as set forth, to draw back the plunger as the breech opens, and thus prevent accidental explosions.

4. The combination of the lever *i* with the jointed end k^3 of the cocking-lever, as set forth.

89,890.—CHARLES G. SARGENT, Westford, Mass. —*Cotton-Gin.*—May 11, 1869.

Claim.—1. The raw-hide or partially elastic working-edge of a stationary guard, in combination with a ginning or cleaning cylinder, substantially as described.

2. The reciprocating comb or finger-bar, in combination with a stationary guard and ginning or cleaning cylinder, the whole constructed to operate substantially as described.

3. The combination of one or more oscillating rakes with a ginning or cleaning cylinder, substantially as described.

89,891.—CHARLES G. SARGENT, Westford, and ALFRED B. ELY, Newton, Mass.—*Cotton-Gin.*—May 11, 1869.

Claim.—An elastic or partially elastic-surfaced roll, in combination with a reciprocating guard-plate, having a serrated or corrugated edge, arranged and operating substantially as described.

89,892.—JOHN SEEBERGER and JOSEPH SEEBERGER, West Troy, N. Y.—*Pump.*—May 11, 1869.

Claim.—1. The revolving bottom D, furnished with the valve V, constructed as described, in combination with the fixed bed E, with one or more pipe-holes *h*, all arranged and constructed as and for the purpose specified.

2. The revolving bottom D, packed with the leather *g*, as shown in fig. 6, and in combination with the shaft *i*, and the miter-gears *k* and *m*, as and for the purpose set forth and described.

3. The dial-face *o*, furnished with the numbered lines 1, 2, 3, and short lines *r*, in combination with the thumb-piece *p*, with its pointer *s* and miter-gears *m* and *k*, all arranged and operated as and for the purpose set forth and specified.

4. The eccentric W, worked by its thumb-piece W′, in combination with the stopper *u*, as and for the purpose set forth and described.

5. The vent Z, provided with the float Z′, in combination with the chamber G and nozzle *y*, as and for the purpose specified.

6. A pump constructed with the chamber A, plunger B, in combination with a revolving bottom, D, furnished with a valve, V, and moving in the pierced fixed bed E, by means of the shafts *i* and *u′* and the miter-gears *k* and *m*, as and for the purpose set forth and described.

89,893.—HENRY S. SHISLER, Manheim Township, Pa.—*Gate-Fastener.*—May 11, 1869.

Claim.—The connecting link or plate B, in com-

bination with a spring rod or pole, A, and wire C, when applied substantially in the manner and for the purpose specified.

89,894.—ANTHONY W. SMITH, Birmingham, Pa.—*Parlor-Game.*—May 11, 1869.

Claim.—The combination of a series of games, arranged in a series of concentric circles, so as to be played by a single pointer or revolving hand at the center, substantially as above set forth and described.

89,895.—EDWIN J. SMITH, Chicago, Ill.—*Revolving Bin.*—May 11, 1869.

Claim.—1. The table E, provided with partitions *b*, so as to form a series of compartments or bins, and cones D and C, so constructed and arranged that the table revolves on the apex of the cone C, substantially as and for the purposes herein specified.

2. The combination of the flange A, series of balls, or their equivalent, and the cones C and D, when constructed and arranged substantially as shown and specified.

89,896.—CHARLES E. SPAULDING, Theresa, N. Y.—*Bee-Hive.*—May 11, 1869; antedated April 8, 1869.

Claim.—1. The shaft H *h*, in connection with the removable upper chamber *a*, hive E, and lock *s*, substantially as and for the purpose herein described.

2. The revolving hoop *f*, in connection with bottom C *c n*, for opening and closing the entrances to the hive, substantially as set forth.

3. The shaft H, revolving upper chamber *a*, boxes D, revolving hoop *f*, and lower chamber E, having a covering-tube, *i*, and double walls *g f*, all constructed, arranged, and operated as and for the purpose herein set forth.

89,897.—MARTIN STIEFENHOFER, City Island, N. Y.—*Rocking-Chair and Rotary-Fan.*—May 11, 1869.

Claim.—The levers *o* and *p*, set upon the rockers of the chair, in combination with the standard *g*, hinged to the chair, so as to be adjusted, and the fan *k*, which is revolved by the cord, as and for the purposes set forth.

89,898.—J. F. TAPLEY, Springfield, Mass., assignor to himself, SAMUEL BOWLES, B. F. BOWLES, and CLARK W. BRYAN, same place.—*Paper-Fastener.*—May 11, 1869.

Claim.—Securing or binding sheets by a metal plate, substantially as and for the purposes herein described.

89,899.—JOHN F. THOMAS, Ilion, N. Y.—*Hay-Spreader.*—May 11, 1869.

Claim.—1. The stationary cams E, constructed substantially as described, for giving the positions and motions, as specified, to forks *f*, which turn upon axes parallel to the axis of the reel or shaft D, substantially as shown and set forth.

2. The stationary gear-box H, the intermediate pinion P, and the central pinions N, constructed and operating as described, in combination with the wheel C of the carriage, and with the tedder-arms and tines, for the purpose described.

3. The stationary pawl *s s*, in combination with the tedder-arms and tines and the carriage-wheels of the machine, substantially as described.

4. The combination of the arm or dog *g*, fork-tines *f*, and cam E, constructed and operating substantially as described.

5. The arrangement of independently movable forks or tines upon independent revolving arms, when the vibrating movements of the forks or tines are controlled by a stationary cam, substantially as described.

89,900.—ASAPH THOMPSON, Hudson, Ohio.—*Milk-Cooler.*—May 11, 1869.

Claim.—1. The two hollow boxes, with their metallic surfaces M M′, the knobs K K, &c., depressions D D′, and perforations, or their equivalents, substantially as shown and set forth.

2. The combination and arrangement of said boxes with faucets, reservoirs, and packing, for the purpose and substantially as herein set forth.

3. The mode of cooling milk and other liquids, by causing a thin stratum thereof to so flow between two metallic surfaces as to keep the cavity therefor at all times full of the liquid to be cooled, while the metallic surfaces are themselves kept cool by a stratum of cooling liquid, so flowing forward over the upper sides of the one, and (the same stratum) backward in full contact with the under side of the other, as to keep all the cavities at all times both full and flowing, substantially as set forth.

89,901.—ASAPH THOMPSON, Hudson, and JAMES DARLING, Northfield Township, Ohio.—*Milk-Cooler.*—May 11, 1869.

Claim.—1. The combination of the horizontal pipes P P, &c., for the cooling liquid to flow through, with the floats F F, &c., or their equivalents, substantially as and for the purpose set forth in the foregoing specification.

2. The mode of cooling liquids, by horizontal pipes, or their equivalents, kept floating on or at any desired depth beneath the surface of the liquid to be cooled, the pipes adjusting themselves to the varying height of the liquid to be cooled, and having constantly flowing through them the cooling liquid, substantially as herein set forth.

89,902.—SILVANUS FREDERICK VAN CHOATE, Boston, Mass.—*Breech-Loading Fire-Arm.*—May 11, 1869.

Claim.—1. The breech-frame *b*, as made with a slot, having walls in vertical planes, a bottom concentric with the bore of the barrel, and an open top, one of the walls having a groove for reception of the shell-extractor, the frame having also a recess at the rear to receive the recoil-cam, which locks the breech-piece in the breech-frame.

2. The breech-piece *a*, made to fill the slot in the frame, and to have its top flush with the cylindrical surface of the breech-frame, and with provision at the rear for the recoil-cam and its turning-shaft, and with the slot *n* for operating the cartridge-ejector, and the mortise, described and shown, for admitting the actuator of the firing-pin, and the slot which traverses pin *k*.

3. The shaft *e*, constructed at or near its end, as described, so as to operate as a safety-device to protect the firing-pin from being struck while the breech-piece is unlocked.

4. Combining with the shaft *e* a projection, *z*, as and for the purposes described.

5. In fire-arms in which the breech-piece *a* can be moved back and forth in the direction of the length of the barrel without turning, traversing in a slot in the breech-frame *b*, the employment of a cam, *f*, arranged to slide with the breech-piece, and to be turned crosswise of said piece, so as to lock into and unlock from cross-cuts or recoil-seats made in the opposite sides of the breech-frame *b*, as and for the purposes described.

89,903.—THOMAS B. WALKER, Wakefield, Mass.—*Cooking-Stove.*—May 11, 1869.

Claim.—1. The combination of the hot-air flues F, H, and I, and the openings *c e* thereof, with the air-heating chamber E, the fire-place A, the oven D, and the smoke-flues over the top, in rear, and underneath the oven, the whole being as set forth.

2. The combination of the chamber *h* (in the shelf M) and its openings *i f*, the fire-place A, the chamber E, with the oven D and the air and smoke-passages arranged about the same, in manner as described.

3. The arrangement of the air-flues F, H, and I, and the openings *c e* with the oven, in manner as set forth, when such flues are employed with a fire-place and air-heating chamber about the same, and with smoke-flues, as specified.

4. The arrangement of the shelf-chamber *h* and its openings *i f*, with the oven D, and the air and smoke flues about the same, and combined with a fire-place and air-heating chamber, as set forth.

89,904.—MARTIN WEAVER, East Earl Township, Pa., assignor to himself and PHILIP FOREMAN

same place.—*Feed-Regulator for Mills.*—May 11, 1869.

Claim.—The combination and arrangement of the external cup A with its conductors *a a a*, central elevated disk B, and curved beaters *b b b*, internal ring D, provided with flanges *d d d d*, and slotted ears E *e*, all suspended within the eye of the runner G, and operated as and for the purpose herein shown and described.

89,905.—William Wellington, Rockford, Ill.—*Ventilator and Refrigerator.*—May 11, 1869.

Claim.—The refrigerator and ventilator above described, consisting substantially of the refrigerator A, in combination with the tubes A^2 and B, with their slides *a* a^1 a^2, as and for the purpose set forth.

89,906.—William L. Williams, New York, N. Y.—*Wood-Splitting Machine.*—May 11, 1869.

Claim.—The swinging-arm *l* and pulley *k*, arranged as specified, to carry the feeding-chain for moving the wood in the trough of a wood-splitting machine, substantially as set forth.

89,907.—William H. Allen and William Stoddard, Winona, Minn.—*Flour-Bolt.*—May 11, 1869.

Claim.—The external rapper, (one or more,) having a shoulder, *b*, and the spring E, in combination with cleats *f*, on the ribs *a* of a flour-bolt, substantially as described.

89,908.—R. N. Allen and L. W. Kimball, Pittsford, Vt., assignors to themselves, William H. Mallory, and Edwin L. Butterfield, New York City.—*Car-Wheel.*—May 11, 1869.

Claim.—Car-wheels constructed of metal and paper, substantially as herein described.

89,909.—John A. Bailey, Detroit, Mich.—*Pneumatic Pump.*—May 11, 1869.

Claim.—1. The pneumatic pump, arranged as described, to effect the elevation of the water by the direct action of the compressed air on the water, and provided with its valve-mechanism D C *b h f a*, substantially as shown, for changing the pressure from one chamber to another, to admit of alternately filling the same, all as and for the purpose specified.

2. The valve C, as arranged to be operated by means of the compressed air, the same being admitted to act thereon after having expelled the water from the chamber F or G, through the medium of the float-valves L K, substantially as and for the purpose specified.

3. The vessel H, having the compartments F G, the valve C, provided with passages, as described, and its operating mechanism, the float-valves L K and valves S, all arranged and combined substantially as and for the purpose specified.

89,910.—Otto H. Bandisch, Berlin, Prussia, assignor to Frederick Volckmann, Hoboken, N. J.—*Explosive Compound.*—May 11, 1869.

Claim.—The explosive compound herein described.

89,911.—Virgil W. Blanchard, Bridport, Vt.—*Machine for Carving.*—May 11, 1869.

Claim.—1. The employment of the nuts G and H, screw-shafts p^3 and q^3, in combination with the two upright screw-shafts i^3 and j^2, and nuts N and O, for the purpose of giving at the same time a longitudinal sliding motion to the pattern or copy, and the material furnished to be carved, &c., and a rising and falling vertical motion to the molding and cutting or polishing points of the lathe or engine, substantially as and in the manner set forth.

2. The employment of the sliding frames E and F, and nuts H and G attached to said frames, in combination with the screw-shafts p^3 and q^3, having the mechanism for communicating motion to said shafts, substantially as and for the purpose described.

3. The nuts N and O, in combination with the screw-shafts i^3 and j^3, and guides T^1, T^2, and T^3, as and for the purpose set forth.

4. The shaft a^7, carried in the nut N, with the nut R and arm P, arranged and operating substantially in the manner and for the purpose specified.

5. The arm b^7, lever Q, and shaft S, carried by the nut O, arranged to operate substantially as described.

6. The combination of the shaft a^7, carried in the nut N, nut R, and arm P, with the arm b^7, lever Q, and shaft S, substantially as described.

7. The weighted lever V, pivoted to the arm of nut O and the sliding-frame S^1, in combination with shaft S, arranged to operate substantially as described.

8. The weight X, in combination with the lever Q, arm b^6, nut O, and screw-shaft j^3, arranged to operate substantially as and for the purpose set forth.

9. The employment of the lathe-mechanism attached to sliding-frame E, consisting of the parts *a* and B″, in combination with said frame, substantially as described.

10. The employment of the mechanism mounted on the sliding-plate K K, in combination with the bed-plate A A, ways *r r*, tooth-bar A^3, and folding-frames B B, when all the parts are constructed and arranged to operate substantially as and for the purpose described.

11. The ratchet-wheel f^2, pawl h^2, disconnecting lever c^6, and the shaft j^3, arranged and operated substantially as set forth.

12. The adjustable feed-mechanism, consisting of feed-bar O^2, the plate above it provided with a slot or mortise, and a screw, to vary the length of the stroke, substantially as and for the purpose set forth.

13. The arrangement of the differential gear-wheels k^3, b^3, t^3, and u^3, with the screw-shafts i^3, j^3, p^3, and q^3, and nuts N, O, H, and G, substantially as and for the purpose set forth.

89,912.—Alonzo T. Boon and James H. Bell, Galesburgh, Ill.—*Bed-Bottom.*—May 11, 1869.

Claim.—1. The boxes A A, provided with rubber, in combination with arms C C, substantially as and for the purpose set forth.

2. The spool D, as arranged and operated substantially in the manner and for the purpose as described.

89,913.—Albert Branshaw, Fond du Lac, Wis.—*Car-Coupling.*—May 11, 1869.

Claim.—The combination and arrangement of the draw-head A, gravitating-hook C, and pivoted device D, substantially as described.

89,914.—Theodore W. Burger, New York, N. Y.—*Vent for Cans.*—May 11, 1869.

Claim.—The plug or cap C, fitting within the socket B of the can, when provided with the pendant wire stop D, as herein described, for the purpose specified.

89,915.—Daniel C. Chester, Ogdensburgh, N. Y.—*Braiding-Foot for Sewing Machines.*—May 11, 1869.

Claim.—1. A braider-foot, constructed substantially as described, with elastic fingers *b b*, arranged along either side of the foot, and bent at their ends, to form a braid-passage, *c*, in line with, and so that it meets or approximates the needle-hole *d*, on the under side or face of the foot, essentially as specified.

2. The combination of the cam *e* and screw *f* with the elastic fingers *b b*, constructed to form a braid-passage, *c*, disposed, in relation to the needle-hole *d*, substantially as specified.

89,916.—Jonathan M. Clark, New York, N. Y.—*Steam-Generator.*—May 11, 1869.

Claim.—The combination of the hollow, angular head B, tubular connecting-plug C, and flange *d*, substantially as described.

89,917.—Benjamin F. Cloud, Philadelphia, Pa.—*Curtain-Fixture.*—May 11, 1869.

Claim.—The combination of the flanged journals *a*, hangers *c*, chords *e i*, rollers *f*, pulley *j*, friction-wheel *k*, casing *l*, and the friction-spring, as herein described, for the purpose specified.

89,918.—J. W. Cole, Mount Pleasant, Iowa.—*Pump.*—May 11, 1869.

Claim.—A metallic pump-bracket, held in place

by lateral flanges, embracing an outer portion of the pump-stock, the inner flanges being fixed in a groove, the bottom part of said bracket converging upon the base of the slot, the pump-brake pivoted upon bearings projecting about centrally from the bracket, all arranged so as to permit the full sweep of the handle, from a vertical position, when the piston is elevated to an acute angle in the reverse position.

89,919.—CHARLES CROSS, Louisville, Ky.—*Foot-Measure for Shoemakers.*—May 11, 1869.

Claim.—1. The combination, with the bed-piece A, provided with the side walls B and B′, of the measures C and C′, when inlaid in the same, substantially as and for the purpose described.

2. The combination, with the bed A, having the side walls B and B′, of the inlaid measures D and E, substantially as and for the purpose described.

3. The slide E, arranged in the adjustable part F of the bed, substantially as and for the purpose described.

4. The combination, with the inlaid measures C and C′, of the toe-gauges G, substantially as and for the purpose described.

89,920.—FREDERICK EBERT, Saxonburgh, Pa.—*Horse Hay-Fork.*—May 11, 1869.

Claim.—The arrangement shown and described of the sliding-block or plate D, and cross-tie or brace *a*, and lug a^1, with relation to the bent rod A, link E, lever F, sliding-rod C, and articulated arms B B′, as and for the purpose specified.

89,921.—GEORGE EWART, New York, N. Y.—*Needle-Wrapper.*—May 11, 1869.

Claim.—The needle-wrapper, which consists of the paper sheets A B, the sheet B having the projecting flaps *a b*, by means of which the loop *c* is formed, substantially as herein shown and described.

89,922.—DANIEL FASIG, Rowsburgh, Ohio.—*Device for Seizing Animals.*—May 11, 1869.

Claim.—The curved horns B and extensions *d*, in combination with the handle A, plate *b*, links *e*, rod *f*, loop *h*, and elastic strap C, all arranged as described, for the purpose specified.

89,923.—JOHN FIELD, New York, N. Y.—*Banjo.*—May 11, 1869.

Claim.—Constructing the drum of banjoes with a frame, A, formed with the projections 3 3, and cross-pieces 4 4, and ring B, substantially as and for the purpose herein shown.

89,924.—GAETANO FORMICA, New York, N. Y.—*Rocking-Chair.*—May 11, 1869.

Claim.—1. The levers E E, pivoted to the side bars of the swinging-seat, and connected with the rotary fan, as described, they being so hung that they will swing in opposite directions, substantially as herein shown and described.

2. The combination of the support A, which carries the pivoted seat, with the springs *e*, levers E, rods *f*, and rotary fan F, all arranged and operating substantially as herein shown and described.

89,925.—JOHN S. FRAY, Bridgeport, Conn., assignor to himself and HORACE PIGG, same place.—*Attachment to Boring-Brace.*—May 11, 1869.

Claim.—The attachment B, provided with the longitudinal groove, the lugs or ears C C, and the set-screws *d*, arranged and operating as described, whereby it is adapted to be applied to a common boring-brace, as herein set forth, for the purpose specified.

89,926.—C. E. FRITTS, Oneonta, N. Y.—*Curtain-Fixture.*—May 11, 1869.

Claim.—A window-shade fixture, consisting of the combination of the spring-drum *a*, spring *b*, arbors *c h*, cord *g*, recessed pulley K, cord *e*, ratchet-wheel *n*, pawl *o*, and spring-rod *p*, all combined and operating substantially as herein shown and described.

89,927.—L. P. GARNER, Ashland, Pa.—*Coal-Screen.*—May 11, 1869.

Claim.—1. A coal-screen, composed of the circular grate-bars A, constructed as described, and arranged for rotation, substantially as specified.

2. The combination, with the said rotary screen, of the roller B, provided with disks, working in the spaces between the grates, and the sliding spring-comb D, all substantially as specified.

89,928.—JAMES HERVEY GUEST and ELWOOD FAUCETT, New Albany, Ind.—*Memorandum-Book.*—May 11, 1869.

Claim.—Attaching the book B to the cover A by means of the hinge C, slots *f*, and pins *e*, all arranged as described, for the purpose specified.

89,929.—VALENTINE T. HALL, Brooklyn, N. Y.—*Locking-Device for Stop-Cocks.*—May 11, 1869.

Claim.—The collars, flanges, or lugs *d e* and *g h*, formed upon the cock C, sleeve B, and pipe A, to receive the padlocks, whereby either the cock is locked to the sleeve, or the sleeve to the pipe A, all arranged as described, for the purpose specified.

89,930.—VALENTINE T. HALL, Brooklyn, N. Y.—*Locking-Case for Stop-Cocks.*—May 11, 1869.

Claim.—The case or clasp C, provided with either an interior hook-fastening, or with a hinge, or other connection, and so constructed that a stop-cock or connection may be secured and prevented from being turned or removed, by applying a padlock to the case, substantially as shown and described.

89,931.—J. WAYTT JONES, Paducah, Ky.—*Door-Lock.*—May 11, 1869.

Claim.—The combination of the slides E and G with the bolts B and F, and levers *J*, *m*, and *n*, arranged substantially as shown and described, for the purposes set forth.

89,932.—T. D. KEITH, Mayville, Wis., assignor to himself and E. J. DAHM, same place.—*Operating-Drill.*—May 11, 1869.

Claim.—A ratchet-swivel, placed between two ropes, so constructed and arranged as to act and to automatically turn a drill, substantially as herein shown and described.

89,933.—THEODOR LANDMANN, Cincinnati, Ohio.—*Composition for Floors, Sidewalks, &c.*—May 11, 1869.

Claim.—1. The compound for floors, sidewalks, &c., herein described, when composed of the ingredients substantially in the manner set forth.

2. Soaking the cement floor or walk with linseed or other oil, after it is dry, to make it water-tight, as specified.

89,934.—ISRAEL LONG, Terre Haute, Ind.—*Coffee-Roaster.*—May 11, 1869.

Claim.—1. The compass-legs, in combination with the screw-nut, when applied to a coffee-roaster, substantially as and for the purpose specified.

2. As an article of manufacture, the whole device above described, consisting essentially of the globe A, handle *i*, legs *e e e*, compass-legs *m m*, screw-nut *n*, crank *b*, shaft B, arm *a*, and oblique plate C, all constructed, arranged, and adapted to operate substantially as and for the purposes set forth.

89,935.—F. X. LOUGHERY, Kelleysville, Pa.—*Warp-Beam for Loom for Weaving Skirts.*—May 11, 1869.

Claim.—The conical yarn-beam B, provided with the separating-disk D, substantially as and for the purpose described.

89,936.—CHARLES T. MASON, Sumter, S. C.—*Electric Alarm.*—May 11, 1869.

Claim.—The combination of the circuit-wire B, springs D, and arms F, with each other, substantially as herein shown and described and for the purpose set forth.

89,937.—W. A. MCDONALD, Morrisania, N. Y.—*Machine for Cutting Moldings in Wood.*—May 11, 1869.

Claim.—1. The stamped or molded saw-blade C, when formed with the requisite angular, curved, or irregular cross-section, and tapered toward one end,

its teeth being on the tapering edge, as shown, operating as described, for the purpose specified.

2. Arranging two molded tapering saw-blades C, which are constructed as herein described, on one machine, to cut into the edge of a wooden plate, as herein set forth, for the purpose specified.

89,938.—DANIEL B. NEAL, Mount Gilead, Ohio, assignor to himself, W. W. MCCLENACKEN, and E. C. CHASE, same place—*Horse Hay-Fork.*—May 11, 1869.

Claim.—In a horse hay-fork, constructed as described, the combination, with the handle H, of the shaft *a*, disk D, bar A, and cord C, constructed, arranged, and operating substantially in the manner specified.

89,939.—STEWART NEILL and ADAM PICK, Chillicothe, Ill.—*Extension End-Board for Wagons.*—May 11, 1869.

Claim.—The combination of the pivot-blocks or stops *b* with the triangular sides C, constructed substantially as described.

89,940.—HENRY L. PRATT, Beverly, Mass., administrator of the estate of E. L. PRATT, deceased.—*Pen.*—May 11, 1869.

Claim.—A pen-fountain, having two foraminous fluted tongues *a f*, arranged to clasp upon the body of a pen, and between each of which and the adjacent surface of the pen an ink-holding and nib-supplying reservoir is formed, as described.

89,941.—H. L. PRATT, Beverly, Mass., administrator of the estate of E. L. PRATT, deceased.—*Boiler-Scraper.*—May 11, 1869.

Claim.—The construction and arrangement of the heads *b*, pieces *c*, with scraping-edges *d*, and ribs *f* and *g*, and springs *e*, all operating together substantially as described.

89,942.—WILLIAM QUAYLE, Warsaw, Ill.—*Door-Fastener.*—May 11, 1869.

Claim.—The loose-spring pawls *h*, toe D, slotted plate A, having the ratchet-teeth *e* formed upon it, the bolt C, slotted back-plate B, spring J, and connecting-rod L, in combination with the roller *m*, all constructed, arranged, and operating as herein described, for the purpose specified.

89,943.—THOMAS M. RICHARDS, Philadelphia, Pa., assignor to JOHN H. EATON, Burlington, N. J.—*Ironing-Table.*—May 11, 1869.

Claim.—The board A, and the folding-frame A′, constructed, arranged, and operating in combination, substantially as and for the purposes herein shown and described.

89,944.—JOHN H. ROBERTS, Nashville, Tenn.—*Rock-Drilling Machine.*—May 11, 1869.

Claim.—1. The combination with the trip-catch E, arranged to operate the drill of the cam-driving shaft, gear-wheel B, and balance-wheel, geared thereto, when all arranged as specified.

2. The trip-catch E, arranged to slide on its axis, and provided with the friction-rollers I, spring K, and combined with the lever H, substantially as specified.

3. The combination, with the lever H, of the spring-dog O, and notched guide M, substantially as specified.

4. The combination, with the trip-catch, of the adjusting-spring S, substantially as specified.

5. The arrangement of the rope-case W on the drill-rope post, substantially as specified.

89,945.—ALBERT ROHRBECK, New York, N. Y.—*Apparatus for Stamping Lace-Paper.*—May 11, 1869.

Claim.—1. A machine for stamping lace-paper, consisting of the hammer A, slotted plate B, driving-shaft H, cylinder E, and springs G G, all arranged, combined, and operating substantially as herein shown and described.

2. The plate B, having the bent slot, when combined with the shaft H, which has the fingers *f* and *g*, all arranged and operating substantially as herein shown and described.

3. The perforated plate *c*, formed on the bar F below the springs G, in combination with the perforated plate *d*, which is loose on the bar F, above the springs G, both said plates have flanges *e*, substantially as and for the purpose herein shown and described.

89,946.—JOHN ROY, New Orleans, La.—*Draining-Apparatus.*—May 11, 1869.

Claim.—1. The draining-apparatus, so constructed that it may be placed at any desired depth beneath the water of the canal while forcing out the water against the outside head of water only, substantially as herein shown and described, and for the purpose set forth.

2. The arrangement of the water-tight compartment B, the compartments C, one or more, the piston-chambers F, and pistons G, with each other, substantially as herein shown and described, and for the purposes set forth.

89,947.—GUSTAV SCHULZ, Fort Madison, Iowa.—*Breech-Loading Fire-Arm.*—May 11, 1869.

Claim.—The lock, consisting of the fixed tube P, movable cylinder G, rod I, needle H, and springs J, K, and L, the rod I having two shoulders, *e* and *f*, and the springs K and L, the pins *g* and *h*, respectively, all made and operating substantially as herein shown and described.

89,948.—FREDERICK H. SMITH, Baltimore, Md.—*Bridge.*—May 11, 1869.

Claim.—1. Anchoring the tops of iron or steel piers of bridges, by means of longitudinal diagonal stays, or equivalent tension-members, to the feet or pedestals of other piers or abutments, substantially as herein described, so that the pier can be formed of but two columns, or equivalent compression-members, and still have the great longitudinal base afforded by the spread of the longitudinal diagonal stays, to give it stability under the action of temperature or moving load.

2. In combination with the system of longitudinal diagonal stays, specified in the preceding clause, iron or steel piers, stiffened by means of up-and-down strut or tension rods, and cross-struts or tension-rods, at such point in the height of the pier as will prevent flexure, substantially as shown and described.

3. Stiffening iron or steel bridge-piers, by means of longitudinal rods or struts, anchored to or abutting against masonry, and connecting therewith the piers, and the piers with other piers, at such point in their heights as will prevent flexure, substantially as described.

4. The combination of the iron and steel piers of bridges with the longitudinal diagonal stays, the up-and-down stiffening system, and the longitudinal stiffening system, substantially as and for the purposes set forth.

89,949.—N. L. SMITH, Derby, Conn.—*Alarm Feed-Water Regulator for Boilers.*—May 11, 1869.

Claim.—The arrangement of the yielding vessel B, stand A, and jointed pipes D E, with reference to the boiler F and whistle G, when constructed substantially as herein set forth.

89,950.—ERASTUS R. SPEAR and WILLIAM R. SPEAR, Orland, Ind.—*Horse-Rake.*—May 11, 1869.

Claim.—The lever M, carrying the forked head L, pivoted to and between the curved bars H, whose lower ends embrace the finger or tooth K, upon the rake-head, and whose upper ends are hung to the frame of the machine, all arranged as described, for the purpose specified.

89,951.—HENRY STOLLAR, Watertown, Ohio.—*Evaporator.*—May 11, 1869.

Claim.—An improved evaporator, formed by the combination of the main pan A, partitions a^2, and trough E with each other, said parts being constructed and arranged substantially as herein shown and described, and for the purposes set forth.

89,952.—JAMES STRATTON, Philadelphia, Pa., assignor to W. W. GLENWORTH, same place.—*Apparatus for Supplying Air to Hydrocarbon-Burners.*—May 11, 1869.

Claim.—1. The tapering-valve C, with its floats *b*

and rod c^2, in combination with the reservoir B and pipes D and H, arranged and operating substantially as decribed.

2. The reservoir B and tube E, in combination with the fan-cylinder A and pipe D, as and for the purpose described.

89,953.—A. R. SWARTZ, Carlisle, Pa.—*Child's Crib.*—May 11, 1869.

Claim.—Cribs for children, having the bottoms adjustable as to height, by means of the brackets B, arranged at different heights under the crib, as herein shown and described, for the purpose specified.

89,954.—JOHN H. TEAHL and JACOB C. ZIMMERMAN, Eberly's Mills, Pa.—*Sash-Holder.*—May 11, 1869.

Claim.—The drop E, constructed as described, in combination with the drop D and plate C, substantially in the manner and for the purpose specified.

89,955.—LOUIS B. TIEBEL, Hudson City, N. J., assignor to himself and CHARLES MATTERN, same place.—*Breech-Loading Arm.*—May 11, 1869.

Claim.—The sliding-block C, when arranged as shown, and when connected with the hinged lever D, spring E, needle *i*, and trigger F, all made and operating substantially as herein shown and described.

89,956.—ALBERT TSCHOP and JACOB HARTMAN, East Berlin, Pa.—*Horse-Rake.*—May 11, 1869.

Claim.—1. The combination and arrangement of plate K, having the notched or roughened lower edge, and the curved eccentric bar N, screwed to said plate at *n*, and having its lower end roughened or notched on the inner side, substantially as and for the purpose described.

2. In connection with the axle B, bar I, lever K, and eccentric N, the hinge *t*, when arranged to operate as and for the purpose set forth.

89,957.—SARA TUTTON, Tunkhannock, Pa.—*Presser-Foot for Sewing-Machines.*—May 11, 1869.

Claim.—The combination, with the presser-foot *a*, of the presser *b f*, and the spring *c*, all constructed and arranged so that the part *b* may be turned away from the part *a*, substantially as specified.

89,958.—ALEXANDER R. WIGGS, Iuka, Miss.—*Cotton-Planter.*—May 11, 1869.

Claim.—The arrangement and combination of the harrow A, plow C, hopper B, scraper D, and handles E, when constructed and operating as herein described, and for the purposes set forth.

89,959.—AMBROSE G. WILDER, Cohoes, N. Y.—*Pipe-Cutter.*—May 11, 1869.

Claim.—1. The arrangement of the knife or cutting-tool C and the spring E, operated upon by the screw-handle B, and in combination with the adjustable rollers H H, in the manner and for the purposes substantially as herein described and set forth.

2. The employment of the self-adjusting knife or tool or cutter C, arranged and operating within the frame A, and in combination with the adjustable rollers H H, in the manner, by the means, and for the purposes substantially as herein described and set forth.

89,960.—BENJAMIN F. WILSON, Geddes, N. Y.—*Velocipede.*—May 11, 1869.

Claim.—1. Crossed propelling-handles h' h'', Fig. 2, engaging and releasing apparatus, as shown in Fig. 4, when operating substantially in the manner described.

2. The pivoted seat C, spring *o*, and slotted arm *b*, when arranged and operating substantially in the manner set forth.

3. The independent spring-brakes l^1 l^2, Fig. 3, slots, with pins n^1 n^2, and springs m^1 m^2, when arranged and operating substantially in the manner shown and described.

4. The adjustable umbrella, awning, or parasol brackets, when operating substantially in the manner set forth.

89,961.—DANIEL WOODARD, Springfield, Tenn.—*Apparatus for Distilling and Purifying Spirits.*—May 11, 1869.

Claim.—1. The cylinders A B and perforated pipes O P, arranged in combination with a still, or boiler and condenser, substantially as specified.

2. The case D, hopper E, cylinder F, and rake H, combined with the cylinder B, substantially as specified.

3. The cylinders B and C, provided with the passages G, K, and N, and their valves, and the rakes I and M, all substantially as specified.

89,962.—R. B. ZWAHLEN, New York, N. Y.—*Till-Check.*—May 11, 1869.

Claim.—The combination of the frame C, bar *a*, and spring-bar E, with the frame A and the drawer B, as herein described, for the purpose specified.

89,963.—JOHN T. AGNER, Lexington, Va.—*Bolting-Reel.*—May 11, 1869.

Claim.—The arrangement of the bolting-cloth *e* between the wire cloths *g s*, for the purpose of protecting the cloth *e* from the ravages of insects, substantially as specified.

89,964.—JOHN ALLGAIER, Philadelphia, Pa.—*Velocipede.*—May 11, 1869.

Claim.—1. The driving-spindle *d*, arranged to turn in a slide, *e*, controlled by a screw, *f*, when the said slide is adapted to a frame, H^1, arranged in respect to the center of the axle D, and spindle *d*, all substantially as and for the purpose specified.

2. The frame H^1, extending from the rear axle, and provided at the upper end with an adjustable slide, *e*, carrying a crank-shaft holding a pulley, H, all substantially as and for the purpose described.

3. The spindles I′ I′, with their arms *m*, in combination with the lever M, the foot-lever *q′*, and the intermediate devices, or any equivalent to the same, by which the movement of the foot-lever may be communicated to the lever M.

4. The combination of the guided spindles I′ I′, spring-bed J, spring K, and cross-bar J′.

5. The arm P, adapted to a staple, *w*, in the spring-bed, J, and hinged to the connecting-rod *n*, all substantially as and for the purpose set forth.

89,965.—WILLIAM BACON, Monticello, Kans.—*Breech-Loading Ordnance.*—May 11, 1869.

Claim.—1. The gun, constructed of the central core C, the wire *w*, the two disks B B′, the front strap C, and the side straps D D′, having the trunnions upon which the gun is supported in its carriage, all said parts being constructed and arranged substantially as and for the purposes specified.

2. The combination of the block E, pivoted between the parts D D′, the arms G G, the rods H H, and the blocks I I, guided by the parts D D′, and carrying the breech-block J, all said parts being constructed to operate as and for the purpose described.

3. In combination with the parts E, F, G, H, I, and J, the screw-bolt M, operating as and for the purpose set forth.

4. In combination with the main barrel of the gun, the small barrel or tube *m*, adapted to tear and penetrate the gun-cartridge, and to discharge into it a small cartridge, as herein described.

5. In combination with the pivoted breech-block J, the small tube *m*, rod R, and spring S, arranged (all except the spring) within the block J, and operating substantially as described.

6. The arrangement of the rod R, stop *o′*, link *o″*, spring *p*, lever *n*, spring S, and cord M′, in connection with each other, substantially as and for the purpose set forth.

7. The adit *e*, when arranged in connection with the breech-block J, and the parts contained therein, substantially as and for the purpose specified.

89,966.—GILBERT L. BAILEY, Portland, Me.—*Sample-Holder.*—May 11, 1869.

Claim.—A metallic spring sample-holder, made and operating substantially as and for the purpose herein set forth and described.

89,967.—M. B. BATTEY, Washington, D. C.—*Fastening for Collars.*—May 11, 1869.

Claim.—As an article of manufacture, the fastening for collars above described, consisting essentially of the plate A, provided with the pointed projections

a a and the irregular opening *o*, adapted to receive and hold the stud in the manner described and shown.

89,968.—JACOB H. BEAM, Woodside, Ill.—*Corn-Harvester.*—May 11, 1869.

Claim.—1. A corn-harvester, constructed and arranged with the frame A, revolving-axle B, cogs C *c c*, receiving-platform D, revolving-saws E, tumble-shaft F, upright shaft G, reel H, cogs I, and lever-device K, substantially as herein described, and for the purposes set forth.

2. The lever-device K, as arranged and applied to corn-harvesters, in the manner described.

89,969.—ASA M. BEARD, Hillsborough, N. H.—*Head-Block for Saw-Mills.*—May 11, 1869.

Claim.—1. In combination with the longitudinal beam *c*, to which the log is secured, the sliding bar *l*, (with its gear-rack,) the stationary gear-racks or rails *a b*, the pinions *h h'*, and auxiliary pinions *k k'*, (the shafts of which turn in bearings fixed to and moving with the beam *c*,) the whole being constructed and arranged to operate substantially as described.

2. In combination with the above, and with the auxiliary pinion *k'* and shaft *g*, the friction-wheel *n* and spring-pawl *p*, substantially as and for the purpose set forth.

89,970.—J. W. BISHOP, New Haven, Conn.—*Picture-Nail.*—May 11, 1869.

Claim.—A cut-nail, the head of which, without previous preparation or change of form, is covered with a cap of metal, in the manner described and set forth, as an article of manufacture.

89,971.—GEORGE W. BROKAW, Lodi, N. Y.—*Apple Parer and Slicer.*—May 11, 1869.

Claim.—1. The wheel or casing F, constructed as described, with cogs on its inner edge, and a worm on its periphery, substantially as and for the purposes herein set forth.

2. The combination of the shaft H, arm O, having at its upper end a notched eccentric or cam-shaped slot, the shaft H, arm R, toothed wheel S, and pin T, all constructed as described, so as to give the shaft H a rocking motion, substantially as and for the purposes herein set forth.

3. In combination with the shaft H and a mechanism for giving said shaft a rocking motion, the arm I, with its bar M, each being provided with a cog-wheel, as described, so as to be alternately thrown in and out of gear with the cogs on the main wheel F, all substantially as and for the purposes herein set forth.

4. The arrangement of the lever V, pivoted to the standard E, and passing through a slot in the arm I, its outer end supporting the rack-bar X, so that by the motion of the said arm the rack-bar will be thrown in and out of gear with the worm Y on the main wheel F, substantially as and for the purposes herein set forth.

5. The arrangement of the shaft *d* within the hollow standard Z, when said shaft carries or supports the paring-knife, and receives its motion from a worm on the outside of the main wheel F, by means of a movable rack-bar, X, and cog-wheel, *c*, substantially as herein set forth.

6. The arm *f*, carrying the paring-knife *m*, when pivoted to the shaft *d*, and provided with an eccentric against which the spring *g* presses, so as to cause the paring-knife to have an equal pressure on the apple, at whatever angle said arm is placed—that is, whether the apple is large or small, substantially as herein set forth.

7. Constructing an apple parer and slicer in such a manner that the mechanism which operates the paring-knife will set the slicing-knife in proper position and *vice versa*, substantially as herein set forth.

8. The arrangement of the bent lever *o*, carrying at one end the slicing-knife *p*, and at the other end connected by a pitman, *s*, to the cog-wheel N, whereby the slicing-knife obtains a drawing as well as a cutting stroke, substantially as herein set forth.

9. The curved and slotted guide *v*, constructed as described, so as to guide the slicing-knife in a semi-circular course, following the shape of the core, substantially as herein set forth.

10. The knife-guide *v*, constructed as described, its inner end resting on a suitable pivot, and its outer end adjusted by means of the lever *t*, when combined and arranged substantially as and for the purposes herein set forth.

11. The arrangement of the notched latch F', bar G', lever *w*, which supports the inner end of the knife-guide *v*, and spring H, or their equivalents, whereby the slicing-knife is made to cut the first piece thin, substantially as herein set forth.

12. The arrangement of the bent lever C', pawl D', and spring E', the lever worked by the head of the pitman *s*, for the purpose of turning the apple while slicing, substantially as herein set forth.

13. Providing the cog-wheel, through which motion is communicated to the slicing-knife, with a balance, substantially as and for the purposes herein set forth.

89,972.—IRVINE CARMAN, Sandwich, Ill.—*Horse-Rake.*—May 11, 1869.

Claim.—1. The hinged seat H, with supporting-bars *a a*, connecting-bars *b b*, and the rake-roller I, all substantially as and for the purposes herein set forth.

2. The rest J, supporting-bars *d d*, connecting-bars *c c*, and the rake-roller I, with teeth *e e* and springs *f f*, all arranged and operating substantially as and for the purposes herein set forth.

89,973.—GRANT T. COOLMAN and CHARLES M. YOUNG, Corry, Pa.—*Harvester.*—May 11, 1869.

Claim.—1. The combination of the chambered collars fixed on the axle, the driving-wheel hub, inclosing the collar, and the loose jamming-rollers, the whole constructed as set forth, for joint operation.

2. The collar B, keyed fast on the axle, and constructed as described, with recessed chambers, having sides curved tangentially to the axle, as set forth.

89,974.—WILLIAM G. CREAMER, Brooklyn, N. Y.—*Railroad-Car Ventilator.*—May 11, 1869.

Claim.—The construction of a ventilating-register, substantially as described, and for the purposes mentioned.

89,975.—JONATHAN L. DEVOL, Parkersburgh, W. Va.—*Sash-Fastener.*—May 11, 1869.

Claim.—The construction of the handle B and lever C, and their arrangement with reference to the bell-crank lever D, substantially as shown and described.

89,976.—JAMES S. DIACK, Aurora Ill.—*Car-Seat.*—May 11, 1869.

Claim.—The foot-box E and hinged board F, when constructed as herein specified, and when used in combination with the adjustable car-seat herein described.

89,977.—C. J. DOTY and ALFRED S. DICKINSON, Washington, D. C.—*Velocipede.*—May 11, 1869.

Claim.—The arrangement of the cranks F F', connecting-rods G G', and jointed lever H, with reference to the steering-apparatus, substantially as and for the purpose specified.

89,978.—JOHN W. EVERHAM, Pittsgrove, N. J.—*Gate-Hinge.*—May 11, 1869.

Claim.—The pivots or knobs C, eyes or jaws E, and latch D, in combination with each other, said parts being constructed and operating in connection with each other, and in connection with the posts and gate, substantially as herein shown and described, and for the purposes set forth.

89,979.—JAMES H. FISHER and CHARLES HOLCOMB, Mendota, Ill.—*Corn-Harvester.*—May 11, 1869.

Claim.—1. Combining with a corn-harvesting machine a corn-husker, having fluted or corrugated rollers, substantially as and for the purpose set forth.

2. The within-described arrangement of the gear-wheels C^1 C^1, with reference to the wheel C^2, pinion B^6, driving-wheel B^2, and pinions N, on the husking-rollers, substantially as shown, and for the purpose set forth.

3. The arrangement of the fly-wheels upon the

ends of the shafts of the husking-rollers, substantially as and for the purpose set forth.

4. The combination of the inclined planes L L with the husking-rollers.

5. The arrangement of the inclined planes L L, with reference to the apron G^1 G^2 G^3, substantially as shown, and for the purpose set forth.

6. The arrangement of the apron G^1 G^2 G^3, elevator H H^1, and spout or delivery K, with reference to the receptacle I, substantially as and for the purpose set forth.

7. The combination and arrangement of the husking-rollers N N, wheel Q, and endless belt or apron R R^1 R^2, substantially as and for the purpose set forth.

8. The arrangement of the wheel V, with reference to the endless belt or apron R R^1 R^2, substantially as and for the purpose set forth.

9. The arrangement of the cam or projection over the driving-wheel, the bell-crank lever V^1, and depositing-wheel V, substantially as and for the purpose set forth.

10. The arrangement of the endless apron F F^1 F^2 F^4 with reference to the cutters and inclined planes L L, substantially as and for the purpose set forth.

11. The construction and arrangement of the inclined planes L L and M, substantially as and for the purpose set forth.

12. The arrangement of the inclines L and M, with reference to the husking-rollers, substantially as shown, and for the purpose of guiding the stalks to the husking-rollers.

89,980.—Carl Fogelberg, New York, N. Y.—*Process of Preparing Zinc for Organ-Pipes and for other Purposes.*—May 11, 1869.

Claim.—1. Impregnating zinc with lead and tin, either or both, substantially as herein described, and for the purpose set forth.

2. The application of sal-ammoniac to the zinc, preparatory to the application of the melted metal or metals, substantially as herein set forth and described.

89,981.—Thomas Garrick, Providence, R. I.—*Lawn-Mower.*—May 11, 1869.

Claim.—The combination, with the trundle-roller and its cams, and the finger-bar frame and hand-shafts, hung upon the axis of the roller, as described, of the cutter-bar and the vibratory levers, by which it is operated, under the arrangement herein shown and set forth.

89,982.—Joseph Gawler, Washington, D. C.—*Wooden Burial-Case.*—May 11, 1869.

Claim.—The above-described improvement in burial-cases.

89,983.—James Gould, Lexington, Mass.—*Grass-Renovator.*—May 11, 1869.

Claim.—1. Combining with a cultivator, otherwise of ordinary or proper construction, one or more rollers or drums, provided with a series of projections or teeth, essentially in manner and for the purpose as before explained.

2. The construction of a cultivator, when provided with the rollers above mentioned, whereby the teeth of such cultivator may be readily raised above the surface of the ground, in manner and to operate as specified.

89,984.—Bellville A. Grant, Lockport, Ill.—*Hand-Spinning Machine.*—May 11, 1869.

Claim.—The combination and arrangement of the sliding-bar Y, swinging-frame *a'*, feeding-bar K, pinions *i* and *n*, and the pivoted bar *c*, all constructed and operating substantially as and for the purposes specified.

89,985.—Gordon Y. Gray, Niles, Mich.—*Cracker-Machine.*—May 11, 1869.

Claim.—1. The hollow cylinder C, having a series of cutters mounted on its exterior surface, and having openings through the shell of the cylinder, in the spaces between the cutters, to permit the surplus dough to pass through into the interior of the cylinder, substantially as described.

2. The screw G, located within said cylinder C, and arranged to operate in connection therewith, substantially as and for the purpose set forth.

3. The combination, with cutting-cylinder C, of the wires or cords H, when arranged to operate as described, for the purpose of removing the crackers rom the cutters, as set forth.

89,986.—C. B. Gregory, Beverly, N. J.—*Furnace for Steam and other Enginery.*—May 11, 1869.

Claim.—1. The arrangement of channels and perforations in the walls of a fire-place, substantially as described.

2. The arrangement, substantially as described, of steam-pipes and nozzles, by which jets of steam are directed on to the fire, in the course described, for the purpose specified.

3. In combination with the subject-matter of the second claim, the valves *j* above the air-passages, for the purpose described.

89,987.—Lev. Griswold, Brooklyn, N. Y.—*Sewing-Machine.*—May 11, 1869.

Claim.—1. The shaft D, arranged longitudinally in the goose-neck crank O, rocker K, arms M P, and connecting-links N Q, for operating the needle-bar, in combination with the crank-arm W, link V, and driver T, for driving the shuttle, when all arranged and operated in the manner and for the purpose herein specified.

2. The tri-armed friction-frame Y Y^1 Y^2, Z, and lever *a*, with its roller *d*, in combination with the cam *e* and feed-wheel X, for the purposes substantially as set forth and described.

89,988.—Henry Grogan and George T. Lape, New York, N. Y.—*Distillation of Hydrocarbon-Oils.*—May 11, 1869.

Claim.—1. The application of cold hydrocarbon-oils to a heated still, in such quantities that the heat in the still will suddenly evolve their available products, or so much of them as may be desired, before admitting a subsequent supply.

2. Combining the means of supplying the oils to a still with a vacuum-pump, so as to have the supply of oils, and the exhaust of their evolved products, alternate substantially as and for the purpose herein specified.

3. Regulating the time of admission, and the quantity of oils admitted into the still, to its temperature, so that the available products, or so much of them as it may be desired to evolve, may be evolved together, and immediately drawn off by the vacuum-pump, without materially affecting the temperature of the still, substantially as and for the purpose herein specified.

4. Conducting the evolved products, first, through a hot-water condenser, then a cold-water condenser, into a vacuum distillate-receiver, whence the lighter or uncondensed vapors, remaining separated from the heavier or condensed products, are removed by the vacuum-pump, substantially as and for the purpose herein specified.

5. The combination of the means of supply with a vacuum-still, and a hot-water and a cold-water condenser, and vacuum distillate-receiver, and a vacuum-pump, substantially as and for the purpose herein specified.

6. The combination of the means of supply with a vacuum-still, and a hot-water and a cold-water condenser, and a vacuum-pump, substantially as and for the purpose herein specified.

7. The combination of the means of supply with a vacuum-still, and a cold-water condenser, and a vacuum-pump, substantially as and for the purpose herein specified.

8. The combination of a vacuum-still with a hot-water and a cold-water condenser, and a vacuum distillate-receiver, and a vacuum-pump, substantially as and for the purpose herein specified.

9. The combination of a vacuum-still with a hot-water and a cold-water condenser, and a vacuum-pump, substantially as and for the purpose herein specified.

89,989.—Henry Gross, Tiffin, Ohio.—*Combination-Lock.*—May 11, 1869.

Claim.—1. The combination of the movable tumblers *d d*, movable center *c*, and stationary center K,

all constructed and arranged substantially as and for the purposes herein set forth.

2. The arrangement of the horizontal slots *x* and *y* with a vertical connecting-slot in the back of the lock-box R, for the purpose of moving the slide I, substantially as herein set forth.

3. The curved projections N N, constructed and arranged to operate substantially as and for the purposes herein set forth.

4. The movable tumblers *d d*, movable center *e*, fixed center K, slide I, and curved projections N N, in combination with the bolt H, all constructed and arranged as a whole, substantially as and for the purposes herein set forth.

89,990.—E. P. HALSTED, Worcester, Mass., assignor to R. BALL & CO.—*Planing-Machine.*—May 11, 1869.

Claim.—The construction and arrangement, herein described, of the swinging feed-roll frame-joint, consisting of the recessed piece N, flanged head *c*, bracket O, and cap *d*, operating as described, for the purpose specified.

89,991.—THOMAS P. HANDY and CHRISTIAN R. KLEIBACKER, Baltimore, Md.—*Supplemental Horseshoe.*—May 11, 1869.

Claim.—1. In combination with a supplemental horseshoe, hinged at or near its front or toe-portion, the stationary studs or clips at or near its rear or heel-portion, to prevent it from being pressed inward, substantially as described.

2. In combination with a supplemental horseshoe, having stationary studs or clips thereon, the movable flanges, controlled or worked by a screw, to hold the supplemental and the ordinary shoe tight together, substantially as described.

3. In combination with a supplemental shoe, held to an ordinary horseshoe by means of screws, the locking-mechanism, to prevent said screws from turning or the fastening from becoming loose, substantially as described.

89,992.—THOMAS HARBOTTLE, Brooklyn, N. Y.—*Pressure-Gauge for Hydrostatic Presses.*—May 11, 1869.

Claim.—The pressure-indicating piston A, combined with and operating the valve E, by means substantially as described, when so applied that the pressure and current of the escape have a tendency to close said valve, as and for the purpose set forth.

89,993.—THOMAS B. HARKINS, Bristol, Pa.—*Folding-Bedstead.*—May 11, 1869.

Claim.—The combination of the posts A A, the side and end pieces consisting of two sections, each hinged together and to the posts, as described, and the buttons *k*, hung to the posts, and adapted to inclined recesses in the sections, all substantially as set forth.

89,994.—ROBERT HERMANCE, Schuylersville, N. Y.—*Washing-Machine.*—May 11, 1869.

Claim.—1. The board or strip *d*, extending from one end of the rack to the other, and made to project below the bars *a*, when used in the manner and for the purpose set forth.

2. In combination with the board *d*, the semicircular end-pieces B, boxes *b b*, bars *a* and *e*, and handle *e*, when used in the manner and connection as set forth.

89,995.—INCREASE S. HILL, Boston, and ANDREW BURNHAM, North Chelsea, Mass.—*Underpinning for Buildings.*—May 11, 1869.

Claim.—The system of metal underpinning, consisting of the straight and angular castings, arranged and connected together substantially as described.

89,996.—J. H. HOBBS, Wheeling, W. Va.—*Pitcher.*—May 11, 1869.

Claim.—As an article of manufacture, a pitcher, having projections C C′, to receive the sockets of the handle, a portion of the cover *a*, formed of the same material with the body, and a hinged cover, B, attached thereto, substantially as set forth.

89,997.—AUGUST HOEN, Baltimore, Md.—*Lithographic Press.*—May 11, 1869.

Claim.—1. The oscillating cross-beam D, adapted to support the scraper-holder E, and to apply pressure to the stone at the proper time by the operation of the arms G and dogs H, in conjunction with the movement of the bed, substantially as and for the purposes described.

2. In combination with the reciprocating bed of a lithographic printing-press, an eccentric cylinder, C, having its circumference equal to the distance traversed by each movement of the bed, and so constructed and arranged as to support the bed during its whole movement, and at one part of its movement to raise it, and thereby produce pressure upon the stone.

3. The driving-wheel L, with its double rim, one of said rims having the recess *a*, when employed in a printing-press, in combination with the shaft N and pinion M, to produce a forward and backward motion of the bed, substantially as described.

4. The combination of the hook R, lever *u*, and inking-carriage V, when constructed to operate as herein described.

5. In combination with said parts R, *u*, and V, constructed to operate as described, the lever P, shaft S′, and arm S, substantially as and for the purposes specified.

6. In a printing-press, the combination of the reciprocating-roller *a*, with the tilting distributing-table Y, when constructed to operate substantially as and for the purposes set forth.

7. The register-frame E′, pivoted at *e′*, having the tail-piece *f* and the open slot *g′*, in combination with the bed B, having the projection *g*, substantially as and for the purposes set forth.

8. Supporting the points *o o*, the register-frame *e*, and the stone, upon one and the same bed or frame B, for the purposes set forth.

89,998.—ALBERT H. HOOK, New York, N. Y. assignor to SMITH GARDNER.—*Apparatus for Freeing Petroleum and other Liquids from Gas.*—May 11, 1869.

Claim.—1. The dripping-chamber.

2. Passing a current of air up through the chamber while the liquid is dripping down it.

3. Checking or reducing the force of the current of air as soon as it has passed through the dripping-chamber, by means of the large chamber *f*, and thus preventing it from carrying the liquid away with it.

4. The construction, combination, and arrangement of the dripping-chamber, the large chamber *f*, and the flue *g*, substantially in the manner described, and for the purposes specified.

89,999.—E. J. HORNER, Wilmington, Del.—*Car-Spring.*—May 11, 1869.

Claim.—In combination with one, two, or more spiral springs, constructed as herein described, the rubber-pin C, tapering at its lower end, and resting on the stationary pin B, substantially as and for the purposes set forth.

90,000.—ABIJAH HUBBELL, Salisbury, Conn., assignor to himself, GEORGE V. CAPRON, and E. P. H. CAPRON.—*Turbine Water-Wheel.*—May 11, 1869.

Claim.—1. A water-wheel, consisting of the plates B, having the central notched opening, and having the buckets *a* formed and arranged in relation thereto, substantially as described.

2. The shaft C, secured to the wheel by means of the arms *f*, so as to leave an unobstructed opening through the center of the wheel, substantially as described.

90,001.—ABEL L. HURTT, Monticello, Ind.—*Washing-Machine.*—May 11, 1869.

Claim.—The combination of the case A, pipes B, plates C and E, springs D, arranged to operate substantially in the manner and for the purpose set forth.

90,002.—H. E. JAMES, West Alexandria, Pa.—*Churn.*—May 11, 1869.

Claim.—The combination and arrangement of the ring B, with its set-screws, standards C and *i*, shafts *c* and *e*, pinions *d*, and slotted arm, and pivot-

ed dasher-handle *s*, when constructed and operating substantially as and for the purposes specified.

90,003.—S. K. JONES and GEORGE H. SNOW, New Haven, Conn., assignors to S. K. JONES, A. A. WILCOX, LYSANDER FLAGG, and JESSE CUDWORTH, Jr.—*Machine for Making Cut Nails.*—May 11, 1869.

Claim.—1. In combination with the revolving cylinder M^3, movable cutters K K′, and fixed cutters L and L′, constructed and arranged to operate in the manner described, the transferring-die *a*, with its spring-catch *d*, as and for the purpose specified.

2. The combination of the movable cutter K, fixed cutter L, transferring-die *a*, with its spring-catch *d*, and the holding dies *f* and *g*, constructed and arranged so as to operate in the manner described.

3. In combination with the subject-matter of the second clause of claim, the heading-dies, operating as set forth.

90,004.—WILLIAM H. KAY, Lemont, Ill.—*Graining-Apparatus.*—May 11, 1869.

Claim.—1. The device shown in Fig. 1, constructed and arranged substantially as and for the purposes set forth.

2. The use of oil-cloth having apertures, as set forth, in combination with the device shown in Fig. 1, for the purpose described.

90,005.—JOHN E. KEYT, Louisville, Ky.—*Feed-Device for Saw-Mill.*—May 11, 1869.

Claim.—1. The arrangement of the cone-pulleys K and L, friction-pulleys F and G, and gear-wheels H, I, and J, for feeding the carriage and log toward the saw, substantially in the manner shown and described.

2. The arrangement of friction-wheels E and F, and gear-wheels H, I, and J, for gigging back the carriage and the log, substantially as shown and described.

90,006.—WILLIAM KOPP, Louisville, Ky.—*Method of Preparing and Embossing Wood.*—May 11, 1869.

Claim.—1. The method of pressing wood into certain shapes and forms, by pressing it with one sharp-edged sunk and one flat die, the former of which cuts the pasteboard, while the latter forces it into the cavities on the reversed side of the pressed wood, substantially as and for the purposes set forth.

2. The method of glueing pasteboard on the reverse side of wood to be pressed with such glue-composition, that the pasteboard and glue, when heated, cut, and pressed, will combine to form a pulp, which fills the cavities on the reverse side of the pressed wood, and dries during the operation, substantially as and for the purposes set forth.

90,007.—CHARLES MACKH, Elgin, Ill.—*Pocket-Lantern.*—May 11, 1869.

Claim.—1. The improved pocket-lamp and lantern, consisting of the lamp C, the guard F, and outer case A, constructed and operating substantially as described, for the purposes specified.

2. The within-described pocket-lamp and lantern, in combination with a match-box, arranged substantially as shown and described, for the purposes specified.

90,008.—NAPOLEON MAISONNEUVE, Kankakee, Ill.—*Corn-Planter.*—May 11, 1869.

Claim.—1. The combined arrangement of the beam M, lever N, arms *m m* and O O′, and marker Q, all arranged and operating substantially as herein described, and for the purpose specified.

2. The arrangement of the tongue T, pivoted to the upper side of the frame A, passing between the uprights V and the foot-lever X and cord Y, all as herein shown and described.

90,009.—JOHN MALTRY, Morrisania, N. Y.—*Automatic Fan.*—May 11, 1869.

Claim.—The combination and arrangement of fan B, balance-weight C, eccentric wrist-pin *c*, notched disk *h*, and spring-stop *f*, substantially as and for the purpose described.

90,010.—THOMAS MARKLAND, Jr., Philadelphia, Pa.—*Saw-Sharpening Device.*—May 11, 1869.

Claim.—1. The construction and arrangement herein described, of the cam *x*, oscillating frame Q, lever *w*, and swivel-head P, for the purpose set forth.

2. The construction and arrangement herein described, of the segmental bed-plate N, and jointed confining screw-bolt O, for the adjustment of the reversible bed B, to give the required lateral bevel to the back edge of the teeth or cutters.

3. The construction and arrangement herein described, of the clamping-board E, guide-board H, rack K, pinion L, bed B, standard C, in connection with segmental bed-plate N, and jointed confining screw-bolt O, for the purpose set forth.

90,011.—RUFUS S. MITCHELL and GEORGE Z. KESSINGER, Elizabeth, Ind.—*Flour-Bolt.*—May 11, 1869.

Claim.—In combination with a bolting-reel, having ratchet-bands K K, placed on each end, the arrangement of the cord A, extending lengthwise the exterior of the bolt, and fastened to springs B B, substantially in the manner herein set forth.

90,012.—EDMON L. MIX, Rochester, N. Y.—*Carbureter.*—May 11, 1869.

Claim.—1. The combination and arrangement of the carbureting-vessel A with the cistern B^3 and annular air-holder C, so that its sides and bottom are surrounded with water, while its upper extremity is open to the atmosphere, and accessible through the central space of the air-holder, for inspection, and the application of warming-agents, when required, substantially as set forth.

2. A carbureting-apparatus, consisting of the concentric annular compartments B^1 B^3, and intervening air-space B^2, the annular air-holder C C′, and the carbureting-vessel A, combined, arranged, and operating substantially as shown and described.

3. The arrangement, in combination with the central carbureting-vessel A, of the annular air-space B^2, intervening between the two annular water-chambers B^1 and B^3, substantially as and for the purpose set forth.

90,013.—GEORGE MURRAY, Waterloo, N. Y.—*Bag-Tie.*—May 11, 1869.

Claim.—The arrangement of the plates A and C, ears *a a* and *c c*, flange *b*, and pin *e*, all constructed as described, and operating substantially as and for the purposes herein set forth.

90,014.—BYRON W. NICHOLS, Canton, Ohio, assignor to himself, CORNELIUS AULTMAN, GEORGE H. BUCKINS, PERCY S. SOWERS, and A. CLARK TONNER, same place.—*Compound for Hardening Cast Iron.*—May 11, 1869.

Claim.—1. The employment of the ingredients herein named, or their chemical equivalents, when compounded and used (either in solid or liquid form) about in the proportions, and substantially in the manner and for the purpose set forth.

2. The employment of manganese and resin in the process of hardening cast iron.

90,015.—HENRY S. NORTH and THOMAS THOMPSON, Middletown, Conn., assignors to themselves and DANIEL R. BENHAM.—*Water-Cock.*—May 11, 1869.

Claim.—1. An India rubber sleeve or nut, with a hole through its center, and screw-threads on the outside, for the purpose of attaching a water-cock filter, or coupling a hose to a water-cock with a smooth bib, substantially as herein set forth.

2. The filter C, constructed, as described, with the tapering-chamber *a* at the upper end, and an annular groove, *d*, around the discharge-hole at the lower end, in combination with the rubber sleeve or nut B, for the purpose of attaching the filter to a water-cock with smooth bib, substantially as herein set forth.

90,016.—ABRAHAM OVERHOLT, Gardenville, Pa.—*Boot-Crimp.*—May 11, 1869.

Claim.—The adjustable jaws A, provided with the screw F, in combination with the form B, clamps E, and screw C, when all are arranged and combined in the manner and for the purpose set forth.

90,017.—JOHN D. PARSONS, Albany, N. Y.—*Advertising-Calendar.*—May 11, 1869.

Claim.—The combination of a permanent metallic cap with a single-sheet calendar-table, containing the days of the month, with separate slips of paper denoting the months and days of the week, substantially as described and shown.

90,018.—FREDRICK AUGUST PAUCK, St. Mary's, Ohio.—*Combined Carrier and Dresser for Tobacco.*—May 11, 1869.

Claim.—1. Combining with a rotating knife or cutter, for cutting tobacco, a series of fans or blowers, for the purpose of carrying the tobacco to any desired point, and dressing it during its transit, substantially as herein set forth.

2. The arrangement and combination of the wheel C on the end of the shaft B, with the knife or cutter E and fans and blowers F F, all working inside of the beveled drum D, substantially as and for the purpose herein set forth.

90,019.—JOSEPH B. PEDRICK, Columbus, Ind., assignor to himself and JOSEPH F. GENT, same place.—*Steam-Pipe for Reversing Steam-Engines.*—May 11, 1869.

Claim.—The arrangement of the valve-box *e*, the joint *h*, between the pipe *b* and the stem of the valve *k*, and the joints *c*, between the pipes *g* and the stems of the valves in the valve-boxes *d*.

90,020.—JOHN G. PERRY, Kingston, R. I.—*Harvester.*—May 11, 1869.

Claim.—1. The spiral lifting-sector, operating substantially as described.

2. The combination, substantially as set forth, with a cutting-apparatus and an open or annular driving-wheel, of a lifting-sector outside the wheel, a rock-shaft passing through the open or annular driving-wheel and a lifting-lever and detent inside wheel.

3. The combination, with the rock-shaft and hand-lever, of the rocking foot-lever and its swinging pawl, for the purposes specified.

4. The combination, with the coupling-arm, of the vertically moving depressing-lever and the horizontally moving stop-lever, operating as set forth, to hold down the heel-end of the finger-beam.

5. The combination of the drag-bar, slotted bracket, and loop, with the interposed spring, to hold down the bar, substantially as set forth.

6. The combination of the removable foot-board and the tool-chest, arranged as set forth.

7. The combination of the shipping-lever, eccentric and pendulum yoke, arranged on the tool-chest, with the counter-shaft and sliding-clutch, as set forth.

8. In a two-wheel harvester, the combination of the grain-platform, the finger-beam, and the open or annular driving-wheel, arranged substantially as described, and for the purposes set forth.

9. The combination, substantially as set forth, of an open or annular driving-wheel, a finger-beam, and a grain-platform, with a raker's seat supported by the open axle, or on an arm passing through the open or annular driving-wheel.

90,021.—JOSEPH T. POPE, New York, N. Y.—*Lamp-Shade Holder.*—May 11, 1869.

Claim.—The holder E, made of one continuous piece of wire, and forming an open hook, F, for attaching to the lamp or gas-burner, and the combination of the same with the mirror-shade L by the pivots *h h* and brackets *i i*, on the back of the shade, for the purposes herein specified.

90,022.—DAN READ, Hudson City, N. J.—*Method of Sheathing Vessels, &c.*—May 11, 1869.

Claim.—Sheathing the hulls, sides, and decks of vessels, and other surfaces of wood and of iron and other metals, with gutta-percha, India rubber, and allied gums and their vulcanizable and vulcanized compounds, substantially as and for the purposes specified.

90,023.—SAMUEL J. REEVES, Philadelphia, Pa.—*Railway-Rail.*—May 11, 1869.

Claim.—The supporting clamp-bars D D, with the flanges *e' e'*, combined with the ribbed bar B, constructed as described, and the whole adapted to the ordinary rail A, substantially as herein set forth.

90,024.—BENJAMIN S. ROBERTS, United States Army.—*Breech-Loading Fire-Arm.*—May 11, 1869.

Claim.—1. Arranging the hammer, the trigger, and spring H, centrally in the plane of the axis of the piece, in combination with a double main-spring, acting directly on both the cock and trigger, to operate substantially as described.

2. So arranging the hammer centrally, in relation to the slot *s* of the breech-plug lever C', that the act of cocking the hammer will positively adjust the breech-plug in position for firing, substantially as described.

3. The lever-catch J J', applied to the lever C', in combination with a spring, *j*, which is applied beneath the tang B' of the frame B, substantially as described.

4. The concavity *b* at the rear of the cheeks *a a*, receiving the rear end of a swinging breech-plug, C, which is pivoted between said cheeks, and which carries on its forward end a self-adjusting recoil-plate, F, substantially as described.

5. A swinging breech-plug, in combination with a recoil-plate, F, on its forward end, and a centrally arranged firing-pin, substantially as described.

6. A centrally arranged extractor, G, in combination with a spring, *g'*, formed on its opposite end, substantially as and for the purposes described.

7. The cam key-pin *r*, about which the breech-plug swings, when made with a spring-arm, *p*, and stud p^2, on the end thereof, in the manner and for the purpose specified.

90,025.—WILLIAM H. ROBINSON, Vermont, Ill.—*Leveling-Staff.*—May 11, 1869.

Claim.—A leveling-rod, having a traveling-band, as described, moving around the same longitudinally, when said rod and band are graduated and operate substantially as and for the purposes specified.

90,026.—GEORGE W. ROLAND, Salem, Oregon.—*Buckle.*—May 11, 1869.

Claim.—As a new article of manufacture, the clasp for securing harness or other straps, constructed substantially as specified and described.

90,027.—W. C. SCOTT, Richmond, Ind.—*Lumber-Drier.*—May 11, 1869.

Claim.—1. With the building and furnace, the heat-radiating pipes, arranged in combination with tank *c* and receptacle *d*, in the manner and for the purpose set forth.

2. The tank *c*, for the purposes of extinguishing sparks and supplying moisture to the lumber, as set forth.

3. The receptacle *d*, with its top plate *e*, and perforated or reticulated sides, when arranged, with relation to pipe *b*, in the manner set forth.

90,028.—W. S. SHOEMAKER, Towsontown, Md., and E. H. SHOEMAKER, Lancaster, Ohio.—*Hog-Ring*—May 11, 1869.

Claim.—A hog-ring, *a*, having a tongue a^1 a^1, formed by its ends bent as described, in combination with a looped seal-plate, *b*, substantially as described.

90,029.—GERARD SICKELS, Boston, Mass.—*Counting-Register.*—May 11, 1869.

Claim.—1. The combination and arrangement of springs *i* on plate B, with the notched rings C, substantially as and for the purposes set forth.

2. The segmental annular cams *g*, in combination with rims *f* on plate B, substantially as and for the purpose set forth.

3. The combination and arrangement of springs *m*, with rings C and cams *g*, substantially as and for the purpose described.

90,030.—MICHAEL SIMONS, Middletown, Conn.—*Coffee and Tea Pot.*—May 11, 1869.

Claim.—A spun or dished bottom, F, made of Britannia-ware, when attached permanently to a tin top, E, as herein described, and for the purpose set forth.

90,031.—GEORGE C. SMITH, Matteawan, N. Y.—*Hose.*—May 11, 1869.

Claim.—Constructing suction-hose around a series of hard-rubber or gutta-percha rings, when said rings form the inside lining of the hose, and are connected, substantially in the manner and for the purposes set forth.

90,032.—HUGH SMITH, Newark, N. J.—*Velocipede.*—May 11, 1869.

Claim.—1. The cranks C and *f*, connected by rods Q, in combination with the slotted hanger *k*, guide-bars *j j*, and treadles P, the latter having a motion in a vertical plane, while the rods Q move longitudinally, substantially as described.

2. The guide-bars *j*, extending from the treadles into the slotted hangers *k*, substantially as and for the purpose set forth.

3. The treadles P, in combination with the friction-rollers *i*, and rods Q, substantially as shown.

90,033.—THOMAS S. SPEAKMAN, Camden, N. J.—*Steam-Generator.*—May 11, 1869.

Claim.—1. The construction and arrangement of the hollow shaft *i*, provided with openings *j*, fan I, and hollow belt-wheel J, as set forth.

2. The arrangement of the discharge-pipe *f* below the line of the openings *h* of fan-case H, substantially as described.

3. The combination with the boiler A and jacket C of the chamber F, dampers *d e*. fan-case H, pipe H′, discharge-pipe *f*, and fan I, substantially as set forth.

4. The arrangement of chamber F, fan-case H, and connecting-pipe H′, whereby to surround the fan-case and pipe with water, so as to cool the same, and at the same time absorb the carbonic acid of the products of combustion, substantially as described.

90,034.—CHARLES SPRING, Hyde Park, and ANDREW SPRING, Weston, Mass.—*Velocipede.*—May 11, 1869.

Claim.—1. In combination with the leader-wheel, the two follower or trailing wheels, the axis of each of which is hung in bearings placed out of vertical line with the shaft by which the wheel-frame is connected to the carriage-frame.

2. In combination with each follower-wheel the plates f^2, g^2 and friction-rolls h^2, substantially as shown and described.

3. Follower or trailing wheels, arranged as described, and connected by a band or equivalent mechanism, substantially as described.

90,035.—JAMES TAYLOR, Philadelphia, Pa., assignor to himself, BENJAMIN SCHOFIELD, and THOMAS BRANSON.—*Washing and Fulling Machine.*—May 11, 1869.

Claim.—The combination of the vessel A and its perforated lining with the vibrating beater or beaters F, the whole being arranged and operating substantially as and for the purpose herein set forth.

90,036.—ALEXANDER TURNER, Newark, N. J.—*Child's Table-Tray.*—May 11, 1869.

Claim.—The child's table-tray, formed with the rims *b b* and *c* higher than the rim *d*, in combination with the stop-legs *e*, attached at the front edge of the tray, as and for the purposes set forth.

90,037.—E. D. WEATHERBEE, Worcester, Mass.—*Cork-Fastener.*—May 11, 1869.

Claim.—A cork-fastener, having a side-stop or loop, *d d e*, and otherwise constructed, substantially as shown and for the purposes described.

90,038.—BALAH W. WEAVER, Transitville, Ind.—*Stump-Extractor.*—May 11, 1869.

Claim.—1. The above-described arrangement of the wheels G G, with reference to the frame of the machine, as a consequence of which it is rendered capable of being transported from one place to another.

2. The arrangement of the nut D, screw C, tongue E, and chain F, substantially as and for the purpose set forth.

3. The combination of the tongue E, screw C, nut D, and staple I, substantially as and for the purpose set forth.

90,039.—JACOB H. WITTMER, Manor, Pa., assignor to himself and WILLIAM SIPLE, same place.—*Power-Press for Hay, &c.*—May 11, 1869.

Claim.—The arrangement of the removable box A, placed upon the bed or bottom F, and having grooves on the inside ends, central beam H, notched at the ends, centrally provided with a catch-plate, I, and top-boards 1 3 5 7 affixed, having bevel sides for the reception of the loose pieces 2 4 6, hooks J, ropes K, passing under pulleys O, and operated by ratchet-wheels and pawls, supported by posts B B at both ends of the press, all constructed and operated as herein shown and described.

90,040.—ALONZO E. YOUNG, Dorchester, Mass., assignor to BOSTON SILVER-GLASS COMPANY.—*Glass-Ware Mold.*—May 11, 1869.

Claim.—A lathe-turned mold, for forming glass dishes, said mold having a cavity and plunger, the molding surface of each of which is oval in section, substantially as described.

90,041.—C. W. COTTON, Portsmouth, Ohio.—*Machine for Forming Oval Tenons.*—May 11, 1869.

Claim.—The combination of the elliptic cam *v*, on shaft *m*, screw in arm *t*, and vibrating-frame *g*, with the cutter-head *d*, cutter-head disks *f*, and the mechanism for giving motion to the cutter-head, cutter-head disks, and shaft *m*, substantially in the manner and for the purpose described.

90,042.—THOMAS H. DE MOTTE, Woodford County, Ill.—*Washing-Machine.*—May 11, 1869.

Claim.—In a washing-machine, the plunger C, with sockets *p*, perforations *a*, reserve-chamber B, sediment-receiver *t*, inclined bottom D, and tramway *f f*, stay-rod *u*, drip-cups *i i*, handle *e*, and rods *d d*, all constructed, arranged, and combined substantially in the manner and for the purposes herein shown and set forth.

90,043.—WILLIAM GARDINER, Stoneborough, Pa.—*Sawing-Machine.*—May 11, 1869.

Claim.—In combination with the frame A and sill B, provided with suitable gearing and pitmen, the saw D and spring-pawls E, when all the parts are constructed and arranged to operate substantially as and for the purpose set forth.

90,044.—JOSEPH S. GOLD, Springfield, Ill.—*Measuring-Can for Liquids.*—May 11, 1869.

Claim.—The flanged receptacle A, provided with perforations in its top, in combination with the pump C, reservoir B, tubes D D and N, float E, guide-rods *f f* and H, and graduated measure F, all constructed, arranged, and operated in the manner and for the purpose set forth.

90,045.—ALEXANDER HARROUN, Jr., Onondaga County, N. Y.—*Machine-Made Stitch.*—May 11, 1869.

Claim.—The machine-made stitch, herein described and shown, formed by the three threads *c d e*, when combined as and for the purpose set forth.

90,046.—BEVERLY KENNON, New Orleans, La.—*Center-Board.*—May 11, 1869.

Claim.—The center-board herein described, consisting of two distinct plates, E, F, H, K, and L, M, N, K′, when the same are constructed and united for conjoint operation, substantially as herein described, for the purpose set forth.

90,047.—PAUL NARCISSE JOSEPH MACABIES, Paris, France.—*Automatic Boiler-Feeder.*—May 11, 1869.

Claim.—1. The combination of the receivers with the tubular supporting-arms and upper lever, arranged to maintain said receivers at all times in a vertical position, as set forth.

2. The arrangement, with respect to the receivers, of the vibratory tubular arms for supporting the same, substantially as set forth.

3. The combination with the upper vibratory lever, to which the receivers are connected, of the oscillating cylinder and its piston-rod, arranged to prevent the excessive movement of said lever, substantially as shown and set forth.

4. The combination with the receivers, tubular

arms, and lever, of the vertical tubular column B, serving as a condenser or steam-reservoir, as well as a support for the different organs of the apparatus, substantially as herein shown and set forth.

5. The arrangement of the joints and distributing cocks of the receivers and tubes, substantially in the manner herein shown and specified.

90,048.—James H. McCartney, Dansville, N. Y.—*Tonic Bitters.*—May 11, 1869.

Claim.—A preparation, compounded substantially in the manner and for the purpose described.

90,049.—F. Henry Morgan, Beverly, Mass.—*Method of Attaching to the Soles of Boots and Shoes Heels made of Vulcanized Wood.*—May 11, 1869.

Claim.—1. Introducing into molds for the formation of heels, when constructed as described, pieces of metal or other material, by which the heel can be attached to the sole of a boot or shoe.

2. Introducing into molds for the formation of heels, when constructed as described, pieces of metal, or other material, for strengthening and giving durability to the heels.

3. Introducing into molds for the formation of heels, when constructed as described, a screw, or its equivalent, to produce a matrix, by which to attach them to the soles of boots or shoes.

4. Heels for boots and shoes, constructed as herein described, as a new article of manufacture.

90,050.—A. M. Rodgers, Brooklyn, N. Y.—*Mosquito and Fly Net.*—May 11, 1869.

Claim.—1. The frame A, composed of detachable radial arms, the inner ends of which are formed to fit each other, and, so fitted, are secured, around a common center, by means of adjustable clamping-disks *b b'*, carried upon a central screw, *s*, which also serves to secure the frame to the ceiling, substantially as herein described.

2. The arrangement of the lifting-cords *g*, and their guide-rings, in connection with the weighted skirt of a mosquito or fly net, in combination with the above-claimed devices, substantially as and for the purpose herein set forth.

90,051.—Z. Rogers, Chicago, Ill.—*Air-Inhaler.*—May 11, 1869.

Claim.—1. The cylinder *h* and valve S, in combination with the mouth-piece A, arranged to operate substantially as herein described and shown.

2. The combination of the cylinder *h*, valve S, mouth-piece A, tube E, valve D, and cylinder B, the whole being arranged and constructed substantially as set forth.

90,052.—Mary Ann H. Saurman, Philadelphia, Pa.—*Book-Curb.*—May 11, 1869.

Claim.—A book-protector, consisting of a cord or chain, B, adapted to be secured to the backs of a book, to prevent the book from being opened too far, by means of the metallic clasps *a*, with slots *d d*, tongues *b b*, and point or holder *i*, as set forth.

90,053.—Jacob Scholer, Burlington, Iowa.—*Wine and Cider Press.*—May 11, 1869.

Claim.—1. The arrangement of bed H, movable floor *i*, movable tub I, and movable platen J, supported by standard K, strap L, and roller *l*, when said parts are employed in connection with a lever, F, substantially as and for the purpose specified.

2. The within-described arrangement of weight-frame G, link g^1, lever F, platen J, and cylinder I, constructed and operated in the manner and for the purpose specified.

90,054.—Henry Searle, Washington, D. C.—*Mosquito-Bar Frame.*—May 11, 1869.

Claim.—The combination of three or more intersecting springs, A B C, with a transverse adjusting-cord, I, and with lateral cords, D, D, E, F, G, and H, the whole constituting an adjustable arched mosquito-bar frame, substantially as herein set forth.

90,055.—W. S. Shoemaker, Towsontown, Md., and E. H. Shoemaker, Lancaster, Ohio.—*Clothes-Line Clamp.*—May 11, 1869.

Claim.—A clothes-line clasp, consisting of a ring, B, terminating, at its ends, in jaws *a a*, and stiffened by corrugating, substantially as described.

90,056.—William H. Smith, New York, N. Y.—*Graining-Machine.*—May 11, 1869.

Claim.—1. The compound belt H *h*, formed with a soft and ornamented outer surface, and with a tough and durable inner surface, and adapted to operate substantially as and for the purpose herein set forth.

2. Traversing the ornamenting-belt over a surface of small radius, G, in combination with a larger roller, C, and with an operating-frame, A *a*, or its equivalent, so as to ornament thereby not only on plain surfaces, but in recesses, or re-entering angles in the work, substantially as and for the purposes herein set forth.

90,057.—David Stewart, Port Penn, Del.—*Phosphate Fertilizing-Compound.*—May 11, 1869.

Claim.—1. The manner of composting insoluble substances containing silicates and phosphates with caustic alkalies, substantially as described.

2. The improved fertilizer, which I term "the persieator," composed of the within-described ingredients, compounded in about the relative proportions stated.

90,058.—I. R. Weisiger, Danville, Ky.—*Dermatic Medicator.*—May 11, 1869.

Claim.—The vessel A, constructed with an outer and inner wall, and provided with openings a^2 a^3, b^1 and b^4, and cover B, constructed with the opening C and collar *c*, all arranged and operated substantially as and for the purpose set forth.

90,059.—Marcus Brown Westhead, Manchester, and Charles Bartleet James, Redditch, England, assignors to Marcus Brown Westhead.—*Sewing-Package.*—May 11, 1869.

Claim.—A winder or case, for holding twine, needles, buttons, hooks and eyes, and pins, or either two or more of these articles, substantially as herein shown and described.

90,060.—Daniel Fitzgerald, New York, N. Y.—*Railway-Car.*—May 11, 1869.

Claim.—The railroad-car A, having double walls or sides, floor, and roof, one or more compartments, K, and burglar-proof cases F C H I, all substantially as shown and described.

90,061.—Henry H. Waters, Atlanta, Ga.—*Washing-Machine.*—May 11, 1869.

Claim.—1. The segmental presser, arranged and united to the connecting-rod E, and the balance-wheel F, by means of the hinged tray D, in such manner that said presser may be supported and pivoted upon the tub when elevated therefrom, substantially as described.

2. The square tub A, in connection with an oscillating presser, arranged as described, to allow the tub to be turned, so as to present the clothes to the presser at right angles to its former line of action, as described.

3. The foot-lever R, and center pivot or support S, in combination with a square tub, for the purpose of lifting the latter, to enable it to be swiveled or turned ninety degrees, for the purpose described.

4. The removable hood or cover P, when used in connection with a segmental presser, a square tub, and a wringer, in the manner and for the purpose described.

5. The removable hood or cover of the tub, in combination with the oscillating presser, by which it is removed and replaced upon its seat automatically, substantially as described.

90,062.—John F. Adams, Worcester, Mass.—*Gold-Leaf Condenser.*—May 18, 1869.

Claim.—The "leaf"-condenser, as a new article of manufacture, when the same consists of the two "workers" A B, made substantially as described, and for the purpose set forth.

90,063.—Joseph H. Atkinson, San Francisco, Cal.—*Combined Comb and Shears for Hair-Cutting.*—May 18, 1869.

Claim.—The clamping-device for adjustably securing a comb to a pair of scissors, consisting of the spring-clamps B B, D, screws A A, and nuts C C, arranged substantially as shown and described.

90,064.—E. J. Balcear, Martinez, assignor to Samuel Pillsbury, San Francisco, Cal.—*Cleansing-Liquid.*—May 18, 1869.

Claim.—A washing or cleansing fluid, composed of the ingredients named, prepared and mixed in the manner and in about the proportions above specified.

90,065.—Osmer W. Baldwin, Greenfield, Ohio, assignor to himself and Thomas F. Wright, same place.—*Potato-Digger.*—May 18, 1869.

Claim.—1. In combination with the digger and revolving slatted apron, the two rakes, operated by the double-crank shaft, substantially as and for the purpose set forth.

2. In combination with the slotted rakes, worked by a double-crank shaft, and supported by the frame H, as described, the adjusting-nuts *o*, as and for the purpose described.

3. In combination with the slotted rakes, worked by the double-crank shaft, and the supporting-frame H, the spiral springs *i*, on the plunger-rods of the rakes, substantially as and for the purpose described.

4. In combination with the slotted rakes, double-crank shaft, and supporting-frame H, the trunnions or oscillating braces *h*, substantially as described.

90,066.—Nicholas Baumann, Kalamazoo, Mich., assignor to himself and W. B. Clark, same place.—*Process of Using Unmashed Indian-Corn in Brewing Beer*, &c.—May 18, 1869.

Claim.—The combination of the separate mash-tub B, Fig. I, inclosing the spiral steam-pipe E E, Fig. III, perforated with small holes on the inside; the larger mash-tub A, Fig. I; the pipe C, provided with stop-cock F, connecting the tubs, for the purpose of discharging the contents of the tub B into the tub A, with the steam-pipes E and D, provided with stop-cocks for letting steam into or shutting it off from the tubs A and B, for the purposes set forth and described.

90,067.—Artemas Bigelow and James S. Baldwin, Newark, N. J., assignors to Henry Martin, Baltimore, Md.—*Purifying the Waste Gases from Copper-Roasting Furnaces.*—May 18, 1869.

Claim.—Removing the impurities held in mechanical suspension by the waste gases of copper-roasting or calcining furnaces, by washing said gases or reducing the speed of their flow, by the means substantially as described.

90,068.—John Adolph Bilz, Pleasanton, Cal.—*Plow-Clevis.*—May 18, 1869.

Claim.—1. The vertical slotted bar E, secured to the ends of the two arms A and B of a clevis, substantially as and for the purpose described.

2. The sliding-bar F, moving up and down through slots in said arms A and B, and held at the point desired by means of a set-screw, *g*, substantially as and for the purpose described.

3. The shackle G, attached by a swivel-joint to the screw *c*, said screw being secured to the lower end of the sliding-bar F, and moving up and down in the vertical slot *a*, substantially as and for the purpose described.

90,069.—Edward C. Blakeslee, Waterbury, Conn., assignor to "The Benedict and Burnham Manufacturing Company."—*Lamp-Reflector.*—May 18, 1869.

Claim.—The combination of a band, A, helical spring, B, and reflector, C, constructed and operating substantially as described, for the purposes set forth.

90,070.—Theodore Blodgett, Belchertown, and Warren S. Weatherby, Granby, assignors to themselves and Charles D. Clapp, Amherst, Mass.—*Alarm for Pocket-Books.*—May 18, 1869.

Claim.—A pocket-book protector and alarm, constructed of the stock *b*, in combination with muzzle *g*, hammer *t*, spring *v*, plug *u*, lever *j*, trigger *m*, and catch *n*, the whole arranged and operating substantially as specified.

90,071.—Hervey C. Boardman, Morrisville, Vt.—*Log-Sawing Machine.*—May 18, 1869.

Claim.—1. The combination of the obliquely arranged friction-roller D with the carriage A, and wheels, *a a*, and flanged rails or guides *i i*, substantially in the manner described.

2 The combination of the oblique roller D and the lever C, substantially as and for the purpose described.

3. The combination of the oblique roller D, bearing E, and lever C, substantially as and for the purpose described.

90,072.—Fredrick W. Born, Cleveland, Ohio.—*Washing-Machine.*—May 18, 1869.

Claim.—The combination of the radial-chambered machine A, the perforated diaphragm E, tube H, and valve G, all constructed and arranged to operate in the manner and for the purpose substantially as described.

90,073.—H. W. Bradley, Binghamton, N. Y., assignor to Charles M. Dickinson, same place.—*Paint-Compound.*—May 18, 1869.

Claim.—As a new article of manufacture, a paint composed of the within-described ingredients, or their equivalents, whereby oil and water are affined or saponified in such a manner that the pigments may be held in affinity, as herein described, for the purposes set forth.

90,074.—C. D. Brewer, Williamsport, Pa.—*Gate.*—May 18, 1869; antedated May 10, 1869.

Claim.—The hook *g* and swinging hinge-bar A, by means of which a swinging and sliding gate may be so opened and closed as to rest, either at right angles with or against the inside or outside of the fence, when the same is constructed for the purposes set forth and described.

90,075.—Henry Brooks, Pittsburgh, Pa.—*Process for Hardening Steel.*—May 18, 1869.

Claim.—The process of making and hardening homogeneous castings, substantially as herein described, when applied to the articles enumerated herein.

90,076.—Edwin Lee Brown, Chicago, Ill.—*Boot-Jack.*—May 18, 1869.

Claim.—A double-ended and double-sided or reversible boot-jack, substantially as herein shown and described, as a new article of manufacture.

90,077.—William H. Butterworth, Trenton, N. J.—*Hay-Spreader.*—May 18, 1869.

Claim.—1. The combination of the eccentric ring E, or its equivalent, the revolving-head G G′, and the slotted arms K, or their equivalent, with the reel, when the slotted arms K, or their equivalent, are pivoted to the reel-head at a distance from its center different from the distance of the pins *b* from the center of the revolving-head G G′, and arranged to operate in the manner described, and for the purpose set forth.

2. Operating the forks L L by mechanism, so constructed as to cause the tines of the forks to constantly project downward while being carried around a common center, and to assume a nearly vertical position while passing under and over the center of the reel, and to have a constantly varying outward inclination while passing from top to bottom, and from bottom to top of the reel, thereby gathering and discharging the hay, substantially in the manner set forth.

3. The fork-head, constructed of the bars I I′ and cross-pieces J, with the slotted arms K, as herein shown and described.

4. Fastening the teeth of a hay-tedder by a metallic clasp, combined and arranged as herein set forth.

5. The arrangement of the revolving-head G G′, the cranks *e e*, and the slotted arms K, when used to operate the forks of a hay-tedder, or rake, substantially as described.

90,078.—Wesley Chase, Buffalo, N. Y.—*Settee.*—May 18, 1869.

Claim.—The combination of the bent legs and

arms C C D, seat A, and girts or ties E, when constructed and connected in the manner herein represented and described.

90,079.—George W. Clapper, Martinsville, Ind., assignor to himself, Thomas E. Dawson, Joel M. Johnson, and A. S. Greggs.—*Feed-Regulator for Millstones.*—May 18, 1869.

Claim.—The adjustable funnel C, with its conductors E E, and perforated bottom *c*, when fixed within the eye of the runner A, by means of set-screws D, all constructed and arranged to operate substantially as and for the purposes herein set forth.

90,080.—William H. T. Clark, San Francisco, Cal.—*Pump.*—May 18, 1869.

Claim.—1. The arrangement of the partition *g*, chamber E, valve-chambers C and D, and air-chamber F, within the part A, substantially as described.

2. In combination with the above-named parts, arranged as claimed, the valves *e* and *e'*, provided with the raised seats *i*, and radiating-guides *r*, substantially as specified.

3. The arrangement of the parts *h h* and *h' h'*, in relation to the diaphragm *e*, and with reference to the cylinder B, whereby said cylinder may be attached to the part A, either in a vertical or horizontal position, substantially as set forth.

4. The compound packing-ring M, fastened to the interior flange *p*, together with the elongated plunger H, the whole constructed and arranged substantially as herein described.

90,081.—Leon Cline, Chicago, Ill.—*Machine for Hanging Wall-Paper.*—May 18, 1869.

Claim.—The combination of the troughs I J H, and U G' G M, rollers B C D, transfer-roller E, brush O P, friction-rollers H, and springs L, as described.

90,082.—Theodor De Kimp, Kirksville, Ill.—*Wagon-Seat.*—May 18, 1869.

Claim.—The combination and arrangement of the wagon-seat A, wooden springs B, with their clutches *v*, blocks *a* and *e*, and screws *s*, substantially as and for the purposes herein specified.

90,083.—Anthony Demarce, Fairfield, Iowa—*Steam-Generator.*—May 18, 1869.

Claim.—The arrangement of the bent tubes B, with reference to the boiler A and smoke-box C, substantially as herein set forth.

90,084.—Julius Edmund Dotch and Edward Duempelman, Washington, D. C.—*Composition for Pavements, Roofing, and for other Purposes.*—May 18, 1869.

Claim.—1. The improved method of treating pure asphaltum, either alone or mixed with coal-tar, brick-dust, or sand, substantially as and for the purposes described.

2. The foundation for pavements, prepared substantially as herein described.

3. The method of fastening tiles to roofs, as herein described.

90,085.—John C. Duckworth, Pittsfield, Mass,, assignor to Duckworth & Sons, same place.—*Power-Loom.*—May 18, 1869.

Claim.—1. In combination with the jacks, arranged horizontally at the side of the loom, and projecting outward therefrom, the segment-wheels and upright sliding-bars, connected with the leaves of heddles, substantially as described.

2. The evener-rods, in combination with the arms of the levers upon which they operate to close the shed, when the eveners are moved in the curve described by the movement of that part of the arms of the levers with which the eveners are in contact, substantially as and for the purposes described.

3. The arrangement and combination of the short crank-shaft with its two cranks and gear-wheel, with the gear-wheel and crank carried by the projecting end of the crank-shaft which drives the lay, whereby motion from the crank-shaft is imparted to the links which drive the lifter and depresser, and pattern-mechanism of the harness-motion, and the pattern-mechanism for selecting the shuttles, substantially as described.

4. In combination with the main shipping-lever, the rock-shaft, with its releasing-arm, the second lever, and connecting-rod, substantially as described, whereby the loom may be stopped or started from either side, as set forth.

90,086.—G. L. Dulaney, Mechaniesburgh, Pa.—*Harvester-Cutter.*—May 18, 1869.

Claim.—1. The lock-bolt D, when constructed and operated as shown and described, and for the purpose set forth.

2. The cutters *a a a*, constructed substantially as shown and described.

3. The combination of the bar B, constructed with a groove, C, the lock-bolt D, and the cutters *a a a*, when constructed and arranged as shown and described.

90,087.—George B. Flint, Sing Sing, N. Y., assignor to Montgomery Fork Company, New York City.—*Manure and Hay Fork.*—May 18, 1869.

Claim.—Supporting the tangs within a round ferrule by the means of internal lugs *b*, with the aid of hooks *e* or their equivalents, substantially as and for the purposes herein set forth.

90,088.—Chester D. Flynt, Philadelphia, Pa.—*Trunk.*—May 18, 1869.

Claim.—1. The cushion-form frames A and B, made of steel strips, woven together, to form lattice-work, substantially in the manner and for the purpose hereinbefore described.

2. The combination of the angle-strips C C' with the strips *a b*, substantially in the manner and for the purpose set forth.

3. The combination of the angle-strips D with the strips *a b*, whereby great additional strength is given to the lattice-work, substantially as described.

90,089.—Alfred Faucaut, Orleans, France.—*Submarine-Telegraph Cable.*—May 18, 1869.

Claim.—1. The construction of a telegraphic cable, in the manner and for the purpose herein described.

2. A conducting surface for induction-currents, when applied to the outside of the insulating-coating of each group of conductors, in the manner and for the purpose herein described.

3. A band, composed of linen, or analogous material, saturated with a compound of carbonate of lead, and litharged or other oil, when arranged in a telegraphic cable, in the manner and for the purpose herein described.

4. In a telegraphic cable, the construction of the coatings, formed of gutta-percha or composition, the metallic conducting-surface, the cotton thread, the band saturated with mastic, and the tarred rope, arranged in the manner and for the purpose described.

5. As an insulating material, used in the construction of telegraphic cables, the composition, composed of carbonate of lead or other similar substance, litharged or other oil, sawdust, or other analogous fibrous substance, in the manner and for the purpose herein described.

90,090.—Warren Gale, Peekskill, N. Y.—*Straw-Cutter.*—May 18, 1869.

Claim.—1. The pressure-cylinder B, having its flanges provided with convex faces, when used in combination with the concavo-convex strip C, (with or without stud *e*,) constructed and operating substantially as and for the purposes set forth.

2. The concavo-convex strip C, provided with one or more studs, *e*, and constructed and operating substantially as and for the purposes set forth.

3. The flanged knife-shaft D, made with a shoulder, *x*, at each end, for the knife to rest on, when used in combination with a knife, or knives, secured by screws or rivets, so that the knife, at the upper part of its hole, shall rest upon the upper part of its screw, the whole being geared to and used in combination with a pressure-shaft provided with metal-faced flanges, substantially as and for the purposes set forth.

4. The hinged bottom G of the automatic mouth,

in combination with spring E, constructed and operating substantially as and for the purposes set forth, when used in combination with the subject-matter of the first claim, as above set forth.

5. The combination, with the knife-shaft D, of the crank-arm *x*, when said arm is secured to the gear-wheel, on the end of the shaft, by means of the projections 3 and 4 and recesses 1 and 2, substantially as set forth.

90,091.—George P. Gordon, Rahway, N. J.—*Printing-Press.*—May 18, 1869.

Claim.—1. In combination with a reciprocating bed, operating an ink-distributing cylinder L^2, such ink-cylinder L^2 hung upon vibrating arms N, so that the cylinder may be vibrated or turned upward, and away from the inking-rollers, when desired, thus giving free access to said inking-rollers.

2. In combination with such cylinder, the arm R, to cause the cylinder to bear heavily or lightly upon the inking-rollers placed beneath it.

3. In combination with such cylinder and reciprocating bed, a revolving ink-distributing table, for the purposes specified.

90,092.—Lucius D. Gould, Newark, N. J.—*Window-Fastener.*—May 18, 1869.

Claim.—The hook G, for holding the sash, in combination with its adjustable bolt and plate F, all constructed, arranged, and operating as and for the purpose herein shown and described.

90,093.—Edwin H. Grant, Washington, D. C.—*Process of Tempering Metals.*—May 18, 1869.

Claim.—1. The process of tempering metals by the use of a jet or current of steam, as described.

2. The combination of the steam-chest, or inclosure A, the induction-pipes B B, the valves or stock-cocks C C, the steam-generator D, and the eduction-pipe or opening E, for the uses and purposes substantially as described.

90,094.—Charles Greenlee and William H. Redfield, Belvidere, Ill.—*Apparatus for Cooling Liquids.*—May 18, 1869.

Claim.—The tank, provided with apartments F G, in combination with plate A′, provided with grooves T, and corrugated plate S, provided with troughs D E, and gate L, as described.

90,095.—John Gwynn, Tiffin; Ohio.—*Hot-Air Furnace.*—May 18, 1869.

Claim.—1. The cast-iron frames I, J, K, L, and M, and the radiators P P, connected, as described, together with the front and rear plates marked R R, and the peculiar form of the brick-work in which they are built, for leading the fire and air in alternating, horizontal, and ascending thin layers, at right angles with each other.

2. The use of a plain sheet of iron, without bend, seam, or rivet, connected to an iron frame by means of grooves, as described, for radiating-surface.

3. The construction of the iron frames I, J, and K, with grooves, intended to receive the edges, and allow the withdrawal and renewal of the radiators P P P, and with orifices to form part of the fire-flues.

4. The forming of a flue, or tube, by the manner described of connecting the sheet-iron to frame, and the manner of making the same flues continuous and ascending, by their relative position with each other, in connection with the brick-work or casting, whichever may be used.

5. The combination of the parts herein described, for the purposes set forth.

90,096.—William Hall, Boston, Mass.—*Permutation-Lock.*—May 18, 1869.

Claim.—1. The combination of the adjustable dog M with the wheel L, substantially as described, and for the purpose set forth.

2. The combination of the cam G G′ with the wheel L, sliding-lever C C′, and latch D D′, all operating as described, and for the purpose set forth.

3. The combination of the lever C C′ with the latch D D′, arranged and operating substantially as described, and for the purpose set forth.

90,097.—Melancthon Hanford, Boston, Mass.—*Apparatus for Purifying, Screening, and Cooling Reburnt Bone-Black.*—May 18, 1869.

Claim.—As a device for elevating, cooling in transition, and screening a mass of renewed charcoal from sugar-refineries, the employment and arrangement of an air-engine, a receiving, elevating, and cooling chute, and screening and receiving chests, the chute being connected with the engine, and provided with the filling-hopper, or its equivalent, and the receiving-chest with the apiculated deflector L and screen O, and connected with the receiving-chest Q by the conduit P, the latter being provided with means for admitting steam to its interior, and the whole operating in manner and to produce results substantially as before shown and described.

90,098.—Samuel Z. Hawbecker, Upton, and Abraham Thomas, St. Thomas, Pa.—*Horse Hay-Fork.*—May 18, 1869.

Claim.—In combination with the geared rod and barbs or tines, the arm D, levers E and *f*, and cord *h*, for the purpose of holding, and for tripping the said barbs or tines, as may be required, and as set forth.

90,099.—Moses H. Hawkins, New Haven, Conn.—*Artificial Leg and Foot.*—May 18, 1869.

Claim.—1. The combination of the knee-cord B and the leather sheath *t*, with the main spring C, adjustable bar *a a*, and fulcrum-pin *g*, when constructed, arranged, and fitted substantially as herein described and set forth.

2. The combination of the cords *d* and *e*, with the screws *r* and *s*, and the main-spring C, substantially as herein described and set forth.

3. The combination of the devices which constitute the double-acting ankle-joint *l l* and *m*, Fig. 5, substantially as herein described and set forth.

90,100.—E. E. Hendrick, Carbondale, Pa.—*Compound for the Manufacture of Lubricating Oils.*—May 18, 1869.

Claim.—The use of the compound formed by a union of lead with the oxide of lead, in the manner and for the purposes substantially as described.

90,101.—Edward N. Hillsgrove, Concord, N. H.—*Ox-Yoke.*—May 18, 1869.

Claim.—A yoke constructed with the beam *a a*, the hook-plate *e*, and the neck-pieces *b b*, and the dogs *k k*, combined, arranged, and adjusted as described, as and for the purposes described and set forth.

90,102.—Nelson H. Howard, Beloit, Wis.—*Stove-Pipe Shelf.*—May 18, 1869.

Claim.—The yoke B, provided with the arms G and lips E, in combination with the bar D and screw C, all arranged and operating substantially as described.

90,103.—S. K. Hoxsie, Philadelphia, Pa.—*Coal and Grain Boat Elevator.*—May 18, 1869.

Claim.—1. The combination and arrangement of the vertical trunks B with the wharves A A, for the passage of the reciprocating tanks C, substantially as described.

2. The combination of the elevating platform D and reciprocating tanks C, with the elevated water-reservoirs G, the several parts being arranged and operating substantially in the manner and for the purpose set forth.

3. The combination and arrangement of the brake-shaft N, wheels T T, pulleys O O, O^2 O^2, chains P P, swivels Q Q, and bars R R, with the platform D, substantially as described.

4. The combination and arrangement of the weighted vessels S, chains D, and pulleys O^1 O^1, with the brake-shaft N, substantially in the manner and for the purpose set forth.

5. The connection of chains or ropes E of regularly increased length, with the movable tanks C, for giving an angle to the platform D, when in its elevated position, substantially as described.

6. The combination and arrangement of the rod L, ropes N, and levers K, with the valves J, for operating the latter, as above described.

7. The combination and arrangement of the rod *h*,

ropes W and W′, sheaves g g^1 g^2, and weight-shaft f, with the valves V, substantially in the manner and for the purpose set forth.

90,104.—Lucius H. Ives, Syracuse, N. Y.—*Meat-Block.*—May 18, 1869.

Claim.—A meat-block made in sections, and bolted and held together and in place substantially in the manner above set forth.

90,105.—Bruce Irons, Columbus, Wis.—*Carriage-Painters' Easel.*—May 18, 1869.

Claim.—A machine by which a carriage-body may be placed and sustained in any required position, in the manner and by the means herein described.

90,106.—John L. Kidwell, Washington, D. C.—*Composition for Pavements, Roofing, Drain-Pipes, &c.*—May 18, 1869.

Claim.—The improved composition for pavements and roofing, as above described and set forth.

90,107.—V. P. Kimball, Watertown, N. Y.—*Cheese-Box.*—May 18, 1869.

Claim.—1. Forming the cover for the cheese-ends of a paper disk or blank, the outer or projecting portion of which is bent down over the end and upon the sides of the cheese, and is there held, by means of a metallic or other hoop, applied to said cover and cheese, substantially in the manner and for the purposes set forth.

2. The method of boxing cheese by the employment of a paper strip or band, to encircle the sides of the cheese, in combination with the covers for the ends, and the hoops for holding the same, constructed and applied substantially as herein shown and specified.

90,108.—Jacob B. Kingman, Dorchester, Mass.—*Machine for Making Cut Nails.*—May 18, 1869.

Claim.—The combination of the rebated griper M, the vibrating griper C″, and the fixed griper N, all arranged and operating as specified.

90,109.—Peter Lawson, Lowell, Mass.—*Composition Drawing or Roving Can for Use in the Manufacture of Yarns.*—May 18, 1869.

Claim.—The improved composition-can for rovings, made of paper-pulp or other fibrous materials, united substantially as and for the purpose herein described.

90,110.—Daniel Lee, Boston, Mass.—*Steam-Engine.*—May 18, 1869.

Claim.—1. Utilizing the exhaust-steam in a steam-engine, by bringing it in communication with the live steam, and producing a current, by the mechanical devices substantially as shown and described.

2. The vacuum-chamber E, arranged substantially as specified.

3. The pipe b, in combination with the vacuum-chamber E, pipe C, and valves c and d, substantially as shown and described.

4. The receiving-chamber F, arranged substantially as specified.

5. The weight J, tubular rod I, and piston H, in combination with the valves e and d, substantially as shown and described.

90,111.—Charles S. Lynch, Boston, Mass.—*Mode of Utilizing the Slag of a Rolling-Mill Furnace.*—May 18, 1869.

Claim.—The employment of the furnace-slag or cinder, as described, with iron-ore alone, or with such and a quantity of oxide of manganese, in the manner, and under circumstances, and for the purposes substantially as hereinbefore explained.

90,112.—J. McIlvain, Hancock, Ill.—*Cultivator.*—May 18, 1869.

Claim.—1. The standard and brace I, when attached at front and rear as deseribed, for the purpose set forth.

2. The screw-hooks K, when arranged as described, for the purpose set forth.

90,113.—William McKay and Charles E. Bayley, Newburyport, Mass.—*Sail-Hank.*—May 18, 1869.

Claim.—The improved sail-hank, constructed as represented and described, viz, with the two parts, B B′, of its frame hinged together at one extremity of each, and provided with lap-hooks D D′ at their opposite ends, and also having the connection-screw bolt of such parts B B′ arranged and applied to them, so as not only to hold them together, but serve, at the same time, as a pivot or journal, to support the friction-roller of the hank, as set forth.

90,114.—Theodore H. Mead, Boston, Mass.—*Fly-Frame for Printing-Presses.*—May 18, 1869.

Claim.—1. The fingers F F, &c., when the form of their faces is modified by the application of the rods W W, &c., substantially as described.

2. The combination of the adjustable gauge G with the fingers F F, &c., for the purpose described.

90,115.—Michael Meade, Boston, Mass.—*Graduating Pattern for Boots and Shoes.*—May 18, 1869.

Claim.—The extension-pattern, when provided with the graduating-scales E and H, as described, and for the purpose set forth.

90,116.—Clark W. Mills, Brooklyn, N. Y.—*Grain-Bin.*—May 18, 1869.

Claim.—A grain-bin, formed with ranges of ventilating and supporting troughs, introduced substantially as and for the purposes set forth.

90,117.—Thomas Nevison, Morgan, Ohio.—*Portable Fence.*—May 18, 1869.

Claim.—The braces D, standards C, in combination with the rails E, sills A, and rider F, when constructed and arranged as herein described, and for the purpose specified.

90,118.—Enoch Osgood, Boston, Mass.—*Compound to be Applied to Shoes and other Articles.*—May 18, 1869.

Claim.—1. The application of rubber and emery, or their equivalent, vulcanized together hard or semi-hard, to horseshoes, or to boots and shoes for ladies' and gents' wear, either with or without a base, to prevent their slipping, substantially as and for the purpose herein set forth.

2. A horseshoe made with compartments, to be filled with a substance that will prevent horses and other animals from slipping, substantially as herein set forth.

3. The rubber and emery vulcanized compound, applied to brakes or other surfaces, so as to prevent slipping, substantially as and for the purpose herein set forth.

90,119.—Oscar Paddock, Watertown, N. Y.—*Button.*—May 18, 1869.

Claim.—A button or stud, having combined with its head and shank a dished volute wire spring, arranged, with relation to the button-head, in the manner and for the purposes set forth.

90,120.—P. M. Papin, St. Louis, Mo.—*Apparatus for Ageing Spirits.*—May 18, 1869.

Claim.—The combination of the air-duct F with its perforations and head f, coil E, vessel C, with perforated cover C′, spaces D, D^1, and D^2, diaphragm B, with vessel A and pipe G, constructed and arranged to operate substantially in the manner and for the purpose described.

90,121.—Emery Parker, New Britain, Conn.—*Key.*—May 18, 1869.

Claim.—The improvement, which consists in uniting the two members A and B of the shank of an extension-key, by means of the slot b, terminated by the reverse curved slot c d, formed in one member, in combination with the fixed pins e e, in the other member, the whole operating in the manner substantially as described, for the purposes specified.

90,122.—A. G. Perry, Clyde, Ohio.—*Eaves-Trough Supporter.*—May 18, 1869.

Claim.—The strap A, with a jaw. B, in combina-

tion with the upright shaft D, bolt C, with an eye, K and bar, H, when used with the cross-bar F, all arranged substantially as described, as and for the purpose set forth.

90,123.—Townsend Poore, Scranton, Pa.—*Fluid-Meter.*—May 18, 1869.

Claim.—1. The loaded levers P, applied to disk E, or its equivalent, and so connected to valve *g* as to shut this valve at the termination of the down-strokes of said disk, substantially as described.

2. The loaded lever L, applied to disk E, or its equivalent, and provided with a gravitating-catch, M, and so connected to the valve *g*, and loaded lever P, as to open this valve at the termination of the up-strokes of the disk E, substantially as and for the purposes described.

3. The combination of loaded levers L and P, and their respective catches, with valve *g*, and reciprocating disk E, said parts being so constructed and arranged as to operate to shut valve *g*, at the termination of the down-stroke of disk E, and to open and lock open the valve at the termination of the up-stroke of said disk, substantially as described.

4. The combination of the gravitating latches and catches with a reciprocating valve-disk, E, of a fluid-meter, arranged and constructed so as to automatically open and lock open the valve of said disk, at the termination of its up-stroke, so that the valve cannot casually shut while the disk is descending by gravity, substantially as described.

90,124.—Ph. J. Probeck and John B. Corlett, Newburgh, Ohio.—*Invalid-Table and Book-Holder.*—May 18, 1869.

Claim.—The combination of the jointed frame or book-holder I, pivoted arm E, table D, tray H, and adjustable standard C, all arranged and constructed to operate in the manner and for the purpose substantially as described.

90,125.—George Robinson and Harvey O. Silver, Sodus, N. Y.—*Saw-Filing Machine.*—May 18, 1869.

Claim.—1. The adjustable two-part stirrups C *e*, C *e*, constructed as described, and suspended from the weighted roller B, for altering the inclination of the file, as and for the purpose set forth.

2. The saw-filing apparatus, composed of the vertical clamps D D and keys *e e*, for holding the saw, and the two-part adjustable stirrups C *e* suspended from the weighted roller B, for supporting the file in different positions and at various inclinations, all constructed substantially as described, and arranged within a suitable frame, to operate as set forth.

90,126.—George Lamb Scott, Manchester, England.—*Apparatus for Molding Pulleys.*—May 18, 1869.

Claim.—1. For the purpose herein set forth, the use of a trammel, carrying gearing and other parts, substantially as described.

2. The use of the movable center of motion *a b*, and constructing the molding-apparatus so as to constitute a machine complete in itself, and capable of being adapted to any part of the foundry.

90,127.—Thomas Shaw, Philadelphia, Pa.—*Water-Heater.*—May 18, 1869.

Claim.—The employment of a woven tube, in the manner and for the purpose set forth.

90,128.—Philander Shaw, Boston, Mass., assignor to Shaw's Union Air-Engine Company, same place.—*Hot-Air Engine.*—May 18, 1869.

Claim.—1. The inlet-valve V, when made hollow and combined with the cold-air pipe T″, substantially as described.

2. The combination of the inlet-vacuum valve V″ with the working-cylinder of the air-engine, substantially as described.

90,129.—William N. Shellabarger, Union, Ohio.—*Folding Feed-Trough.*—May 18, 1869.

Claim.—1. The folding feed-trough, constructed substantially as described.

2. The construction of a hay-rack in connection therewith, substantially as described.

90,130.—Simon P. Sleppy, Wilkesbarre, Pa.—*Sewing-Machine.*—May 18, 1869.

Claim.—1. The elliptical cam 6 and its flange 6″, in combination with the main-shaft 2 and intermediate gearing, all constructed and operating substantially as herein described.

2. The compound cam 7, combined with the looping-arm 16, and constructed to operate substantially as and for the purpose herein set forth.

3. The double-hooked spreader 10, constructed and operating substantially as described.

4. The slotted lip 20, attached to front face of the double-hooked spreader 10, constructed, arranged, and operating substantially as and for the purpose set forth.

5. The combination, as herein described, of the feed-dog 17, friction-wheel 17′, and adjusting-screw 17‴, with the cam 6 6″, for imparting vertical and longitudinal motion to the feed-dog 17.

6. The combination, with the above, of the arms 17″ and their adjusting screw or screws, and the cam 6′, for giving lateral, vertical, and forward motion to the cloth or feed, substantially as herein set forth.

7. The curved lever 16, having its long arm forked or divided, and supported on and made adjustable by the fulcrum-screw 15, substantially as herein described.

8. The needle-bar C, when provided with arm *b* for carrying the rods *f* and *g*′, and working in the tube *a*, attached to the front face of the stationary arm or goose-neck B, all substantially in the manner and for the purpose herein set forth.

9. The conical-headed screw, Fig. 7, in combination with the needle-bar C, when used to secure the needle in place, substantially as described.

10. The outer cylinder *d*′ of the feed-wheel, with its spring *h*, clutch *f*, rod *f*′, and clamp *f*″, when combined, constructed, and operating substantially as set forth.

11. The inner cylinder *e* of the upper feed-wheel, with its corrugated ends, Fig. 6, adjusting-screws *i i*′, and clutch *g*, and rods *g*′, clamp *g*″, and spring *h*′, combined, constructed, and operating as set forth, to give lateral motion to the feed-wheel.

12. The combination of the outer feeding-cylinder *d* and its appendages with the inner cylinder *e* and its appendages, for giving lateral and forward or retrograde motion to the cloth, as described.

13. The roller, Fig. 8, when used in combination with the upper feed-apparatus, in the manner and for the purpose set forth.

14. The adjustable plate, Fig. 9, constructed as described and for the purpose set forth, in combination with the upper and lower feeding-apparatus, operating as and for the purpose herein set forth.

15. The looper-needle 31, eyed and pointed at one end, and forked at the other, substantially as described.

16. The combination, with the looper-needle 31, of the notched plate 27, spring 28, pin 29, and screw 30, for fastening and operating the looper-needle, in the manner and for the purpose set forth.

17. The combination of the frame 33 and its arms 33′ and 33″ with the large wheel 34 and small wheel 35, for winding the thread on the bobbin 23 automatically, substantially as described.

18. The tension-spring 38, in combination with the described winding-apparatus for regulating the tension of the thread in its passage from the spool to the bobbin, as described.

19. In sewing-machines, where rotary hooks or spreaders are used to carry a loop around a spool or bobbin, or the spool or bobbin-case, the combination of the rotary spreading-hook 10 with a feeding-mechanism, feeding the cloth or fabric toward the free face of the hook or spreader, and in a plane at right angles, or nearly so, to the plane of revolution of the said hook or spreader, to cause the loop just forming to be caught with certainty by the point of the hook or spreader.

20. The combination, in a sewing-machine, of two feeding-devices, substantially as herein described, when one of them is constructed to feed the material in an opposite direction to the other.

21. The combination, with a sewing-machine, of

two feeding-devices, constructed substantially as herein described, either one of which may be made to perform alone all the requirements of a feed-apparatus, both for zigzag and direct stitches.

22. The combination, with a sewing-machine, of two feeding-devices, either of which may be made to perform, substantially as herein described, all the requirements of a feed-apparatus for a direct stitch, whilst the other vibrates or oscillates laterally.

23. The combination, with a sewing-machine, of two feeding-devices, constructed and operating substantially as herein described, so that both may have a vibrating, oscillating, or zigzag motion, in like or opposite directions at the same time, while the stitching continues in a uniform or direct line, thus forming two connected lines of stitches.

24. The combination, with a sewing-machine, of a cylindrical or spheroidal bobbin, a turning or revolving looper-hook, and a forked or barbed looper vibrating below the bed-plate, when constructed substantially as herein described, so that it will be unnecessary to remove either of these elements or devices therefrom to render the machine capable of making either a single-loop or a back-stitch.

25. The combination, in a sewing-machine, of mechanical devices, constructed and arranged substantially as herein described, so as to operate efficiently in making not only a stitch or stitches with three threads, but also in making a stitch or stitches with either one or two threads, at option, without the removal therefrom or the addition thereto of any mechanical device or part of the machine used in making a stitch with three threads.

90,131.— WILLIAM H. STAATS and AUGUST C. SCHWANKE, La Prairie, and LUCAS STADLER, Bowen, Ill.—*Land-Roller.*—May 18, 1869.

Claim.—The arrangement of the frames *a* and *b*, lever *c*, roller *d*, wheels *e*, and brace *f*, or their equivalents, when constructed and operating substantially as and for the purposes herein described.

90,132.—G. CARTER STAMPER, Osceola, Iowa.—*Nut-Lock.*—May 18, 1869.

Claim.—1. The riveted spring-plate A, having at the ends holes *a* or flanges *b*, or teeth or pins *c*, in combination with plate B and outer nuts *d d*, substantially as described.

2. Cap C, having flanges *e e*, and square hole *k*, in combination with bolt D, having square part *f*, and with nut *h*, substantially as described.

90,133.—EDWARD S. STIMPSON, Milford, Mass., assignor to DUTCHER TEMPLE COMPANY, same place.—*Lubricating Temple for Looms.*—May 18, 1869.

Claim.—The arrangement of the oiling-passage E in the projection *b* of the cap C of such temple, so that oil, after having been poured into such passage, shall be conveyed by it both to the spindle and to the next adjacent end of the toothed roller, before going through the bore of the roller, the whole being substantially as specified.

90,134.—THEODORE R. TIMBY, Saratoga Springs, N. Y.—*Umbrella-Fastening.*—May 18, 1869.

Claim.—The ring *c*, attached to the staff *a* of an umbrella or parasol, by means of a staple, *b*, or other suitable connection, in such a manner as to allow the ring to pass over and beyond the ends of the ribs, to secure the same, substantially as described.

90,135.—JAMES S. TRAVIS, New York, N. Y., assignor to ARCHER \& PANCOAST MANUFACTURING COMPANY, same place.—*Lamp-Shade.*—May 18, 1869.

Claim.—The translucent disk C, made of a separate piece from, but applied in connection with, the shade of a gas or other burner, substantially as and for the purpose herein set forth.

90,136.—WILLIAM L. TRULAND, Waterford, N. Y.—*Cutting-Plier.*—May 18, 1869.

Claim.—As a new article of manufacture, the within-described pliers, constructed with cutting-edges at the rear-ends of the jaws, and furnished with plates D D, substantially as set forth.

90,137.—ALEXANDER C. TWINING, New Haven, Conn.—*Detachable Fixture for Casters.*—May 18, 1869.

Claim.—1. The combination of a plate or socket with the elastic strip, wire, or branches traversing or skirting the bore, and attached, substantially as and for the purpose set forth.

2. The knob *k* in the same combination.

3. The swell *s* of the shaft or pintle in the same combination.

90,138.—WILLIAM V. VAN SYCKEL, Joshua, Ill.—*Fence-Gauge.*—May 18, 1869.

Claim.—The fence-gauge herein described, consisting of blocks C, arms E E, wedge D, strips B, and roller F, when constructed and arranged as set forth.

90,139.—WILLIAM H. WALL, Boston, Mass.—*Driving Reins and Bridle.*—May 18, 1869.

Claim.—1. The combination of the driving-reins, headstall, and bit, substantially in the manner as described, each driving-rein, under such mode of combining the parts, being made with two branches connected to the martingale and cheek-pieces of the headstall, and applied to one of the rings of the bit, substantially as and so as to operate therewith as described.

2. In combination therewith, the application of one of the branches each of the driving-reins to the cheek-rein, substantially in manner and so as to operate therewith, as hereinbefore explained.

90,140.—ISIDOR WALZ and JOHN M. PENDLETON, New York, N. Y.—*Manufacture of Carbonate of Soda and Other Chemicals.*—May 18, 1869.

Claim.—1. The use of steam in connection with a heated mass of carbonate of lime and nitrate of soda in a highly heated vessel or retort, for the regeneration of nitric acid, substantially as above described.

2. The production of a mass, consisting of quicklime and carbonate of soda, in exactly or nearly their chemical proportions or equivalents, and forming a mass applicable to the production of caustic-soda lyes from carbonate of lime and nitrate of soda, treated in the manner substantially as herein described.

90,141.—DAVID WELLS, Lowell, Mass.—*Coal-Stove.*—May 18, 1869.

Claim.—1. The combination of the auxiliary chamber M, having the discharge-opening N, arranged in the upper part of it, with the fire-place B, the smoke-consuming chamber G, its vertical flues H, and front flame-holes *h*, the whole being substantially as described.

2. A stove as made not only with the smoke-consuming chamber G, the vertical flues H, and fire-place B, combined and arranged as set forth, but as having a hole or opening, K, through the back of the fire-place and front of the smoke-consuming chamber G, and a separate perforated plate, L, arranged to extend across such opening, as specified.

3. A stove provided with a smoke-consuming chamber, G, arranged and combined with its fire-place by flues, and also communicating with the fire-chamber by flame passages or holes *h*, tapered in manner as set forth.

90,142.—SHEPHERD H. WHEELER and LYMAN V. ROUSE, Dowagiac, Mich.—*Potato-Digger.*—May 18, 1869.

Claim.—1. The bars *a*, when constructed, combined, and arranged as set forth.

2. In combination with the bars *a a a a*, the beam A, standard B, and share C, substantially as and for the purposes set forth.

90,143.—PARKER WINEMAN, Joliet, Ill.—*Pump.* May 18, 1869.

Claim.—1. The metal tube-section B, coated with a vitreous substance, and constructed with flaring ends, and receiving into said ends the lower terminus of the wooden section A, and the upper terminus of the lower wooden section B, all substantially as described.

2. An annular grooved ring-piston D, constructed with a raised valve-seat, *v*, and a forked stem, *i c*,

in combination with the valve *g*, substantially as described.

90,144.—ALLYN E. WOLCOTT, Chicago, Ill., assignor to himself and ISAAC SIMMONS, Baltimore, Md.—*Carriage-Spring.*—May 18, 1869.

Claim.—The combination of two or more sets of metallic springs B and D, and their attendant curved bearings A and C, and connecting-rods E, when constructed and arranged so as to operate substantially as shown and specified.

90,145.—ALLYN E. WOLCOTT, Chicago, Ill., assignor to himself and ISAAC SIMMONS, Baltimore, Md.—*Carriage-Spring.*—May 18, 1869.

Claim.—1. The combination of the curved bearings B, springs A, suspended adjusting-links C, and connecting-bar D, when constructed and arranged so as to operate substantially as and for the purposes set forth.

2. The combination of the springs A A and the curved bearings B B, arranged to operate substantially as herein set forth, either with or without the suspended links C C and connecting-bar D, or either of them.

90,146.—ALLYN E. WOLCOTT, Chicago, Ill., assignor to himself and ISAAC SIMMONS, Baltimore, Md.—*Carriage-Spring.*—May 18, 1869.

Claim.—1. A straight metallic resilient plate or spring, in combination with the auxiliary spring-plate I, or its equivalent, and a curved bearing on support, when arranged so as to operate substantially as described.

2. The combination of the adjusting links or arms C, a metallic resilient plate or spring, and a curved bearing, when constructed and arranged so as to operate substantially as and for the purpose specified.

3. The connecting beam or bar D, adjusting-links, or arms C, resilient plate or spring, and curved bearing, when constructed and operating substantially as described.

4. The flanges L and projections O, when constructed and operating substantially as and for the purposes shown and described.

5. The auxiliary ledges K and springs I, when constructed and arranged substantially as shown and specified.

90,147.—JOHN ZELLER, Stouchsburgh, Pa.—*Wagon-Jack.*—May 18, 1869.

Claim.—1. Lever C, in combination with the bail *f*, bar B, and rod or cord *g*, all arranged to operate substantially as and for the purpose set forth.

2. A lifting-jack, consisting of bar B, stock A, lever C, bail *f*, cord or rod *g*, knee-lever *m*, springs *n* and *l*, and stop *k*, all combined, arranged, and operating substantially as and for the purpose described.

90,148.—CHARLES ANTHONY, Providence, R. I.—*Rigging for Gaff-Topsails.*—May 18, 1869.

Claim.—The mode described of hanging and securing the gaff-topsail to the mast and gaff by means of the pintles P T and the latch-link K, or their equivalent, operated by halyards from the deck of the vessel, substantially as specified.

90,149.—DANIEL S. BIGLER, Siddonstown, Pa.—*Horse Hay-Fork.*—May 18, 1869.

Claim.—The fork-head, constructed, as described, of the curved side-pieces *a a*, united by the cross-piece *b*, the rocking fork-heads *c*, carrying the tines *h*, the slotted upright *d*, rods *f*, slotted runner *j*, and spring-catch *i*, all arranged and operating as described, for the purpose specified.

90,150.—EDWARD BLOOMFIELD and DWIGHT P. OTIS, New York, N.Y.—*Piano-Forte.*—May 18, 1869.

Claim.—The combination of the heavy notched bar F, screws E, and arm C, with the bridge D, all arranged and operating substantially as herein shown and described, for the purpose specified.

90,151.—WILLIAM BOND and JOHN WROATH, Sandy Hill, N. Y.—*Screw-Plate.*—May 18, 1869.

Claim.—The arrangement, substantially as described, of the stock A, lever D, screw E, handle F, and steadying-dies B B, for the purpose set forth.

90,152.—ADDISON P. BOREN, Greensborough, N. C.—*Baling-Press.*—May 18, 1869.

Claim.—1. The clamps H, having their parts hinged together, in combination with the yokes I, when arranged so as to be placed in the press before filling, and so as to clamp and secure the bale automatically the instant the compression is effected, substantially as described.

2. In combination with clamps and yokes, arranged as above claimed, the grooves or guides *a*, whereby the clamps are guided into the yokes while the bale is being compressed, substantially as described.

90,153.—GEORGE E. BRETTELL, Rochester, N.Y.—*Mop-Head.*—May 18, 1869.

Claim.—The combination of the jaws C C and D with the cloth-bar B and screw E, nut *e*, and sleeve A, when constructed and arranged substantially as described.

90,154.—WILLIAM BYRON, New York, N. Y., assignor to himself and GEORGE S. RICE, of same place.—*Combining Hard Rubber with Jet and other Substances to Produce Useful and Ornamental Articles.*—May 18, 1869.

Claim.—1. The method of combining hard rubber, or vulcanite, with jet or other substances, substantially in the manner and for the purposes set forth.

2. As a new manufacture, jewelry composed of jet, mounted in or upon, or combined with hard rubber, substantially as herein described.

90,155.—GEORGE W. DALBEY, Carrollton, Miss.—*Thread-Guard.*—May 18, 1869.

Claim.—The guard A, with the lips B and the cutters C, arranged substantially as and for the purposes herein shown and described.

90,156.—REUBEN DANIELS, Woodstock, Vt.—*Bearing for Shafts.*—May 18, 1869.

Claim.—The journal-box A B, provided with the supplementary bearing-plate C, adjustable by means of the set-screw E, substantially in the manner herein described, for the purpose specified.

90,157.—JAMES H. DEVIRS and DANIEL GRAVATT, Pleasantville, Pa.—*Tube-Well Pump.*—May 18, 1869.

Claim.—The described arrangement and combination of the detachable inner barrel *d*, tube *a'*, springs *e e*, ring or collar *c*, and weight *f*, substantially as and for the purposes set forth.

90,158.—PIERRE A. DORMOY, Vienna, Austria.—*Apparatus and Machinery for Puddling Iron.*—May 18, 1869.

Claim.—1. The mode of puddling substantially as hereinbefore described; that is to say, by means of tools to which rotary motion on their axes is imparted mechanically, while they are, at the same time, directed, by the puddler, to any required part of the furnace.

2. Constructing apparatus for imparting rotary motion to puddling-tools, substantially as hereinbefore described and represented in the accompanying drawings.

3. Constructing tools to be employed in puddling, with a handle, which will allow the tool-shaft to rotate while the handle is held by the puddler, substantially as hereinbefore described and represented in the accompanying drawings.

4. The employment of hollow rotating tools, as a means for injecting air, steam, or other gases into the molten iron during the puddling, and the constructing of the same substantially as hereinbefore described and represented in the accompanying drawings, whereby I would have it understood that what I claim as my invention is not simply the injection of air, steam, or gases, by means of puddling-tools as already known, but the employment, for that purpose, of tools rotating, as described, simultaneously with the injection of air, steam, or other gases.

5. The mode of compressing and forming the blooms in the puddling-furnace by means of oscillating tools cooled by an internal stream of water, air, or steam, substantially as hereinbefore de-

scribed and represented in the accompanying drawings.

6. The mode of compressing and forming the blooms in the puddling-furnace by means of tools introduced into the furnace from above, and rotating, rising, and sinking, substantially as hereinbefore described and represented in the accompanying drawings.

7. Constructing apparatus for imparting oscillating or rotating and rising and sinking motion to tools for forming and compressing blooms in the puddling-furnace, substantially as hereinbefore described and represented in the accompanying drawings.

90,159.—W. C. C. ERSKINE, Nether Kinnedder Dunfermline, Scotland.—*Coffee-Pot.*—May 18, 1869.

Claim.—The strainer, constructed as described, of the cone B, provided with coarse perforations, and the finely perforated tube C, extending vertically through said cone, both arranged as described, and adapted for attachment to the interior of the case A, in the manner set forth, for the purpose specified.

90,160.—HUGO FLECK, Dresden, Saxony, assignor to WILLIAM A. FLECK, Philadelphia, Pa.—*Manufacture of Glue.*—May 18, 1869.

Claim.—The herein-described use of salt and its solutions in the process of drying glue.

90,161.—GEORGE P. FULLER, Philadelphia, Pa.—*Railway-Chair.*—May 18, 1869.

Claim.—The combination and arrangement of the railroad-chair A, having a slot, *a*, vertical wings D, and flanges G, the plate-key E, and spring-key F, with the rails B, substantially as described.

90,162.—ANDREW FULTON, Albany, N. Y.—*Binder for Closing Gas-Retorts.*—May 18, 1869.

Claim.—The combination, with the retort, of the arms C D, link F, levers G K, all arranged substantially as specified.

90,163.—THOMAS GAMBLE, Richmond, Va.—*Saw-Grinding Machine.*—May 18, 1869.

Claim.—The combination of the housings B, boxes A, blocks E, and wedges, connected by the adjustable yokes D, when arranged substantially as and for the purpose described.

90,164.—THOMAS D. GIBSON, Wilmington, Del.—*Hollow Projectile for Fire-Arms.*—May 18, 1869.

Claim.—A hollow projectile for fire-arms, composed of the bars *a a*, arranged around the charge A, when notched as described, for the purpose herein shown.

90,165.—J. GODFREY, New York, N. Y.—*Iron Last.*—May 18, 1869.

Claim.—Connecting the foot B to the standard A, by an adjustable joint, without other support, substantially as herein shown and described, and for the purpose set forth.

90,166.—CHARLES R. GORGAS, Roughsburgh, Ohio.—*Pessary.*—May 18, 1869.

Claim.—1. The inflating rubber pessary, having a conical pear-shaped body, A, cord B, and funnel-mouth, C, substantially as shown and described.

2. The hard-rubber cannula D, for introducing the pessary into the vagina, constructed as shown and described.

3. The hollow stem E, answering the two-fold purpose of introducing and inflating the pessary, substantially as shown and described.

90,167.—THOMAS G. HALL, Beech Haven, assignor to himself and DANIEL F. LEYBERT, Salem, Pa.—*Water-Wheel.*—May 18, 1869.

Claim.—1. A series of perpendicular gates, connected to a ring at the top, by the elevation of which ring they may be simultaneously raised, said gates having a transverse double flange at the bottom, the outward part of which flares, or curves upward, and the inner part conducts the flow in a direct line to the wheel, all substantially as and for the purpose described.

2. A turbine-wheel, having the two concentric sets of buckets, I and G, all substantially as described.

90,168.—GEORGE HARRISON, New York, N. Y.—*Pen-Holder.*—May 18, 1869.

Claim.—Discharging the pen from the barrel A by means of the lip *f g*, upon the divided discharge-tube B, working within the slots C *b* of the barrel A, all the parts being constructed and arranged as herein shown and described.

90,169.—L. O. HAYWORTH, New Cumberland, Ind.—*Hand Corn-Planter.*—May 18, 1869.

Claim.—1. The dropping-plate D, spiral plate G, and slotted stud H, in combination with the seed-box C, table or plate F, frame A, and plunger B, substantially as herein shown and described, and for the purpose set forth.

2. An improved corn-planter, formed by the combination of the frame A, plunger B, seed-box C, dropping-plate D *d'*, brush *c*, table F, spiral plate G, hopper E, plate I, and spring-plate K, with each other, said parts being constructed, arranged, and operating substantially as herein shown and described, and for the purpose set forth.

3. Constructing the dropping-plate D in such a way that it may be held up against the bottom of the seed-box C with an elastic pressure, to facilitate the discharge of any stray kernels that may find their way between the said plate and seed-box, substantially as herein shown and described.

90,170.—GEORGE W. HOBART, Silverton, Oregon.—*Machine for Stuffing Horse-Collars.*—May 18, 1869.

Claim.—1. The combination of the crank-wheel D, adjustable crank-pin d^2, pitman E, sliding-block or cross-head F, stuffing-rod G, feed-rack I, and hopper L, either or both, tube J, slide K, and adjustable collar-board M, with each other and with the frame A B, C^1 C^2 C^3, substantially as herein shown and described, and for the purpose set forth.

2. Adjustably pivoting the collar-board M to the slide K, by means of the slotted and recessed plate k^1, substantially as herein shown and described, and for the purposes set forth.

3. The combination of the rack k^2, gear-wheel N, shaft O, rack V, pawl U, crank P, pulley Q, rope or chain R, and weight T, with each other and with the slide K, and beams or bars C^1 C^2 C^3, substantially as herein shown and described, and for the purposes set forth.

90,171.—E. C. HOLDEN and E. L. BROCKETT, Owatonna, Minn.—*Bed-Bottom.*—May 18, 1869.

Claim.—The arrangement of the two parallel pieces *a c*, the curved piece *b*, the two blocks *d d*, one on each side of the center, and the hanging cranks *e e*, substantially as and for the purposes specified.

90,172.—JAMES HOLLINGSWORTH, Chicago, Ill.—*Horse-Stall Floor.*—May 18, 1869.

Claim.—The inclined floor *c*, slats *f f*, and trough *g*, all constructed, combined, and arranged in the manner and for the purpose herein described.

90,173.—LAWRENCE HOLMS, Paterson, N. J.—*Alarm-Bell.*—May 18, 1869.

Claim.—1. In ringing alarm and other fixed bells, the combination of the rotating-spindle *c*, with the swinging-hammer, all constructed and arranged substantially as shown and described.

2. In ringing alarm and other fixed bells, in combination with a rotating-spindle and swinging-hammer suspended therefrom, the sliding-sleeve *k*, feather *c'*, links *i i*, swivel-collar *l*, links *m m*, and forked lever *n*, substantially as and for the purposes shown and described.

3. In ringing alarm and other fixed bells, and in combination with a rotating-spindle and swinging-hammer suspended therefrom, substantially as described, the tangential or worm wheel *q*, worm *r*, ratchet-wheel *s*, lever *t*, and pawl-link *u*, and lever *v*, for the purpose of giving rotary motion to the spindle *c* and hammer *j*, either together with, or in-

dependently of, the ringing mechanism, substantially as shown and described.

4. In combination with a bell-hammer, the cross-arms *g g'*, and springs *h h*, substantially as and for the purposes shown and described.

5. Making the striking-faces of a bell-hammer of a curvature corresponding in reverse to that of the sound-bow of the bell, substantially as and for the purposes shown and described.

6. Arming a bell-hammer with hard wood, or other semi-elastic material, substantially in the manner shown and for the purposes described.

90,174.—Wesley Hull, Fort Wayne, Ind.—*Neck-Yoke.*—May 18, 1869.

Claim.—The ferrules *b b*, constructed and secured to the yoke A, as described, and provided with rollers *d d*, as and for the purpose set forth.

90,175.—W. Davidson Jones, Hagaman's Mills, N. Y.—*Corn-Husker.*—May 18, 1869.

Claim.—The separator *d d d d*, made and constructed substantially as described and shown, having beating or tripping edges, said beaters being provided with recesses *e e e e*, operating substantially as and for the purposes shown and set forth.

90,176.—James L. Judge, Milwaukee, Wis.—*Steam-Heater.*—May 18, 1869.

Claim.—1. The steam-heater, constructed with shell A, circulator E and F, flues G and H, and corrugations K, all arranged substantially as described.

2. Base B, with doors L, M, N, and O, and holes to correspond with the flues G and H, arranged substantially as described.

3. Circulator E and F, flues G and A, corrugations K, steam-chamber I, with shell A, constructed and arranged substantially as described.

90,177.—R. D. King, Brooklyn, N. Y.—*Shutter and Awning Combined.*—May 18, 1869.

Claim.—The attaching, to the front of a building, the upper ends of one or more shutters, by hinges or joints, so that said shutters may be freely raised and lowered, in combination with windlasses, or their equivalent, one or more, arranged with chains or cords, pulleys, and suitable fastenings, whereby the shutter or shutters are made to serve the double purpose or use of an awning and shutters, substantially as herein set forth.

90,178.—J. W. Lewis, Oregon City, Oregon.—*Gang-Plow.*—May 18, 1869.

Claim.—1. The frame A and draught-pole E, with the platform D for the driver's feet, and the seat F, in combination with the toggle H, lever I, and the rack Ix, all constructed and arranged substantially as and for the purpose specified.

2. The pivoted bar J, guides L' Lx, pin *d*, lever N, carrying the catch O *e*, the chain *ax*, and pulley *f*, in combination with the axle L, substantially as described, for the purpose specified.

90,179.—James C. Lewis, Belfast, Me.—*Compound for Treating Asthma and other Diseases.*—May 18, 1869.

Claim.—The compounding of the above ingredients and their preparation, as herein set forth.

90,180.—Melville E. Mead, Darien Depot, Conn.—*Automatic Ventilator.*—May 18, 1869.

Claim.—The automatic ventilator, consisting of the two oppositely arranged series of pivoted slats, connected by adjustable rods or bars, whereby they are adapted to operate substantially in the manner herein set forth, for the purpose specified.

90,181.—Thomas J. Mell, Macon, Ga.—*Railroad-Car Ventilator.*—May 18, 1869.

Claim.—The ventilator A, on the rod B, operated by the cord, chain, or wire C, in combination with the hood or cap D, the whole being set, arranged, and operating in the manner and for the purpose substantially as herein shown and described.

90,182.—Dennis Michaels and John H. Croskey, Hopedale, Ohio.—*Horse-Power.*—May 18, 1869.

Claim.—The combination and arrangement of the drum A, mounted upon the shaft B in the framing, the notched ring E, sweep C, spring-latch D, cord H, and stay-ring I, as herein described, for the purpose specified.

90,183.—David H. Nation, St. Louis, Mo.—*Folding-Seat.*—May 18, 1869.

Claim.—The method of uniting a folding-seat to its standards by elliptical projections *b b'* and sockets *c c'*, with shoulders *o o'*, and bolts passing through them, in the manner shown and specified.

90,184.—John Nichol, New York, N. Y.—*Shears for Cutting Iron.*—May 18, 1869.

Claim.—1. The combination of the arms F, one or more, and friction-rollers H, with the movable cutter-bar C and standards G, attached to the bed or frame A, whether used with or without the adjusting-plates I, substantially as herein shown and described, and for the purpose set forth.

2. The adjustable clamp L M, constructed and adjusted substantially as herein shown and described, and for the purpose set forth.

3. The lever N n^1 n^2, constructed as described, in combination with the adjustable clamp L M and bed A, substantially as herein shown and described, and for the purpose set forth.

90,185.—S. W. Palmer and J. F. Palmer, Auburn, N. Y., assignors to S. W. Palmer and C. M. Palmer, same place.—*Clothes-Wringer.*—May 18, 1869.

Claim.—1. The upright flat springs, when employed on the ends of a wringer, substantially as herein shown and described, to operate as set forth.

2. The pivoted arm *g*, attached to the sliding-plate G, and carrying the pinion J, when provided with the segmental edge *j*, for keeping the pinion in constant gear, as set forth.

3. The combination of the axles E F and gear-wheels K L, with the pinion J and pivoted arm *g*, all combined and operating substantially as herein shown and described.

4. The combination of the handled cams H with the plate G and block *d*, for the purpose of removing and putting on the pressure quickly and easily, when arranged and made substantially as herein shown.

90,186.—Anson Peirce, Lake City, Minn.—*Wagon-Brake.*—May 18, 1869.

Claim.—The pivoted levers K, having slotted cross-heads *k'* formed upon their free ends, the plate or bar L, and connecting-rods J, in combination with each other and with the tongue-rod H, axle D, and sliding-bar M, by which the brake-bar P is operated, substantially as herein shown and described, and for the purpose set forth.

90,187.—J. Deming Perkins, New York, N. Y.—*Alarm Cash-Box.*—May 18, 1869.

Claim.—1. Operating the alarm-mechanism through the box-handle I, which is provided with the coiled spring, substantially as herein shown and described.

2. The combination of the curved arm M, having the laterally projecting pin, with the cover of the box, the spring-hammer L, and the bell K, arranged in the end compartment of the box, all operating as described, to sound the bell when the cover is raised, as herein set forth and shown.

3. The combination of the bells B G K, and their operating mechanism, with the cash-box and cover, all arranged as described, for the purpose specified.

90,188.—Charles Perley, New York, N. Y.—*Sash-Fastening.*—May 18, 1869.

Claim.—The pawl *a*, with its T-head, in combination with the strap, setting over said pawl, and provided with a mortise, for the pawl to pass through, constructed and arranged as and for the purposes set forth.

90,189.—Jacob Pfitzinger, Buffalo, N. Y.—*Elevator-Bucket.*—May 18, 1869.

Claim.—The center-brace C, constructed and fastened to the bucket and binding-frame, substantially in the manner and for the purposes herein set forth and described.

90,190.—Ansel Phinney, Bainbridge, N. Y.—*Holder for Screw-Cutting Dies.*—May 18, 1869.

Claim.—The construction and arrangement of the die-plate A, having the dies and set-screw, and the crotched shank B, terminating in the end C, adapted to fit in a bit-stock, therein described, for the purpose specified.

90,191.—Merritt F. Potter, Kaneville, Ill.—*Abdominal Supporter.*—May 18, 1869.

Claim.—1. The India rubber bag B, combined with the tube C, in the manner and for the purpose set forth.

2. The clasp D, in combination with the bag B.

3. The combination of the bag B and tube C with a syringe for distending it in the manner and for the purpose set forth.

4. The utero-abdominal compress, constructed and combined as set forth, as a new article of manufacture.

90,192.—Mark H. Prescott, Ottawa, Ill.—*Heel for Boots and Shoes.*—May 18, 1869.

Claim.—As an improved article of manufacture, the hollow heel A, having the bent flange D, and the raised bottom B, upon which the wearing surface C rests, secured to the plate E upon the boot or shoe, by means of the screws F F, as herein described, for the purpose specified.

90,193.—Edmond Prud'homme and Pantaleon Moses Leprohon, New York, N. Y.—*Sliding-Door.*—May 18, 1869.

Claim.—The rollers *b*, supported upon the springs *e*, in the upper end of a sliding-door, substantially as described, for the purpose specified.

90,194.—B. M. Quint, St. Joseph, Mich.—*Insect-Trap for Protecting Fruit While Growing.*—May 18, 1869.

Claim.—An improved insect-trap, formed by the combination of the two parallel bars A, open at one end, cross-bar B, outer frame C, plank or brace D, rubber-block E, and sheet F, with each other, substantially in the manner herein shown and described, and for the purpose set forth.

90,195.—H. J. Rickard, Rochester, N. Y.—*Hollow Auger.*—May 18, 1869.

Claim.—1. The head *x*, screws *h*, in combination with the movable T-headed arms *a*, all being constructed and arranged to operate substantially as and for the purpose set forth.

2. In combination with the above, the sustaining-bars *p* and clamping-screws x^2, as and for the purpose set forth.

90,196.—Philippe Ricord and John R. Scattergood, Newark, N. J.—*Fastening for Horses.*—May 18, 1869.

Claim.—1. The spring-catch or snap, consisting of metallic clasp A, bolt B, retracting-bar D, sockets E and G, spring H, and ring I, constructed as described, and for the purpose of enabling the releasement of a driving-rein, or its equivalent, by a simple pull on the part of the driver, after having mounted his carriage.

2. The combination of said snap with a driving-rein, halter, or its equivalent, and the peculiar manner of attaching the same to a post, tree, or other suitable object, without the use of fixed rings or hooks, whereby the strain of the animal tied, when pulling, comes directly on said post, and not on the snap, substantially as described.

90,197.—William Rogers, New York, N. Y., assignor to himself and O. S. Paine, same place.—*Heating-Shoe.*—May 18, 1869.

Claim.—A shoe, boot, or sock, provided with a pocket or compartment for containing any heating material or substance, substantially as and for the purposes herein shown and described.

90,198.—Edward Sealy, Newark, N. J.—*Felted Hat.*—May 18, 1869.

Claim.—The inlaid hat, substantially as hereinbefore described, having a body variegated by pattern-threads inserted in such body, and combined with it by felting, the same being a new article of manufacture.

90,199.—Norman B. Sebring, Matamora, Ohio.—*Bee-Hive.*—May 18, 1869.

Claim.—1. The self-supporting railing *g*, with its several inclined slats *f f*, &c., in combination with the comb-supporting frames, in the manner set forth and described.

2. The two perforated tin cutters T T, tray R, grappers w^1 and w^2, for the use and purposes herein described.

90,200.—Hugh Shepherd, Lee's Summit, Mo., assignor to himself and George W. Scott, same place.—*Seed-Drill.*—May 18, 1869.

Claim.—1. The arrangement of the drill-tooth A, its cutter A^2, with the drag-bar B, by the bolt *b*, and holes *b'*, substantially as set forth.

2. The braces D and E, arranged adjustably by the bolts *d* and *e*, and holes *d'* and e^1, respectively, to support and guide the roller C, in connection with the tooth A, substantially as set forth.

90,201.—John Joseph Charles Smith, Philadelphia, Pa., assignor to "The Metallic Compression Casting Company," Boston, Mass.—*Method of Casting Metal Pipes.*—May 18, 1869.

Claim.—1. The apparatus adapted to receive the molten metal at top, and discharge a portion of it at bottom, substantially as herein described, for the purposes stated.

2. In combination with the mold A, the lined reservoir E and plug G, constructed and arranged as described, to provide for the instantaneous introduction of molten metal into the said mold.

3. The combination of the mold A, the unyielding base or gate S, by which the bottom of the said mold may be opened or closed at pleasure, and a temporary bottom, *s*, of yielding and non-conducting material, all being constructed and arranged to operate substantially as shown and described, for the purposes set forth.

90,202.—Andrew N. Staley, Waynesborough, Pa., assignor to himself and D. B. Russell, same place.—*Hay-Knife.*—May 18, 1869.

Claim.—As a new article of manufacture, the within-described hay-knife, the blade of which being formed diamond-shape, substantially as and for the purpose set forth.

90,203.—R. P. Starbuck, Gallatin, Mo.—*Bee-Hive.*—May 18, 1869.

Claim.—The adjustable entrance-protector *d'*, in combination with the legs *l* and flaps *h*. as and for the purpose specified.

90,204.—George C. Stevens, West Townsend, and J. F. Stevens, Fitchburgh, Mass.—*Turbine Water-Wheel.*—May 18, 1869.

Claim.—1. The top plate *b* and the annular bottom plate *c*, constructed and arranged with the space between them widening toward the center, all as described, for the purpose specified.

2. The stationary chutes E E, constructed as described, and arranged, with relation to the buckets *d*, plates *b c*, and the swinging-gates F, as herein described, for the purpose specified.

3. The gates F F of a water-wheel, connected with two or more wheels, or rings, G H, so that they can be separately or simultaneously opened or closed, as set forth.

4. The wheels or rings G H, by which the gates can be separately moved, with each other, connected by means of a screw, K, for the purpose of allowing the simultaneous setting of the gates as set forth.

90,205.—George W. Strong and Walter L. Strong, San Francisco, Cal.—*Ore-Concentrator.*—May 18, 1869.

Claim.—1. The vibrating-trough C, having the divergent sides E E and inclined bottom N, said sides gradually approaching each other, toward the upper end of the trough, substantially as and for the purpose described.

2. A trough, having divergent sides and an in-

clined bottom, moving on a pivot or standard, D, adjustable by means of the pin *a* at one end, and suspended, by means of rods *e e*, at the opposite end, said trough having communicated to it a shaking or vibrating motion, substantially as and for the purpose above described.

90,206.—CHARLES E. SWENEY, Geneseo, Ill.—*Thill-Coupling.*—May 18, 1869.

Claim.—The clip A, with its projections B B, the thill part D, with the block E, pivot pin J, and nut H, constructed, arranged, combined, and operating substantially as and for the purposes herein shown and described.

90,207.—ALBERT THOMPSON, Ridgeway, Pa., assignor to himself and GILMAN T. WHEELER, same place.—*Saw-Filing Machine.*—May 18, 1869.

Claim.—1. Having the saw-filing machine on a frame or other fixture, as described, so that it can be swung to and adjusted on a circular saw, without removing the saw from its arbor, substantially as herein shown and described, and for the purposes set forth.

2. The plate J, carrying the filing-mechanism, when supported by the central journal *k*, and the arm L, hung upon the shaft I, and adapted for turning the file to an angle other than a right angle to the saw, by means of the graduated disk M and spring-catch lever N, all arranged and operating as herein shown and described.

3. The laterally adjustable roll *e*, and the roll *e'*, having fixed bearings, when operated by means of the gear-wheels *g h*, ratchet-wheel *i*, and pawl-lever *j*, and arranged upon the plate *d*, suspended from the frame B, as herein described, for the purpose specified.

4. Reversing and stopping the file, and holding it in any desired position, by means of the adjustable collar *a*, arm *z*, and spring-bar *b*, as described.

5. In combination with the movable plate J, the disk or index *m*, with the catch-lever N, substantially as and for the purposes herein shown and described.

90,208.—HIRAM VAN METER, Macomb, Ill.—*Cultivator.*—May 18, 1869.

Claim.—1. The combination of the plow-beams I I with a cultivator-frame, constructed as shown and described, with the plow-beams attached to the frame, as set forth.

2. The sockets *ex*, arranged as described, upon the cross-bar A, whereby the elastic bars D of the seat are adapted to be held upon the frame, with their centers resting upon the boxes *c* of the axles, as herein set forth and shown.

90,209.—LORENZO P. WATERMAN and CHARLES H. PORTER, Bridgeport, Conn., assignors to themselves and JAMES M. HUNT, same place.—*Attaching Roses for Knobs to Doors.*—May 18, 1869.

Claim.—Securing the two roses by means of the tubular screws, (Fig. 2,) passing through the door and the two roses A and B, and the end secured in the rose B by the nut *b*, Fig. 3, substantially as herein described, and set forth in Fig. 1.

90,210.—JOHN W. WEBB, Cotton Valley, Ala.—*Cotton-Gin.*—May 18, 1869.

Claim.—1. In combination with a saw-cylinder and brush of a cotton-gin, a woven-wire moat-board, arranged and agitated substantially as described.

2. The movable vibrating ends in the breast or feed-box, pressed toward each other by springs or their equivalents, substantially as described, for the purpose set forth.

90,211.—OTIS H. WEED, Boston, Mass.—*Carpet-Sweeper.*—May 18, 1869.

Claim.—The combination and arrangement of the driving-wheels A A with their cogs, in combination with the cog-wheel B and adjustable bearings D D and G G, substantially as and for the purpose described.

90,212.—WILLIAM WHITESIDE, Manayunk, Philadelphia, assignor to THOMAS WOOD, Philadelphia, Pa.—*Mechanism for Operating Shuttle-Boxes in Looms.*—May 18, 1869.

Claim.—In combination with the box-rod supporting-lever B, and star-cam C, the weighted lever D, for retaining the same in position, substantially as described.

90,213.—H. O. WINSOR, Duxbury, Mass.—*Snatch-Block.*—May 18, 1869.

Claim.—The combination, with a tackle-block, divided at the upper end, as described, of the hinged transverse bar D, supporting the hook, and the hinged catch C, substantially as specified.

90,214.—FRIEDRICH WOHLGEMUTH, New York, N. Y.—*Breech-Loading Fire-Arm.*—May 18, 1869.

Claim.—Combining, with a "break-down" breech-loading shot-gun, fitted with a barrel-lock, as shown, a breech-loading rifle-barrel, made with a small flange on its rear end, and to fit the shot-barrel only at its rear end, the rifle-barrel to be secured by the said lock, and to be of any length less than the shot-barrel.

90,215.—JOSEPH BELL ALEXANDER, Washington, D. C.—*Siphon-Bottle.*—May 18, 1869.

Claim.—1. The India-rubber piece, represented in Fig. 6, with its lower tube K, its flanch or disk R, and its upper conical tube Z, in combination with the glass tube L, having its upper end conical, substantially as described, and for the purpose set forth.

2. The combination of the two-part collar D, and its upper flanch *a*, and its groove *g*, and its lower flanch *f*, and its holes V V, with the lip T, on the neck of the bottle M, and the cement-filling N, substantially as described and for the purpose set forth.

3. The combination of the cap C with its conical throat S, and the draught-pipe E, and the India rubber disk G, and the pipe-support F, and the washer H, and the crown B, and the thumb-screw A, in combination with the washer I, rubber-piece K R Z, glass tube L, collar D, lip T, on the mouth of bottle M, and cement-filling N, substantially as described and for the purpose set forth.

90,216.—W. P. ANDERSON, New York, N. Y.—*Railway-Car Connection.*—May 18, 1869.

Claim.—Combining with a car, for use upon railways, a device, consisting of cases B B', for containing springs, springs for receiving the shock in starting the car, a rope or chain, F, a drum or pulley, D, and a shaft, C, for communicating the propelling-power to the springs, substantially as and for the purpose specified.

90,217.—B. H. AYLWORTH, Oxford, N. Y.—*Vaginal Speculum.*—May 18, 1869.

Claim.—1. A vaginal speculum, made close or air-tight, when in use, by means of a glass or lens fitted to its body in rear of the tube which enters the vagina, and provided with an attachment for blowing or forcing in air to distend the vagina, substantially as specified.

2. The combination of the inflatable collar E and stiff back or collar D with the tube C, the body A, the lens B, and the tube G, essentially as and for the purposes herein set forth.

3. The combination, with a speculum, provided with an attachment for inflation of the vagina, of a flexible tube, for the introduction of instruments capable of manipulation therethrough, substantially as described.

90,218.—ROBERT BAILEY, Cleveland, Ohio.—*Center-Plate for Cooking-Stoves.*—May 18, 1869.

Claim.—1. The cross-plate or center-piece A, provided with one or more strengthening-bars, substantially as described, in combination with narrow slots or rows of perforations for the admission of air, arranged substantially as described.

2. In combination with two or more fixed bars *a a*, one or more separate bars, *b*, bolted, riveted, or otherwise held between them, substantially as herein described.

90,219.—THOMAS F. BAKER, Cincinnati, Ohio.—*Prison-Grating.*—May 18, 1869.

Claim.—1. The mode of constructing a jail door or grating with steel or steel-faced stiles and rails A

B, rods D, and steel sleeves E, countersunk into the rails, as set forth.

2. The combination of the two concentric sleeves E and G, substantially as and for the purposes set forth.

90,220.—ARVID O. BALDWIN and CHARLES H. MILLER, Lincoln, Ill.— *Velocipede.*—May 18, 1869.

Claim.—The arrangement of the springs D, with one end in the hangers E, and with the other attached to the cranks C, and provided with stirrup G, sliding in guide F, as described and shown.

90,221.—LEWIS M. BALLARD, New York, N. Y.—*Locking-Cap for Bottles.*—May 18, 1869.

Claim.—The locking-cap C, composed in part of or provided with a series of notched internally flanged rings, operating on the principle of a combination or permutation lock, in combination with lugs on the neck of a bottle or other vessel, or upon a collar permanently attached thereto, substantially as and for the purpose herein described.

90,222.—GROVE S. BARTHOLOMEW and ADELBERT R. CHAPMAN, Reading, Mich.—*Revolving-Harrow.*—May 18, 1869.

Claim.—A convertible harrow and cart, having separator B, draught-bars C, journals *c*, arms, hinges, and adjustable bands, as described, when constructed and operated substantially as specified.

90,223.—M. BERGNER and OTTO NETZOW, Baltimore, Md., assignors to themselves and JOSEPH LICHTENSTEIN.—*Lubricator.*—May 18, 1869.

Claim.—The construction and arrangement of the journal-box, having the double-chambered oil-box E E, with perforated partitions *e e*, between which slides the wick-holder F, bearing the adjustable wick *f*, the holder F being supported by the spring H, all as shown and described.

90,224.—WILLIAM JONES BERNE, Cincinnati, Ohio.—*Detachable Calk for Horseshoes.*—May 18, 1869.

Claim.—1. The detachable calk; composed of the jaw B, spurred flange D D′, dovetailed shank E, nut G, undercut groove I, steel bit J, jaw C *c*, gain F, lip K, and screw H, constructed and combined to operate substantially as and for the purposes set forth.

2. In combination with the detachable calk, the pad L, for the purposes specified.

90,225.—LYMAN R. BLAKE, Boston, Mass.—*Manufacture of Boots and Shoes.*—May 18, 1869.

Claim.—1. In combination with a narrow lasting-sole, the rib *e*, acting as a guide to keep the lasting-sole from lateral displacement, and as a brace to retain said sole in form, substantially as described.

2. In combination with means for preventing lateral displacement of the lasting-sole, a steady pin or pins, *g*, for fixing the sole in position in the direction of its length, substantially as described.

3. In combination with a last upon which such lasting-sole is used, the clinching-blocks *l*, attached to the last, and acting to turn the points of the tacks or nails driven through the outer sole and lasting-sole, substantially as described.

4 In combination with the narrow rigid metal lasting-sole, the lasting-thread, passing only through the edges of the upper, without passing around or being attached to pins extending above the surface of said sole, as herein described.

5. The process of making a shoe without a permanent or stitched inner sole, said process consisting in first lasting the edges of the upper over a narrow and rigid lasting-sole, (which sole fits upon the face of the last, and is so held in place thereon that the last can be slipped out from the shoe and off from the lasting-sole, the lasting-stitches passing across the last, and through and only through the edges of the upper,) then temporarily fastening the outer sole accurately in position, and then withdrawing the last and uniting the outer sole and vamp, by a series of stitches or other fastenings, passing through the sole and vamp, outside of the edge of the lasting-sole, said latter sole being left free to be withdrawn from the shoe by drawing out the lasting-tacks.

90,226.—SAMUEL BODEN, Louisville, Ky.—*Safety-Valve.*—May 18, 1869.

Claim.—1. The valve-rod D, with its slotted link *r*, adjustable connecting-nut *g*, spring *p*, set-screw *o*, loose joint *c*, and valve G, constructed, combined, and arranged substantially as herein set forth.

2. The arrangement of the foregoing-stated elements with the lever *h*, adjustable bearing *b*, and fulcrum-standard H, connecting link *a* and stem *d*, valve G′, and weight P, substantially as herein set forth.

90,227.—RUDOLPH BOEHM, Chicago, Ill.—*Ore-Washer.*—May 18, 1869.

Claim.—1. The combination of the table W, screw-rods O, suspended water-trough *c*, and sluices *f*, as and for the purpose set forth.

2. The combination of the cam 2, shaft *n*, bumper K, depending-plate *l*, T-brackets F, screw-rod *m*, spring *r*, table W, sluices *f*, and suspended trough E, as described.

90,228.—RUDOLPH BOHEM, Chicago, Ill.—*Smelting-Furnace.*—May 18, 1869.

Claim.—The peculiar construction of the cap C, when operated in combination with the casement A, fire-box S, pan E L, as described.

90,229.—HENRY D. BOLT, Elmira, N. Y.—*Brace for Spring-Beds.*—May 18, 1869.

Claim.—The brace D, clamped to the coil of the spring at *c*, and secured to the upper and lower frames, by means of rivets, or their equivalent, passing through the eyes *f f*, substantially as shown, for the purpose set forth.

90,230.—DAVID BOOKWALTER, Gardner, Ill.—*Corn-Husker.*—May 18, 1869.

Claim.—A husking-machine, having husking-rollers *c*, with their central shafts, flanches, spurs, and drums, constructed as described, in combination with the rollers *y* and bent wires *v*, when constructed, arranged, and operating substantially as specified.

90,231.—GEORGE BRADSHAW, Sandoval, Ill.—*Washing-Machine.*—May 18, 1869.

Claim.—The combination and arrangement of the box C, with ways *f*, open beater F, provided with friction-rollers *c*, performing the double function described, rod *a*, lever E, and springs D, all constructed and operated in the manner and for the purpose set forth.

90,232.—T. E. C. BRINLY, Louisville, Ky.—*Plow.*—May 18, 1869.

Claim.—1. The frame C, constructed substantially as and for the purpose set forth.

2. The combination of the shovel, the frame C, constructed with a notched surface at *c*3, and the notched plate E, and bolts F, substantially as set forth.

3. The adjustable cutter G, when attached to the beam by an adjustable plate, H, and arranged in front of the share, to operate substantially as and for the purpose set forth.

90,233.—ADAM S. BROWN, Lebanon, Pa.—*Horse Hay-Fork.*—May 18, 1869.

Claim.—A hay-fork, having tines A and B, strap C, dog *d*, spring *a*, catch *i*, trip *s*, slotted arm D, and pulley *v*, constructed, arranged, and operating substantially as specified.

90,234.—HENRY BULLARD and ROBERT HOLMES, Middletown, Conn.—*Hard-Metal Bottom for Tea and Coffee Pots.*—May 18, 1869.

Claim.—In a tea or coffee pot constructed with a hard-metal bottom, coating the said hard-metal bottom with porcelain, in the manner and for the purpose set forth.

90,235.—EDMUND F. BURROWS, Mystic River, Conn.—*Tooth-Brush.*—May 18, 1869.

Claim.—As an article of manufacture, a tooth-brush, composed of the parts A, B, and C, the part B having the screws *a* and *b* cut upon it, and all constructed and arranged, in relation to one another, substantially as and for the purpose set forth.

90,236.—Michael K. Carpenter, Cincinnati, Ohio.—*Hoisting-Machine.*—May 18, 1869.

Claim.—The cams H H′, slides E E′, *a a′*, and curved ways J J′, in the described connection or relation to each other, in the herein-described hoisting-machine, and constructed and operating substantially in the manner and for the purpose specified.

90,237.—George R. Carter, New York, N. Y. —*Gang-Plow.*—May 18, 1869.

Claim.—1. In combination with the plow-beams or beam-frame, the tilting carriage-frame, substantially as described.

2. With the tilting carriage-frame and the plow-frame pivoted to the front end thereof, the long seat extending from the axle to the rear of the carriage-frame, substantially as shown and described.

3. A gang-plow, having the plow-beams or beam-frame pivoted to the front end of the carriage-frame, when the latter is arranged to tip relatively to the draught-pole, substantially as shown and described.

90,238.—J. A. Casey, Maysville, Ky.—*Water Purifier and Cooler.*—May 18, 1869.

Claim.—The combination and arrangement of the devices herein described and shown, consisting mainly of the urns A and B, basin E, sand-bag *o*, tubes *i*, *s*, and *y*, perforated cover *d*, and caps *a′* and *c′*, substantially as and for the purposes herein specified.

90,239.—Eben Simpson Chase, Eau Claire, Wis.—*Sawdust-Burner.*—May 18, 1869.

Claim.—1. Utilizing the sawdust of a saw-mill, by placing the same in contact with a steam or blow-pipe or pipes, whereby the same is scattered upon the furnace, substantially as herein set forth.

2. The hollow-flanges E E, provided with fixed valves *a a*, and placed at suitable points in a furnace, for the purpose of receiving and scattering the sawdust on the grates when steam is admitted, substantially as shown and described.

3. In combination with a furnace, the flanges E E, provided with valves *a a*, and connected, by means of one or more pipes, *b*, with the boiler, substantially as and for the purposes herein set forth.

90,240.—John B. Cornell, New York, N. Y. —*Fire-Proof Skylight.*—May 18, 1869.

Claim.—Improved burglar-proof and fire-proof curved or dome-shaped skylight, composed of curved and rebated metallic rafters *a a*, thick plates of curved glass *c c*, curved metallic caps *d d*, a ridge-piece, *b*, and a double gutter-piece, *e f*, all combined with each other, substantially in the manner herein set forth.

90,241.—Thomas Daly, Erie, Pa.—*Railroad Switch and Signal.*—May 18, 1869.

Claim.—In combination with the rails B B′ D D C, and crank-shaft A, constructed and operating as herein specified, the cranks K K′ and their shaft, the two signals *l l′*, the cords *e e′*, and the sheaves *h h′*, all arranged and combined as shown, for the purpose of operating the signals and switch simultaneously in the manner described.

90,242.—Henry C. Dart, New York, N. Y.— *Beer-Cooler.*—May 18, 1869.

Claim.—The corrugated cooler, having its sides inclined at their top, to form an apex, in combination with a slotted distributer, made adjustable relatively to said cooler, substantially as specified.

90,243.—Augustus Day, Detroit, Mich.—*Ice-Tongs.*—May 18, 1869.

Claim.—As an article of manufacture, the ice-tongs A C, when constructed of one piece of metal, so bent as to resemble the figure 8, with the upper portion A smaller than the lower portion C, at the bottom of which the ends of the metal terminate with sharp points, and secured from spreading by the ring D, which embraces it where it is crossed between the upper portion A and the lower portion C, as and for the purpose above described.

90,244.—Samuel B. Dean, Boston, Mass.— *Bronze Ordnance.*—May 18, 1869.

Claim.—As a new manufacture, a bronze gun, in which the metal immediately surrounding the bore is put in the condition that is produced by the process of condensation set forth.

90,245.—J. G. Dillaha, Waco, Texas.—*Horse-Power.*—May 18, 1869.

Claim.—1. The wheels A and A″, constructed substantially as and for the purpose set forth.

2. The combination of wheels A A″ and pinion E″, arranged substantially as and for the purpose set forth.

3. The combination of cross-bars B B″ and bed-piece C, when arranged to operate in the manner and for the purpose described.

90,246.—H. B. Durfee, Decatur, Ill.—*Plow.*— May 18, 1869.

Claim.—The forked standard F, with its branches *c c*, the former attached to the beam, and the latter to the beam and handle both, for securing the plow to the beam, as well as the handle D to the beam and standard, as and for the purposes herein described.

90,247.—Philip Dyer, Jr., Unadilla, Mich., assignor to Robert P. Morden, same place.—*Harvester.*—May 18, 1869.

Claim.—1. The removable disk Z, supporting the vibrating-lever J, substantially as described.

2. The arrangement of the main frame, the axle, star-wheels I I, the disk Z, and the lever J, substantially as described.

90,248.—George A. Eyars, Meriden, Conn., assignor to Wilbur F. Parker, same place.—*Grate-Bar for Boiler and other Furnaces.*—May 18, 1869.

Claim.—The construction of the grate-bars, with one or both sides of either or both ends inclined, substantially as herein specified.

90,249.—David Eynon, Richmond, Va.—*Machine for Removing the Burrs from Railroad-Chairs.*—May 18, 1869.

Claim.—1. The combination of a cutter, D, formed for burring the inside of railroad-chairs, and the guide C, for holding the chair while being subjected to the action of the cutter, substantially in the manner and for the purpose set forth.

2. The combination and arrangement of the shaft E, guide C, bracket B, and cutter D, substantially as shown and described.

90,250.—John Fanning, Detroit, Mich.—*Washing-Machine.*—May 18, 1869.

Claim.—In a rotary washing-machine, the triangular flanges F, flanges G, in combination with cover H, attached by clamp I and thumb-screw, tubular journal C, and drip-tube E, when combined, as and for the purpose set forth.

90,251.—Norman T. Frary and Ezra T. Sherwin, Adrian, Mich.—*Turbine Water-Wheel.*—May 18, 1869.

Claim.—The within-described direct and reaction turbine water-wheel, consisting of the chamber A A, provided with the chutes M N O, (including the annular series,) and the wheel B, revolving on a vertical axis, and provided with the perpendicular buckets *m n o*, (including the annular series,) and oblique issues *m′ n′ o′*, (including the annular series,) the whole constructed and arranged to operate substantially as sot forth and described.

90,252.—James A. French, Scenery Hill, Pa., assignor to himself and J. D. Ulery, same place.— *Shoe-Pattern.*—May 18, 1869.

Claim.—The shoe-pattern A B of the configuration, when constructed and arranged as shown and described.

90,253.—William Freudenau, St. Louis, Mo. —*Process for Treating Corn, &c., in the Manufacture of Flour and Meal.*—May 18, 1869.

Claim.—The method of treating corn or Indian maize in the manufacture of corn-flour, meal, &c., by separating and removing the germ from the grain

before the corn is ground, substantially as and for the purposes herein set forth.

90,254.—E. E. FURNBY, Chicopee, Mass.—*Mechanical Movement.*—May 18, 1869.

Claim.—1. The combination of the cylinder, having a concave gear, G, applied thereto, main-shaft D, having one or more eccentric portions, I J K, and a gear, A, B, or C, for each of such eccentrics, when such gears are left free to follow the thrust of their respective eccentrics, but are prevented from revolving with the main-shaft by means of the sleeve and annular keys, substantially as and for the purposes specified.

2. The construction of the annular keys 1, 2, 3, in combination with the channeled rings A, B, or C, carried upon eccentrics, and with the stationary channeled disk or collar *e*, substantially as and for the purposes set forth.

90,255.—A. O. GALLUP, Salem, and E. A. HEWITT, Groton, Conn.—*Churn.*—May 18, 1869.

Claim.—1. The dasher B, constructed as described, with the beaters C and C′, serrated as shown.

2. In combination with the dasher B, with the arms C and C′, constructed as shown, the corrugated bottom and sides, or either, as set forth.

3. The arrangement of the arms F, in the manner shown and described, so that the flat side of one beater shall follow the sharp edge of the other, as set forth.

4. In combination with the cylinder *q*, having the right-angled stem S T, the blowing-wheel P, when arranged on the outside of the churn, as and for the purpose set forth.

90,256.—J. A. GLENN, West Middlesex, Pa.—*Horse Hay-Fork.*—May 18, 1869.

Claim.—The curved hook D, pivoted upon the extremity of the bar A, and upon the side of the elongated bar E, all constructed and operating substantially as set forth.

90,257.—CHARLES GRASSER, Philadelphia, Pa., asignor to METALLIC COMPRESSION CASTING COMPANY, Boston, Mass.—*Composition for Molds and Cores for Casting Metals.*—May 18, 1869.

Claim.—A composition of the specified materials, in proportion about the same, or their chemical equivalents, to be used for making molds and cores used in casting metals.

90,258.—CHARLES GREEN, Vincentown, N. J.—*Cooking-Stove.*—May 18, 1869.

Claim.—1. The arrangement, with respect to the ovens F and F′, of a cooking-stove, of the within-described passages or flues, for the purpose specified.

2. The diagonal partition *i*, arranged within the flue *a*, substantially as and for the purpose set forth.

90,259.—C. C. HARE, Kansas City, Mo.—*Gas-Machine.*—May 18, 1869.

Claim.—1. The revolving screw-cylinder, with its sleeve I, when used in the construction of a pneumatic gas-machine, constructed substantially as and for the purpose described.

2. The partially filling the spiral grooves of the cylinder described with cotton, wool, or other porous or fibrous material, substantially in the manner and for the purpose described.

3. The hollow shaft E, with its arms G, H, and F, and stop *p*, when used in the construction of a pneumatic gas-machine, constructed substantially as and for the purpose described.

4. The described revolving cylinder, in combination with the described hollow shaft E and its parts, when used in the construction of a pneumatic gas-machine, when constructed and arranged substantially as and for the purpose described.

5. The outer vessel A A A A, with its stuffing-boxes L and M, in combination with the described revolving cylinder and its parts, and the described hollow shaft E and its component parts, when used in the construction of a pneumatic gas-machine, constructed and arranged substantially as described.

6. The friction-joint K, in combination with the described cylinder and its component parts, and the described outer vessel and its parts, and the described hollow shaft and its component parts, when used in the construction of a pneumatic gas-machine, constructed and arranged substantially as and for the purpose described.

90,260.—GEORGE F. HARLAN, Elkton, Md.—*Grain-Separator.*—May 18, 1869.

Claim.—1. The inclined partition E, when arranged and operating substantially as shown and described.

2. The vertical partitions D, when arranged and operating substantially as shown and described.

3. The combination of the inclined partition E, vertical partitions D, and gates *c c*, substantially as shown and described.

4. The combination of the slide G and case C, substantially as and for the purpose shown and described.

90,261.—HENRY P. HASKIN, Roscoe, Ill.—*Gate.*—May 18, 1869.

Claim.—Broadly the arrangement and employment of the levers E, cords or chains and pulleys F *h* and G H, substantially as and for the purposes specified.

90,262.—WILLIAM HEBDON, New York, N. Y., assignor to himself, CHARLES H. F. AHRENS, and CHARLES S. BALDWIN, same place.—*Cloth-Measuring Machine.*—May 18, 1869.

Claim.—The tension-regulator *d d*, constructed as specified, in combination with the measuring-cylinder *b*, and roller 4, whereby the cloth will be guided as it passes along, and the proper tension applied thereto, substantially as set forth.

90,263.—GEORGE P. HERTHEL, Jr., St. Louis, Mo.—*Truss-Bridge.*—May 18, 1869.

Claim.—1. In the construction of bridges, the combination of the equally divided curved or polygonal chords, with vertical posts, and horizontal chords, and tie-rods, the whole arranged substantially in the manner and for the purpose herein described.

2. The construction of a post or strut, so as to resist strains of both tension and compression, either from a central rod, *c*, acting principally under tension, and trussing the same by compression-truss c^1, or from a central column, *d*, acting solely under compression, and trussed by rods d^1, arranged to sustain tension, and combining said parts with the floor-beams G, or its seat *g′*, and upper chord A, in the manner and for the purpose herein set forth.

3. The end bolts a^2, or their sleeves, in combination with their seats a^3 and rollers a^4, in the manner and for the purpose herein set forth.

4. The crown-pieces a^5, in combination with the king-bolts a^1, or their sleeves, as and for the purpose herein set forth.

5. The floor-beam seat, resting upon or suspended from the queen-bolt or queen-bolt sleeve, as and for the purpose herein set forth.

6. The wind-strut E, when arched and braced by the angle-bars *e*, as herein set forth.

7. The diagonal bands F or F′, when formed continuously, and adjusted by the bolt *f*, when combined with the wind-struts E, substantially in the manner and for the purpose herein set forth.

90,264.—ARVA B. HITCHCOCK, Juneau, Wis., assignor to himself and RICHARD MERTZ, same place.—*Railway-Switch.*—May 18, 1869.

Claim.—1. The combination and arrangement of the curved levers F, with the weighted levers H, rods U, and rock-shaft V, for unlocking the switch, substantially as shown.

2. The levers G, when so curved and located that the wheel J, in passing over in either direction, will come in contact therewith, and unlock the switch, before striking or operating the levers F, substantially as specified.

3. The combination and arrangement of the levers F and G, weighted levers H, and rods T U, with the bent levers S, and rock-shafts V and V′, substantially as and for the purposes set forth.

4. The catch *l* and *n*, in combination with the head-blocks Q and slides R, substantially as and for the purposes specified.

5. The rock-shaft V, when provided with the

spring-catch *c*, substantially as and for the purposes specified.

6. The pivoted connections *a*, in combination with the rods T, U, and *b*, provided with heads *f*, substantially as described.

7. The collars K, in combination with the wheels J and lever M, substantially as and for the purposes specified.

8. The operating-lever O, provided with the cross-head O′ and rods *h*, in combination with the bell-crank levers P, rods *g*, and lever M, provided with the cross-bars N and L, for adjusting the wheels J, substantially as specified.

90,265.—JOHN HOUPT, Springtown, Pa.—*Steam-Engine.*—May 18, 1869.

Claim.—1. A steam-reservoir, provided with inlet and outlet pipes, *h* and *i*, communicating with a cylinder, in which is a weighted piston, H, and surrounded by a casing or jacket, B, through which heated products of combustion are arranged to pass, all substantially as herein described.

2. A pipe, *r*, arranged, in respect to the cylinder F and its piston, as specified.

90,266.—JOHN HOUPT, Springfield, Pa.—*Condensing Steam-Engine.*—May 18, 1869.

Claim.—In combination with a single steam-cylinder, a plurality of condensers, arranged to operate substantially as described, for the purpose specified.

90,267.—ROBERT A. HUNTER, Ionia, Mich.—*Stove-Drum.*—May 18, 1869.

Claim.—1. The generator B, arranged with a double or single chamber, as shown, and being arranged to set in the top of the stove A, and to connect with the conductor O, and having flange C, orifices E E, and smoke-hole D, substantially as and for the purpose set forth.

2. Constructing the distributer P funnel-shaped, as shown, and providing it with a conical-shaped lid, T, substantially as shown, and for the purpose set forth.

3. Connecting the pipe S, within the distributer P, to the conductor O, and providing it with a damper, W, as and for the purpose herein specified.

4. As a combination, the means described for ventilating the distributers and side-pipes, and arranging the latter between the ceiling and floor, to connect the main conductor with other distributers, and the arrangement of the conductor O within the stove-pipe Z, and passing it out at the elbow Z′, when it is used to connect the generator B with the distributer P, substantially as and for the purpose herein specified.

90,268.—JOSEPH INGELS, Milton, Ind.—*Seeding-Machine.*—May 18, 1869.

Claim.—1. In combination with the main-gear B, the slotted plates C F, moving around the same center with said gear B, for the purpose of carrying and controlling the intermediate changeable and reversible gears that drive the seed-wheels, substantially as and for the purpose described.

2. In combination with the gears and the slotted plates, the lever and seat *g*, for the reception and attachment of a lever, by which they may be actuated, substantially as herein described.

3. The seed-wheel, with its cogs or projections *m*, and recesses *o*, substantially as and for the purposes described.

4. In combination with the seed-wheel, and the cheeks in the seed-boxes, the projecting or extending of the cogs or projections thereon beyond the body and cheeks, as shown at *n*, substantially as described.

90,269.—FREDERICK G. JENKINS, Brooklyn, (E. D.) N. Y., assignor to JOSEPH RECKENDORFER, New York City.—*Manufacture of Lead-Pencils.*—May 18, 1869.

Claim.—1. The method of shaping and polishing, or both shaping and polishing, polygonal lead-pencils, and like articles, by the employment of one or more stationary dies, having the form required for the finished article, in which the stock is compressed into the desired shape, or polished, after being previously shaped, or both compressed and polished, substantially in the manner and for the purposes set forth.

2. The combination of the stationary compressing and polishing or burnishing die or dies, and one or more sets of feed-rolls, or their equivalents, for carrying forward and forcing the stock through said die or dies, substantially in the manner and for the purposes set forth.

90,270.—CHARLES S. JONES, Albany, N. Y.—*Telegraphic Switch-Board.*—May 18, 1869.

Claim.—1. The improved switch-board, constructed of strips of metal and wood, arranged transversely to each other, in the manner and for the purpose as set forth.

2. The upper and lower straps, insulated from each other by the frame, combined with the metallic plug-pin and spring, by which any two straps are locked together, substantially as described.

90,271.—ISAAC KENNEDY, Binghamton, N. Y.—*Plow.*—May 18, 1869.

Claim.—The supplementary mold-board A, attached to the mold-board of the plow, by means of the clamp D D and thumb-screws, or their equivalents, substantially as herein described, and as essential for the purposes set forth.

90,272.—MATTHEW KERR, New Florence, Pa.—*Railroad-Switch.*—May 18, 1869.

Claim.—The flanges *g* of the switch-rod or bridle G, in combination with the locking-rod F, and arms or flanges *f f*, substantially as and for the purpose set forth.

90,273.—WILLIAM A. KIRBY, Auburn, N. Y., assignor to himself and DAVID M. OSBORNE, same place.—*Harvester.*—May 18, 1869.

Claim.—1. Hinging the axle-frame of a harvesting-machine, on which two driving-wheels are hung, to bearings or bosses, through which the shaft carrying the pinions passes, and in which it turns, so that the pinions and shaft may rise and fall in the arc of a circle, of which the point of the pole or tongue is the center, and the pinions remain in gear with the drive-wheels, as described and represented.

2. In combination with the two frames, hinged together, and controlled in the extent of their motion by an adjustable stop arranged between said frames, a hand-lever, for raising or lowering, or for rolling the finger-bar in the line of its advancing movement, to raise or lower the points of the guards, as and for the purpose described.

3. In combination with the axle and the main frames, and a tongue or pole hinged to each other, the herein-described special devices, by which either or all of said hinged joints may be made rigid or flexible, as may be desired.

4. In combination with a two-wheeled harvesting-machine, which has two frames, hinged to each other, a lever-seat, connected to both frames, and spanning the joint between, so that the driver in said seat may, with the lever S, raise and lower the cutting apparatus, as and for the purpose described.

5. In combination with a pitman, a pitman-connection, which will drive the cutters when they are in working position, and cease to drive the cutter when the finger-bar is folded up for transportation, while the pitman continues to work, substantially as described.

6. In combination with a finger-bar, so hinged to the inner shoe as that it may be folded up against and carried by the main frame, a caster-wheel, carried by an arm or support, independent of said shoe, but so that its journal or turning-center shall be in the line of the centers on which the finger-bar swings, and in advance of said centers, so that while the finger-bar is free to be folded up, the caster-wheel shall serve to roll down the grass in advance of the shoe, and serve the purpose of a caster wheel, when the machine is being turned around, the whole being accomplished by an arrangement of devices, such as herein described and represented.

90,274.—FIELDING L. KIRTLEY, Cleyborne, Texas.—*Combined Plow-Carrier and Cotton-Chopper.*—May 18, 1869.

Claim.—1. The combination of the cotton-chop-

per *m*, *m'*, *n*, and *n'*, with the frame A and hangers *d e*, as and for the purpose described.

2. The slotted and swinging hangers *d e*, as and for the purpose described.

3. The slotted swinging-hangers *d e*, in combination with the connecting-rod *k* and lever *l*, as and for the purpose specified.

4. The shaft *m'* of the cotton-chopper, in combination with the lifting-apparatus *o r*, and for the purpose described.

5. The plow-beams *h*, each provided with two plows, and made so as to be capable of being readily shifted into or out of the hangers, as described.

90,275.—HENRY KUMMER, New York, N. Y.—*Computing-Tablet.*—May 18, 1869.

Claim.—1. The carrying-angles *c d*, in combination with the slots *a b*, in the tablet A, and with the slides B, substantially as set forth.

2. The arrangement of open slots *k* and holes *i j*, in the slides B, as described.

3. The arrangement of open slots *l* in the slides opposite the open slots *k* therein, substantially in the manner set forth.

90,276.—P. W. LAMBERT, New York, N. Y.—*Sewing-Case and Pocket-Book Combined.*—May 18, 1869.

Claim.—The tubular sewing-case B, containing a needle-cushion, a spool, and a thimble, in combination with the pocket-book A, and secured to the same in the manner shown and described.

90,277.—SILAS P. LIONBERGER, St. Mary's Township, Ill.—*Ground-Marker.*—May 18, 1869.

Claim.—The marking-machine, consisting of the frame A, having the shaft B, with the stationary roller D, and the loose rollers C, all constructed and arranged substantially as described.

90,278.—JAMES LINNARD, Philadelphia, Pa., assignor to himself, FRANCIS D. WORLEY, and WILLIAM S. HASELL, same place.—*Safety-Valve.*—May 18, 1869.

Claim.—1. The combination of the lever J, valve B, and links connecting the lever to the valve, substantially as herein described.

2. The combination of the lever J, valve B, spring D, and links *d d*, when arranged in respect to the lever M, or its equivalent, substantially as specified.

90,279.—JOHN D. LYNDE, Philadelphia, Pa.—*Safety-Valve.*—May 18, 1869.

Claim.—1. The valve A, with its concave disk C, ribs B, and guide-pin D, constructed and combined substantially as herein set forth.

2. The disk C, combined with the valve A, annular passage G, and rim F, substantially as herein described.

3. The combination and arrangement of the valve A, disk C, ribs B, guide-pin D, guide-nut I, valve-seat E, braces K, holder H, annular passage G, rim F, spring N, bolts L, cross-head M, lever P, and cover O, substantially as herein made known.

90,280.—ROBERT MCFARLANE, Dane, Wis.—*Fence.*—May 18, 1869.

Claim.—The method of constructing a portable fence of lengths A, braces D, and stakes C, by uniting them with pins *a*, for supporting the structure upon and attaching it to the ground, substantially as herein described.

90,281.—JOHN MATHEIS, Ottawa, Ill.—*Machine for Punching Leather Straps for Fly-Nets.*—May 18, 1869.

Claim.—1. The feeding-device, composed of the combination of the adjustable crank H, the pitman I, the lever J, the pitman L, the feed-bar M, the rod N, with eccentric P, and the gauge-bar Q, the same only when applied to a machine for punching leather straps, substantially as described.

2. The pressure-foot, consisting of the plate R, the rod S, the support U, the lever T, and the spring V, the same only when applied to a machine for punching leather straps, substantially as described.

90,282.—THEODORE T. MCGRATH, Detroit, Mich.—*Reversible Skate-Runner.*—May 18, 1869.

Claim.—The toe-clips C, provided with the lock-pin *d*, in connection with the aperture *b* and slot *c* of the runner, substantially as and for the purposes set forth.

90,283.—MARTIN MACKENZIE, Malden, Mass.—*Key-Hole Guard.*—May 18, 1869.

Claim.—As new, the eccentric lever H I, secured by the rivet C to the major part, T S, of the lock-guard, arranged to pass through the key-hole, and be secured by any suitable fastening device upon the other side. (See Plate 6.)

90,284.—JOSHUA MERRILL, Boston, Mass.—*Manufacture of Deodorized Heavy Hydrocarbon Oil.*—May 18, 1869.

Claim.—1. The above-described new manufacture of deodorized heavy hydrocarbon oils, suitable for lubricating and other purposes, free from the characteristic odors of hydrocarbon oils, and having a slight smell like fatty oil, from heavy hydrocarbon oils, by treating them substantially as hereinbefore described.

2. In combination with a still suitable for distilling oils, the superheating-coil, with its steam-pipe, outlet-pipe, and return-pipe, and their stop-cocks, arranged substantially as described.

90,285.—GEORGE A. METCALF, Malden, Mass.—*Brick-Press.*—May 18, 1869.

Claim.—In combination with the reciprocating mold and piston, the lever *q*, acting by a single movement to first throw forward the mold and then the piston, substantially as set forth.

90,286.—S. D. MILAM, Leoti, Ind.—*Horse-Rake.*—May 18, 1869.

Claim.—1. Providing the ends of a rake-head with wheels flanged on the inner side, substantially as and for the purposes herein set forth.

2. In combination with the carriage A B C D, the hinged or pivoted bars F F, rake-head G, teeth H H, and wheels I I, all constructed and arranged to operate substantially as and for the purposes herein set forth.

3. The combination of the standard J, lever K, hook *c*, and loop *a*, for the purpose of raising and lowering and setting the rake, substantially as herein set forth.

90,287.—CHARLES M. MITCHELL, Waterbury, Conn.—*Lamp-Shade Holder.*—May 18, 1869.

Claim.—The herein-described globe-holder, as an article of manufacture, consisting of the three springs C, arranged and secured to the base substantially as described.

90,288.—W. T. MUNGER, New Britain, Conn., assignor to P. and F. CORBIN, same place.—*Reversible Latch.*—May 18, 1869.

Claim.—The bent claw *g*, upon the inner end of the shank *d* of the latch, in combination with the link *f*, and the swinging block-piece *k*, whereby said claw *g* becomes the connection between the latch-shank and the link *f*, and also the stop, to take against the blocking-piece *k*, as and for the purposes specified.

90,289.—L. B. MYERS, Elmore, Ohio.—*Pencil-Sharpener.*—May 18, 1869.

Claim.—The combined pencil-sharpener and eraser, constructed as described, of the conical metallic sharpener A, having its apex removed, for the passage of the pencil-lead *b*, and provided with the base-flange *a*, over which is fitted the India-rubber tube B, whose outer end clasps the pencil, and holds the eraser thereon, as herein described, for the purpose specified.

90,290.—JOHN F. NAGEL, Ligonier, Pa.—*Car-Coupling.*—May 18, 1869.

Claim.—The levers C D, constructed and pivoted as described, the latter being bent, and provided with a hole for the passage of the pin, and a ring to retain the pin, in combination with the flange-headed

pin, and operated by the link, as and for the purpose set forth.

90,291.—HARRISON OGBORN, Richmond, Ind.—*Grain-Separator.*—May 18, 1869.

Claim.—1. The shackles *e* and *e'*, so constructed with pulley *d* and shoe as to give four vibrations to the shoe to each revolution of the pulley *d*, substantially in the manner set forth.

2. The arrangement of the double bell-cranks, provided with adjusting-holes, whereby a lateral vibrating motion is communicated to the shoe, which motion may be so governed as to produce greater rapidity at one end of the shoe than at the other, substantially as set forth, and for the purpose described.

3. The knocking-lever P, operated by cam *r*, in combination with the screens of a grain or seed separator, for the purpose set forth.

4. In combination with hopper B, the gates or levers *t*, the latter operating independently of each other, as set forth.

90,292.—SPENCER H. OSTROM, Schenectady, N. Y.—*Hand-Drill.*—May 18, 1869.

Claim.—The spring *f*, in combination with the strap *e*, head A, swivel-arm B, and handle C, substantially as set forth.

90,293.—PETER PARADIS, Rochester, N. Y., assignor to EQUITABLE CO-OPERATIVE FOUNDRY COMPANY, same place.—*Cooking-Stove.*—May 18, 1869.

Claim.—1. A cook-stove, having the hollow ribs *a*. with the inlet-passage H, chamber *b*. and the side-flues *m*. with pipes D, connecting said flues with the oven, all constructed and arranged to operate substantially as shown and described.

2. The arrangement, within the smoke-flues of the oven, of the front inclined plates I, with the deflecting-plate G at the top, the rear inclined plates 1^2, with the valve K, and deflecting-plates S, as herein set forth.

90,294.—JAMES PARLANE, Brooklyn, N. Y.—*Steam-Engine Governor.*—May 18, 1869.

Claim.—The combination of the slotted radius arms B B, the track D, and rollers E E, substantially as specified.

90,295.—G. PEDERSEN, Chicago, Ill.—*Straw and Feed Cutter.*—May 18, 1869.

Claim.—1. The combination of the toothed feed-cylinders G' H', toothed plates Z Z', cylinder-box L, and cutter-box K *d* N, constructed as and for the purpose set forth.

2. The combination of the feed-cylinders G' H', toothed plates Z Z', boxes L K *d* N, compound gear-wheel E, sliding-pinion R, and shaft C, as described.

90,296.—BENNET C. PERRY, Bridgeport, Conn.—*Polishing-Machine for Polishing Wood Moldings*, &c.—May 18, 1869.

Claim.—The combination of the vulcanized India-rubber circle, with the two inflexible rims C C and G G, when they are constructed, arranged, and fitted for use, substantially as herein described and set forth.

90,297.—G. W. PERRY and J. D. BILLINGS, Wilmington, Del.—*Railway-Car Seat.*—May 18, 1869.

Claim.—1. The seat H, pivoted directly or indirectly to the rod *b* of the frame, and having racks *g g* adapted to toothed cams M M', by the movement of which, through the medium of the devices herein described, or any equivalent to the same, the said seat H may be adjusted, as set forth.

2. The sliding yoke J, carrying the toothed cams M and M', and controlled by the screw L, in combination with the racks *g g* beneath the seat H, the whole being arranged and operating substantially as and for the purpose herein set forth.

90,298.—FRANCIS PETERS and GEORGE CLEM, Cincinnati, Ohio.—*Privy-Seat.*—May 18, 1869,

Claim.—One or more rollers, constituting a privy-seat, substantially as and for the purpose designated.

90,299.—FRANK P. PFLEGHAR, New Haven, Conn.—*Guide for Fitting Locks to Doors.*—May 18, 1869.

Claim.—The combination of the block A B, clamps E and F, chock *e*, and screw *c d*, when all the parts are constructed and arranged to operate as shown, and for the purposes substantially as herein described.

90,300.—DAVID PHILIPS, Cordova, Ill.—*Portable Fence.*—May 18, 1869.

Claim.—The portable fence, consisting of the posts *a*, made of two pieces of board, nailed together, with the blocks between them, in combination with the bed-pieces *b*, braces *c*, and boards *f*, when said parts are united and arranged as shown and described.

90,301.—J. B. POSADA, New York, N. Y.—*Process of Treating Tobacco.*—May 18, 1869.

Claim.—1. Extracting the nicotine from the tobacco-leaf by immersing the same in boiling water, substantially as set forth and described.

2. Impregnating the tobacco-leaf with the aromatic ingredients herein specified, and general treatment thereof, substantially as and for the purposes described and set forth.

90,302.—WILLIAM H. RACEY, New York, N. Y.—*Apparatus for Connecting Velocipedes.*—May 18, 1869.

Claim.—1. Connecting two independent bicycles together, to be used as one vehicle, substantially as and for the purposes set forth.

2. As a coupling for bicycles or other velocipedes, the clamps *b b*, connected by bars *a a* and braces *d d*, or their equivalents, substantially as set forth.

90,303.—C. D. READ, Burlington, Vt.—*Bed-Bottom.*—May 18, 1869.

Claim.—The combination of the bottom A, conical helical spring B, secured to said bottom by means of a circular groove or recess, the slat C, strap D, and hooks *d d*, all constructed and arranged substantially as shown and described.

90,304.—FRANK W. REILLY, Chicago, Ill.—*Weight-Lifting Apparatus.*—May 18, 1869.

Claim.—1. An arrangement, in connection with weights to be lifted, by which a portion of a given amount of weight may be raised as desired, without the necessity of displacing or replacing the remainder.

2. So constructing the weights of a series adapted for use in a lifting-apparatus, that they shall always return to their original relative positions.

3. The weight-plate C C' C'', when adapted to receive the pin or key F, as and for the purpose described.

4. The weight-plate C C' C'', having the lugs G G G and depressions H H H, as and for the purpose described.

5. The weight-shaft D, perforated or slotted, substantially as and for the purpose described.

6. Connecting the handle-rods of a lifting-apparatus to the cross-bar, by means of the nut S, working in the box S', as shown and described, for the purposes specified.

90,305.—FRANK W. REILLY, Chicago, Ill.—*Handle for Weight-Lifting Apparatus.*—May 18, 1869.

Claim.—The construction of handles or grasping-pieces with surfaces adapted to the entire palm of the hand and fingers, at such an inclination from the line of traction as shall throw the greatest pressure upon the upper fleshy cushions of the hands, and the least upon the bony fingers, substantially as has been described.

90,306.—GEORGE H. RICH, Geneva, Ill.—*Machine for Separating Cockle from Wheat.*—May 18, 1869.

Claim.—The arrangement of the cylinder C, with cells *e*, as herein set forth, brush B, inclines F, and spout D, all as herein specified.

90,307.—Bernard Riley, San Francisco, Cal.—*Pipe-Tongs.*—May 18, 1869.

Claim.—A gas-pipe tongs, with the combined parts arranged and constructed in the manner substantially as herein described, and for the purposes as above set forth.

90,308.—Evans Robinson, Fairport, N. Y.—*Medical Compound.*—May 18, 1869.

Claim.—The medical compound composed of the ingredients above described, and in the proportions named, and compounded in the manner herein set forth.

90,309.—Jacob S. Ross, Bloomington, Ill.—*Washing-Machine.*—May 18, 1869.

Claim.—1. The revolving cylinder B, constructed with the inner perforated shell B″, partitioned annular space B‴, and ribs or projections B⁗, adapted to operate substantially as described, for the purpose specified.

2. The combination of the cylinder B, constructed as described and shown, with the boiler A, substantially as and for the purpose set forth.

90,310.—Francis Rourk, Erie, Pa.—*Apparatus for Operating Velocipedes and other Machines.*—May 18, 1869.

Claim.—The shaft E, the cranks D^1 D^1, C^1 C^1, and A^1, the connecting-rods D^2 D^2, C^2 C^2, and A^2, and the levers D D, C C, and A, or their equivalent, when arranged and operated substantially as described and for the purpose set forth.

90,311.—Jacob Russell, Brooklyn, N. Y., assignor to himself, Eddy, Reynolds & Co., Milton Holmes, and Jacob Chase.—*Corn-Husker.*—May 18, 1869.

Claim.—1. The stripping-rollers D D′, those of each pair being of different sizes, and having their axes arranged in the same plane whereby the husking-troughs are formed, substantially as specified.

2. The endless aprons G and the lower rollers or belt-carriers E, in combination with the stripping-rollers of a corn-husker, substantially as and for the purpose herein set forth.

3. The friction-rollers *f*, forming one side of the husking-trough, in combination with the endless apron G, for giving twisting motion to the ears of the corn, substantially as specified.

4. The combination of the husking-rollers, as arranged with their axes in the same plane, and the lower rollers E, having adjustable boxes, whereby one roller may be removed without disturbing the others, and whereby the belts or aprons may be tightened at pleasure, substantially as herein described.

90,312.—Edward John Scott, Glasgow, Great Britain.—*Process of Ornamenting Boots and Shoes.*—May 18, 1869.

Claim.—The ornamenting of boots and shoes by printing with varnish-colors in imitation of stitch-work, substantially as hereinbefore described.

90,313.—William Anthony Shaw, New York, N. Y.—*Process of Converting Wrought-Iron Wire, Ribbon, and Plates into Steel.*—May 18, 1869.

Claim.—1. The process of converting wrought-iron ribbon, wire, plates, or like articles into steel, by the employment of a bath of cyanide of potassium and charcoal, prepared substantially as described, in which the metal to be converted is treated as herein set forth.

2. The process of converting the wrought iron into steel, and of distributing or equalizing the conversion by first treating the metal to be converted in a bath of the character specified, and afterward subjecting it, when taken from the bath, to a prolonged heating, substantially in the manner and for the purposes described.

3. An apparatus for converting wrought iron into steel, constructed substantially as herein shown and set forth.

90,314.—William Anthony Shaw, New York, N. Y.—*Tempering Steel-Wire.*—May 18, 1869.

Claim.—1. The employment, with the heating-furnace of the tempering-apparatus, of a muffle, containing powders or powder, substantially such as herein specified, as and for the purposes set forth.

2. The muffle, when formed of an iron tube, coated externally and internally with a composition of plumbago and clay, and closed at its ends by plugs of plumbago or asbestos fibers, as and for the purposes specified.

3. The construction of the apparatus for containing the bath of oil or other tempering-liquid, and the jacket for containing the water to regulate the temperature of such liquid, substantially as shown and described.

4. The employment, with the tempering-apparatus, of griping-rollers, in combination with levers and weights, or their mechanical equivalent, for regulating the tension of the wire as it passes through the apparatus.

5. The combination and arrangement of the heating-furnace and its muffle, the annealing-furnace, the oil-bath and surrounding water-jacket, constructed as described, and the griping-rollers for regulating the tension of the wire, substantially as shown and set forth.

90,315.—Isaac Sherck, Flat Rock, Ohio.—*Jack for Thrashing-Machine.*—May 18, 1869.

Claim.—1. The employment of an auxiliary or intermediate device, receiving motion from a primary power, as a means for transmitting motion to thrashing or other machinery, arranged in different positions, with respect to the primary power and auxiliary machine, substantially as shown and described.

2. The adjustable frame L, shaft I, pulley M, and coupling N, arranged and operating substantially as shown and described.

3. The combination of the adjustable frame L and annular platform K, substantially as shown and described.

4. The bevel-wheel C, pinion D, bevel-wheel G, and pinion H, in combination with the frame L and annular plate K, when arranged and operating substantially as shown and described.

90,316.—William H. Simmons, Skaneateles, N. Y.—*Fire-Escape.*—May 18, 1869.

Claim.—1. The extension-ladder, formed of the sections K, adapted to be locked into each other automatically as they are raised, by means of the springs L and slide O, and to be released by pressing the ends of the springs L toward each other, as herein shown and described.

2. The combination of the crank-gear wheels E, and their shaft-gear wheels F, and their shaft-connecting rods G, crank-wheels H, gear-wheels N, and their shaft I, with each other, with the hinged frame D, and with the toothed racks M, of the sections K, substantially as herein shown and described, and for the purposes set forth.

3. The combination of the guide and fulcrum rod J with the slotted middle parts of the connecting-rods G, substantially as herein shown and described, and for the purpose set forth.

4. The adjustable belt B′, made in sections, and provided with buckets or shelves, in combination with the sections K, hollow roller D′, and crank-roller F′, substantially as herein shown and described, and for the purpose set forth.

5. The double hooks W, pivoted to the upper end of the upper section K, held in position by the rope X, and adapted to be thrown forward through the window, by the springs A′, when released by said rope, as herein described, for the purpose specified.

90,317.—John D. Smith, Schuylerville, N. Y.—*Axle.*—May 18, 1869.

Claim.—The combination of the axle A, having a metal plate, as shown and described, the plate D, formed of two pieces, having clips *c c* and a square opening, *d*, all substantially as set forth.

90,318.—John Joseph Charles Smith, Philadelphia, Pa., assignor to the Metallic Compression Casting Company, Boston, Mass.—*Method of Casting Metals Under Pressure.*—May 18, 1869.

Claim.—1. The arrangement of a series of hinged metallic mold-plates radially around the periphery

of a revolving wheel or cylinder, so as to admit of injecting the fluid metal at the periphery of the wheel, and discharging the castings automatically, substantially as set forth.

2. The gates F′, so constructed as to form between them wedge-shaped partitions, substantially as and for the purposes described.

3. The mouth-piece or guard-plate M, operating substantially as described, in combination with the series of molds F, passing in succession an injecting-vessel, in the manner and for the purposes stated.

4. The combination of the separate injecting-vessel, having a non-conducting detachable lining, with the series of molds F F F, passing in succession the mouth or opening for the emission of fluid metal from the said injecting-vessel, substantially in the manner described.

90,319.—WILLIAM SOMERS, Bridgeport, assignor to himself and GEORGE E. SOMERS, Waterbury, Conn.—*Garden Implement and Weeder.*—May 18, 1869.

Claim.—The herein-described instrument for gardeners' use, consisting of the two arms A, attached together by a spring, B, at one end, and at the other formed into pointed jaws, C, so as to operate in the manner substantially as set forth.

90,320.—PETER H. TURNER, Madison, Wis.—*Sawing-Machine.*—May 18, 1869.

Claim.—1. The employment and arrangement of the triangular clevis S, in connection with the rope R, snatch-block Q, and whiffle-tree W, substantially as and for the purpose described.

2. The arrangement and employment of the guide-standard P, grooved drum V, provided with spur-gear X, and the shaft T, provided with the grooved pulley U, pinion Y, and face-plate Z, substantially as described and for the purposes specified.

3. The combination of the above-named parts with the connecting-rod 3, saw-pitman H, vertical guide I, yoke J, hanger K, guide L, lifting-lever M, cord N, sheave O, pendulum G, platform A, frame B B, standards C, D, and F, transverse frame 5, roller 4, drum 7, and feed-rope 6, in connection with any proper drag-saw, when constructed, arranged, and operating substantially as herein described and for the purposes above set forth.

90,321.—JOHN VAN SLOOTEN, New Orleans, La. *Railway-Car Axle.*—May 18, 1869.

Claim.—A car-axle, consisting of the solid axle A, provided with the enlargements A″ and collar *d*, and having the wheel C′ rigidly attached, in combination with the tubular axle B, with the wheel C rigidly attached, when constructed and arranged substantially as herein described.

90,322.—SAMUEL VANSTONE, Providence, R. I., assignor to himself and JOHN W. HOARD, same place.—*Art of Making Metal Tubes.*—May 18, 1869.

Claim.—The method herein described of forming tubes or pipes, by rolling each half of the blank with corresponding flanges, and welding the said flanges together, in the manner specified.

90,323.—JOSIAH VAVASSEUR, Southwark, England.—*Lock for Ordnance.*—May 18, 1869; patented in England November 2, 1868.

Claim.—1. The combination of the dovetailed vent-piece with the horizontally moving cover, the combination being and operating substantially as set forth.

2. The combination, with the horizontally moving cover, of the firing-pin and its spring, to prevent accidental explosions, as set forth.

3. The combination of the vent-piece, capsule-chamber, and its extractor, the combination being and operating as set forth.

4. The combination of the vertically moving hammer with the horizontally moving cover, both swinging on a common axis, to clear the vent, as set forth.

5. The combination of the cover, the hammer, the spring, and the trigger, all mounted on the vent-stopper, as set forth.

90,324.—ANTOINETTE VIDAL, Paris, France.—*Porous Porcelain for Use in Filtering, &c.*—May 18, 1869.

Claim.—1. A compound for porous porcelain, made of the ingredients herein described, and mixed together substantially in the manner herein set forth.

2. The process, substantially as described, for producing a porous porcelain, by mixing gypsum and kaoline with charcoal or other analogous material, and subjecting the mixture to heat, so as to burn out the charcoal or analogous material, as set forth.

90,325.—GEORGE J. WARDWELL, Rutland, Vt., assignor to STEAM STONE-CUTTER COMPANY.—*Stone-Channeling Machinery.*—May 18, 1869; antedated January 30, 1869.

Claim.—1. The arms H H, links *b b*, and spring *h*, or their equivalents, constructed, applied, and operating substantially as and for the purpose herein specified.

2. The combination of reciprocating gangs of channeling or quarrying chisels, applied to opposite sides of the carriage-bed A, a crank-shaft, the yielding connecting-devices H H, *b b*, and *h*, and the engine mounted upon the carriage-bed A, all substantially as herein specified.

3. The forked standard guide or guides B, applied to a stone-channeling machine, and adapted to serve as guides for the chisels, substantially as described.

4. In combination with a reciprocating gang of stone-channeling chisels, guided and supported substantially as described, the adjustable plate, carrying the wrist-pin h^2, substantially as herein specified.

5. The combination of the crank-shaft D, gangs of chisels, carriage of the machine, worm-screw D^2, spur-wheel D^3, longitudinal shaft e^1, spur-wheel *e*, shifting-gearing O^1 O^2, axle *r*, and transporting-wheels S^1, substantially as herein specified.

6. The shifting-gearing O^1 O^2, slide F^2, and locking-bar F^3, applied to a stone-channeling machine, and adapted to operate substantially as and for the purposes described.

7. The plates V O, connected together by means of bolts and interlocking horizontal serrations, in combination with plate P, substantially as and for the purpose described.

90,326.—DARIUS WILCOX, Ansonia, Conn.—*Body-Loop Head for Carriages.*—May 18, 1869.

Claim.—The herein-described body-loop head, consisting of the head A, shank B, and the two lugs C and E, constructed in the manner and for the purpose substantially as herein set forth as an article of manufacture.

90,327.—GEORGE F. WILSON, East Providence, R. I.—*Manufacture of Black Pigment for Making Shoe-Blacking, &c.*—May 18, 1869.

Claim.—1. The manufacture, substantially as herein described, of black pigment.

2. The method of grinding and mixing the blacking or other compound, under pressure, by the employment of a hydrostatic mill, substantially as herein specified.

3. The use of the above-described pigment, for the purposes herein specified.

90,328.—GEORGE F. WILSON, East Providence, R. I.—*Process of Treating Offal Gelatine and Scrap for the Manufacture of Fertilizers.*—May 18, 1869.

Claim.—1. The treatment of offal gelatine and scrap substantially as herein described, employing in such treatment the apparatus, or its equivalent, described in letters-patent numbered 75,327, and dated March 10, 1868, as above specified.

2. The application of the above-described acid phosphate of lime, and of salt of iron, separate or combined, as and for the purposes substantially as described.

3. The employment, in combination with the apparatus, or its equivalent, referred to in the first clause of claims, of the apparatus devised and patented by Charles J. Everett and C. E. Gray, also referred to in this specification, for the purpose of utilizing thereby the above-described residuary products, which result from the method described in their aforesaid

patents, of rendering tallow and fats from the materials employed for the purpose, as therein specified.

4. The combined use of the apparatus referred to in the first clause of claim, and of the aforesaid acid phosphate of lime and salt of iron, used separately or together, for the purpose of treating the above-described offal gelatine and scrap, however obtained.

5. The use of the bone-sulphate of lime described in my patent of August 11, 1863, and numbered 39,519, with the aforesaid offal gelatine and scrap, either before or after its concentration, as above described.

6. The use of the aforesaid bone-sulphate of lime, of dried peat, of gypsum, of clay, of marl, or their equivalents, with the product resulting from the treatment of offal gelatine and scrap, substantially as herein described, for the purpose of rendering the same less sticky and gummy, and easier of uniform distribution in the soil.

7. The concentration of the aforesaid offal gelatine and scrap, whenever the aforesaid acid phosphate of lime and salt of iron are used separately or together, whether the same be effected in my aforesaid patent apparatus, or otherwise, for the purposes substantially as above described; and also the use of either of the bodies described in sixth clause of claims, or their equivalent, either before or after the concentration of the aforesaid offal gelatine and scrap.

8. The fertilizer, produced by the treatment of offal gelatine and scrap, in the manner and for the purpose substantially as herein described.

90,329.—H. S. WING, Plattsburgh, N. Y.—*Bedstead-Fastener.*—May 18, 1869.

Claim.—The combination of the plate C with prongs G G, notched on both sides, and the cam-lever E, all arranged to operate substantially as set forth.

90,330.—H. J. WALTERS, Salem, Mass.—*Reversible Hinge.*—May 18, 1869.

Claim.—The hinge, consisting of the two closed conical sockets B, and the double-conical pintle *a a*, with washer *b*, when constructed to operate together as described.

90,331.—ALBERT C. CORSE, Troy, N. Y.—*Cooking-Stove.*—May 18, 1869.

Claim.—1. The reservoir or water-tank A, containing the air-chamber B, the exit-pipe C, arranged and combined therewith, substantially as herein described and set forth, in combination with a cooking-stove having two vertical flues in the rear end thereof, in the manner and for the purpose substantially as herein described and set forth.

2. The arrangement and employment of the flanges or grooves E and E′, when used upon a cooking-stove, substantially as herein described, and in combination with the projections F and F′, upon the reservoir or water-tank A, in the manner substantially as herein described and set forth.

3. The chamber B, immediately below the reservoir or water-tank A, when used in combination with the exit-pipe C, and with a vertical ascending and descending flue, in the rear end of a cooking-stove, and communicating therewith, in the manner and for the purposes substantially as herein described and set forth.

90,332.—ISAAC ADAMS, Jr., Boston, Mass.—*Mode of Electro-Plating with Nickel.*—May 25, 1869.

Claim.—The use of a solution of sulphite of nickel in a solution of sulphite or bisulphite of ammonia, for depositing nickel.

90,333.—ROBERT ANDREWS, Milwaukee, Wis.—*Composition for Stuffing Leather.*—May 25, 1869.

Claim.—The mode of combining common or crude pitch or tar, tallow, beeswax, linseed-oil, neat's-foot oil, and oil of tar, in any proportion, and also for the composition to be applied to leather, in any form, either in its manufacture or for improving or preserving it, or to any other article or thing for which it can be used, disclaiming all other things, except the composition as above described, and the method of making it, which composition I will denominate "tar leather-stuffing."

90,334.—JOHN ATWOOD, JR., Provincetown, Mass.—*Process of Curing and Putting Up Fish.*—May 25, 1869.

Claim.—The method or process of curing and putting up fish, substantially as herein described.

90,335.—JOSEPH BECK, Trenton, N. J.—*Mode of Coloring and Tinting Rubber Goods.*—May 25, 1869.

Claim.—Forming sheets of India rubber of variegated colors, in the manner as above set forth.

90,336.—JOHN H. BELLAMY, Charlestown, assignor to himself and L. M. FAXON, Boston, Mass.—*Railway-Hose Protector.*—May 25, 1869.

Claim.—The arch A, when secured to the track D by means of the slotted clamps B and bolts C, all constructed and arranged substantially as described, and for the purpose specified.

90,337.—GEORGE B. BRAYTON, Boston, Mass., assignor to "THE NOVELTY EYELET COMPANY," same place.—*Alloy for Forming Eyelets.*—May 25, 1869.

Claim.—The use of a metal for eyelets, composed of the elements and of the character substantially as described.

90,338.—GEORGE E. BRETTELL, Rochester, N. Y.—*Chuck.*—May 25, 1869.

Claim.—In self-centering chuck, closed by movable inclines, the construction and arrangement of the slotted jaws C, ferrules *f*, and springs *s*, as and for the purpose specified.

90,339.—T. J. BURKE, Sandwich, Ill.—*Brick-Press.*—May 25, 1869.

Claim.—1. The combination, substantially as set forth, of the pivoted frame *e e* and plunger B, connected together and retained in their respective places by means of the slots *b′ b′* in the side-pieces *a a*, as described.

2. The press, consisting of the frame A, provided with side-pieces *a a* and slots *b′ b′*, pivoted frame *e e*, mold *b*, roller D, cap E, lever F, and plunger B, all combined, arranged, and operating substantially in the manner and for the purpose described.

90,340.—GEORGE F. CLEMONS, Springfield, Mass.—*Tuck-Creaser and Guide for Sewing-Machines.*—May 25, 1869.

Claim.—1. The employment, in a tuck-marker for sewing-machines, of an adjustable knife-edge plate, and a notched non-vibrating spring-pressure plate, adapted together, substantially as set forth, for forming creases for tuck-marks upon the cloth being sewed, when used in combination with means which produce automatically, substantially in the manner set forth, the described counteracting cloth-guiding action.

2. In a tuck-marker for sewing-machines, adapting the device to form a crease on the cloth, and to guide inward toward a gauge-face, while the cloth is being sewed, by means of continuous automatic pressing and crimping of the cloth over a knife-edge plate, and also adapting the device to produce, simultaneously, an outward counteracting guiding of the cloth, by means of automatic pressure upon it at another point, at or near its inner edge, for the twofold purpose of tuck-marking the cloth and guiding it straight through the sewing-machine; and further, in such devices, adapting them to give adjustable and variable spring-pressure upon the cloth, at the line of creasing, and at or near the inner edge of the cloth, for the purposes set forth.

3. The notched adjustable pressure-plate *i*, adapted both to crease and to guide the cloth, substantially as set forth.

4. The adjustable knife-edge plate *m*, in combination with the notched creasing and guiding adjustable pressure-plate *i*, when adapted together for the purposes set forth.

5. The combination of the adjustable knife-edge plate *m*, stationary base-plate *a*, and notched creasing and guiding adjustable pressure-plate *i*, when adapted together for the purposes set forth.

6. The adjustable knife-edge plate *m*, stationary base-plate *a*, notched creasing and guiding-plate *i*,

adapted together for the purposes set forth, and combined with a cloth-gauge, when the latter is connected to the former by means which are adapted to give the described adjustable and variable spring-pressure to the creasing and guiding plate *i*, for the purposes set forth.

7. The combined tuck-marker and cloth-guide, consisting of the base-plate *a*, slotted gauge-shank *b*, rigid plate *d*, gauge *e*, spring-plates *g* and *h*, creasing and guiding plate *i*, set-screws *j* and *k*, and adjustable knife-edge plate *m*, all substantially as and for the purposes set forth.

8. The cloth-guide, consisting of the base-plate *a*, slotted gauge-shank *b*, rigid plate *d*, gauge *e*, spring-plates *g* and *h*, cloth-guiding plate *i*, and pressure set-screws *j* and *k*, all substantially as and for the purposes set forth.

90,341.—IRA COOPER, Middlefield, Ohio.—*Potato-Digger.*—May 25, 1869.

Claim.—1. The spades or shares E, as arranged in relation to and in combination with the inclined sieve, consisting of the bars G, substantially as and for the purpose set forth.

2. The standards I, pivoted frame C, arms B, and cross-bar A, when arranged and combined to operate in the manner described.

90,342.—EDMUND J. CRIDGE, Troy, N. Y.—*Cooking-Stove.*—May 25, 1869.

Claim.—A removable water-reservoir, which is inclosed within a flue-chamber formed between the back wall of the stove and the back wall of the oven, and which is supported in such a chamber by extending the flue-plates, or their equivalents, of the stove beneath the bottom of this reservoir, and up the front and rear sides thereof, substantially as described, and for the purposes set forth.

90,343.—GEORGE T. DALTON, New York, N. Y.—*Faucet.*—May 25, 1869.

Claim.—The hollow plug A, provided with the flanged head B, and constructed so as to screw into the shoulder C, so as that a tight joint may be produced, by means of the said flanged head and shoulder, placed the one on the inside and the other on he outside of the vessel.

90,344.—GEORGE DARE, Auburn, N. Y.—*Bag-Holder.*—May 25, 1869.

Claim.—The horizontal sliding-bar B, provided at its outer end with the ring or holder *b*, and furnished on its lower opposite side with the bar D, acting as a pawl and lever, and spring-bar *d*, and serrated bar or staudard A, constructed, arranged, and operated substantially as and for the purpose set forth.

90,345.—MARK L. DEERING, New York, N. Y.—*Sliding-Door Sheave.*—May 25, 1869.

Claim.—The arrangement and application of the friction-rollers I I, in combination with the sheave D, and shaft G, frames A and E, and slides H, as shown and described, for the purpose described.

90,346.—CORNELIUS H. DE LAMATER, New York, N. Y.—*Furnace for Steam and other Purposes.*—May 25, 1869.

Claim.—In furnaces, the within-described construction and arrangement of the air-flues N, earthy wall D, induction-orifices *n*, and discharging-orifices *p*, delivering the air thus heated into the inner chamber M, above the grate, as herein set forth.

90,347.—ASHEL J. DENISON, Paris, Mich.—*Compound for the Cure of Diphtheria, &c.*—May 25, 1869.

Claim.—The composition of a remedy, called golden oil, from the ingredients named above, compounded and prepared substantially as and for the purposes above set forth.

90,348. THÉODORE DESCHAMPS, Paris, France.—*Fastening for Gloves.*—May 25, 1869.

Claim.—1. The combination of the eye or hook *a* or a^1 of the clasp *d*, with a crotchet, *l*, and of the ends *b* b^1 of the lace, substantially as hereinbefore described, and represented in Figs. 1 and 2.

2. The combination of the button a^2 of the clasp *d*, with an aperture, l^1, and of the two ends *b* b^1 of the lace, substantially as hereinbefore described, and represented in Figs. 8 and 9.

3. The combination of the button a^2 of the clasp *d*, and of the ring l^2, movable between the two ends *b* b^1 of the lace, substantially as hereinbefore described, and represented in Fig. 12.

90,349.—WILLIAM DIETRICHSEN, Newark, N. J.—*Apparatus for Preserving Beer.*—May 25, 1869.

Claim.—The construction of two chambers or vessels, A and A′, connected together by a pipe or pipes, provided with suitable cocks, and provided with escape-pipes F and F′, the whole being combined and arranged to turn on its axis B, and operating in the manner and for the purpose described.

90,350.—GEORGE C. DOBSON and WILLIAM MCDONNELL, Boston, Mass., assignors to G. C. DOBSON.—*Banjo.*—May 25, 1869.

Claim.—1. The arrangement of the movable hoop C, operated by screws *e* within a hoop, A, having at its upper edge a shoulder or flesh-rim, *b*, the skin-hoop *d*, and the head B, substantially as and for the purpose described.

2. The removable blocks or brackets *f*, with their screws *e*, in combination with the socket-plates *i*, substantially as and for the purpose set forth.

90,351.—JOHN L. DOLSON, Charlotte, Mich.—*Carriage.*—May 25, 1869.

Claim.—1. In combination with the perch-pole A, extension D, and brace F, the tube A, plate H, braces *h c*, and loop *f*, all constructed and arranged to operate substantially in the manner and for the purposes herein set forth.

2. In combination with a pivot-point, interposed between the spring and body of a vehicle, the sockets I I, and pins or guides *y y*, substantially as and for the purposes herein set forth.

90,352.—G. L. DU LANEY, Meehaniesburgh, Pa.—*Device for Attaching and Detaching Horses.*—May 25, 1869.

Claim.—A curved guide-plate, C, screwed fast to the cross-piece, midway between the shafts, with cam-shaped groove, in combination with the elbow-rods or bolts D, and stays O O, when the outer end of the said elbow-rod is made to pass in and out between the end of the single-tree B and the stays O O, and thus engage and disengage the traces, substantially as described.

90,353.—DAVID H. FANNING, Worcester, Mass.—*Corset.*—May 25, 1869.

Claim.—The combination, with the end of the bone or stiffener A, used in a corset, of a metal holding-device, consisting of the shield E and points *a*, and the flanges *b*, curved so as to hold the end of the stiffener between them, and to prevent the splitting or lateral working of the same, said device being applied in the manner shown and described.

90,354.—TALLMADGE O. FOOT, Newburgh, Ill.—*Sewing-Machine for Quilting.*—May 25, 1869.

Claim.—The reversible looper P and hooks *p p*, in combination with traversing-frame B and stationary serrated bars C, when constructed and arranged substantially in the manner and for the purpose herein set forth.

90,355.—JAMES GORTON, Cohocton, N. Y.—*Road-Scraper.*—May 25, 1869.

Claim.—The double revolving scraper E, pivoted to the metallic frame A, at its center, said frame being provided with horizontal levers D D and springs *e e*, for securing the scraper, and allowing the same to revolve, the whole being constructed, arranged, and operating as set forth.

90,356.—JOHN W. GRAHAM, Chillicothe, Ohio.—*Lamp-Post.*—May 25, 1869.

Claim.—1. The plug, Fig. 3, provided with a short pipe and stop-cock, in combination with a lamp-post, constructed in the manner herein described, substantially as and for the purposes specified.

2. The enlarged reservoir *d*, with closed bottom *a*,

to attach to the foot of iron lamp-posts, constructed as and for the purposes herein set forth.

90,357.— WILLIAM HAILES, Albany, N. Y.—*Base-Burning Stove.*—May 25, 1869.

Claim.—1. The oven-chamber F, with its flue-plates S S, divided as described, and held together by the devices described, and all for the purpose set forth.

2. The arrangement of the collar-base *g*, flue-plates S S, oven-chamber F G G′, and collars *h p′*, substantially in the manner shown and described, and for the purpose set forth.

3. The arrangement of the single flat wall G′, plates G G, door *i*, and the plates S S, for the purpose of forming an oven with a single flat wall, and with a flue-space around two of its sides, all as herein described and shown.

90,358.—WILLIAM HAILES, Albany, N. Y.—*Cooking-Stove.*—May 25, 1869.

Claim.—1. The arrangement of the flue-space D, for receiving a portable water-reservoir, N, immediately in rear of the fire-place C, and between two ovens, O O, substantially as described.

3. The draught-dampers *h h* and *i i*, arranged in flue-spaces *g g′*, between ovens O O and the top-plate of the stove, in combination with the depressed flue-space D, and a reservoir, N, substantially as described.

3. The extension D′, arranged in rear of the space D, when the latter is between ovens and separated from the fire-chamber C by a single wall, W, substantially as described.

4. The warming-closet J, arranged beneath the space D, directly in rear of the fire-place W, and between ovens, substantially as described.

90,359.—EBERHARD HARRSCH, New York, N. Y.—*Manufacture of Colors.*—May 25, 1869.

Claim.—The production of colors, by dissolving the ores of zinc in nitric, nitro-muriatic, or muriatic acids, and mixing the solution with soluble salts of baryta or its equivalents, substantially in the manner and for the purpose described.

90,360.—ROBER HENEAGE, Buffalo, N. Y.—*Ice-Preserver and Water-Cooler.*—May 25, 1869.

Claim.—As a cooler for water supplied to a faucet an ice-holder, the walls of which consist of a closely-laid coil of the supplying-pipe, when the whole is inclosed within the double-walled vessel A, having the air-spaces *a*, and provided with the cover C, whereby the apparatus serves the purposes both of an ice-preserver and a refrigerator of the water supplied, substantially as set forth.

90,361.—RICHARD M. HOE, New York, N. Y.—*Fire-Proof Building.*—May 25, 1869.

Claim.—1. The method of constructing a fire-proof building, substantially as described, consisting in the employment of the non-conducting material, the tarred paper, or equivalent therefor, and the metal plate, combined with the beams or flooring, substantially as and for the purpose specified.

2. In combination with metal sheets, arranged as shown, the interposed tarred paper, or like material, substantially as and for the purpose set forth.

90,362.—JAMES HOLLINGSWORTH, Chicago, Ill.—*Horse-Rake.*—May 25, 1869.

Claim.—1. The eye-bolts *d d d*, in combination with the nuts *d′ d′ d′* and flattened teeth *f f f*, for the purpose of adjusting the teeth to smooth or rough ground, substantially as specified.

2. Grooving the under side of forward piece *a*, when said piece is used in combination with eye-bolts *d d d* and teeth *f f f*, operating substantially as and for the purpose specified.

3. The strippers or cleaners B′ B′, in combination with spiral spring *x*, substantially as described.

4. The combination of rocking-frame C, rake-teeth *f f f*, eye-bolts *d d d*, and nuts *d′ d′ d′*, with hand-lever E, all combined, arranged, and operating substantially in the manner and for the purpose set forth.

90,363.—LOUISA L. JACKSON, Richmond, Ind.—*Guide for Measuring the Person and Cutting Out Ladies' Dresses.*—May 25, 1869.

Claim.—1. The several guides, shown in Figs. 1, 2, 3, and 4, when constructed with the configuration, and perforated and marked with figures, as set forth, said parts being intended for use in combination with one another, in forming dress-patterns from six measurements of the person, substantially as described.

2. The back rule, shown in Fig. 1, having a row of perforations, to determine the proper position of the hooks and eyes on each side, substantially as described.

90,364.—EDWIN GEORGE JELLEY, Pawtucket, R. I.—*Heddle for Looms.*—May 25, 1869.

Claim.—A knitted heddle, made in the manner and for the purposes shown and specified.

90,365.—JOHN M. JOHNSTON, Mayfield, Cal.—*Saw and Saw-Tooth.*—May 25, 1869.

Claim.—In combination with the wedge-shaped recess D, cut in the base of the tooth, the wedge E, consisting of two pieces, riveted together, and provided with beveled edges, substantially as and for the purpose set forth.

90,366.—A. H. KNAPP, Newton Centre, Mass.—*Curtain-Fixture.*—May 25, 1869.

Claim.—1. Forming the bracket-case of two parts, B C, one shutting and fitting over the other, and both secured to a base-plate, A, substantially as and for the purpose herein specified.

2. The lips *c c* and the indentations *d d*, on the base-plate A, formed and arranged in relation to and in combination with the parts B C of the bracket-case, substantially as and for the purpose herein specified.

3. The catch *a*, struck up from the metal of the base-plate A, and arranged in combination with the spring D, and its free or unattached holder E, substantially as and for the purpose herein set forth.

4. The spring-holder E, constructed substantially as described, in combination with the spring, and applied to the fixture, thereby serving the several purposes, as herein set forth.

5. The knob I, when formed of sheet-metal into a hollow or cup shape, with peripheral corrugations, for the purpose herein set forth.

6. The left-hand bracket, having mounted in it the sliding-journal N, spring *r*, and projecting thumb-piece *p*, substantially as and for the purpose herein specified.

90,367.—WILLIAM LALOR, Utica, N. Y.—*Fertilizer.*—May 25, 1869.

Claim.—The use of the said refuse for the uses and purposes mentioned.

90,368.—FREDERICK A. LANE, Swanzey, N. H., assignor to himself and LUTHER S. LANE, same place.—*Stuffing for Mattresses.*—May 25, 1869.

Claim.—As an improved article of manufacture, for stuffing-purposes, woolen-fiber, made from the refuse of woolen goods, rags, &c., by bunching and curling as described.

90,369.—MINNIE E. LLOYD, New York, N. Y.—*Fruit-Drier.*—May 25, 1869; antedated May 8, 1869.

Claim.—The chambers B, constructed as shown and described, and provided with transverse bars or spurs *d*, whereby a free upward as well as lateral escape for the vapors is afforded, the whole arranged within a chamber having free circulation between said chambers B, for the passage and escape of heated air, substantially as set forth.

90,370.—A. LODEMAN and M. DESENBERG, Kalamazoo, Mich.—*Manner of Applying Rollers to Rocking-Chairs.*—May 25, 1869.

Claim.—The levers A B and C D, connected by the bar B D, and provided with the pins G and H, for the purpose described, in combination with the disk T, springs P and Q, wires R and S, bolts N and O, and stops U and V, as and for the purpose set forth.

90,371.—J. AUGUSTUS LYNCH, Boston, Mass., assignor to himself, R. K. HUNTOON, and C. S.

LYNCH, same place.—*Steam-Engine Lubricator.*—May 25, 1869.

Claim.—1. The combination as well as the arrangement of the grease-vessel B with the stop-valve *b*, its case *a*, and stem *b*, substantially as described, such being so that steam, when in the said case, may come into contact with and heat the said grease-vessel.

2. The combination of the grease-vessel B, the spray-duct C, one or more passages *m*, and the auxiliary valve-seat *k*, with the stop-valve *b*, its case *a*, and operative mechanism, and with the auxiliary valve *l*, applied to the stem of the said stop-valves, as explained, the whole being substantially as hereinbefore described.

90,372.—WILLIAM M. LYON, Pittsburgh, Pa.—*Manufacture of Iron.*—May 25, 1869.

Claim.—The mixing of solid carbon with iron-ore, or other oxide, and melted pig-metal, in the formation of the conglomerate known as "pig-bloom," or "pig-scrap," in such manner and in such proportion, substantially as hereinbefore described, as to reduce the excess of oxides in the conglomerate, and thus lessen the formation of cinder, and increase the yield of malleable iron, in the process of treating the conglomerate preparatory to rolling or hammering the iron.

90,373.—WILLIAM M. LYON, Pittsburgh, Pa.—*Manufacture of Wrought Iron.*—May 25, 1869.

Claim.—1. In the manufacture of wrought iron, the production of a solid mixture or conglomerate of cast iron and anthracite coal, charcoal, coke, or other like substances containing a large percentage of carbon, by so uniting or intermixing the molten iron and crushed or pulverized carbonaceous matter, that such uniting or intermixing shall result in a solid product, substantially as above described.

2. As a new article of manufacture, a solid mixture or conglomerate of cast iron and carbonaceous matter, produced by uniting or intermixing with cast iron, in a fluid state, crushed, pulverized, or finely divided anthracite coal, charcoal, coke, or other like carbonaceous substances, in a solid state, in such manner and relative proportions as to produce a solid product.

90,374.—M. F. MCINTYRE, Girard, Pa.—*Horse-Collar Fastening.*—May 25, 1869.

Claim.—The spring-clasp C and bar B, in combination with the caps A A′, substantially as shown and described, for the purpose specified.

90,375.—GEORGE H. MITTAN, De Witt, Ill.—*Spring for Wagon-Seats.*—May 25, 1869.

Claim.—As a new article of manufacture, a spring for carriage-seats, consisting of the curved part I, circular parts B D, bars C E, and hooks F, as set forth.

90,376.—WILLIS E. MOORE, Crawfordsville, Ind.—*Fender for Cultivator-Plows.*—May 25, 1869.

Claim.—1. A guard or clod-fender for cultivators, composed of tines *b b′*, formed and pivoted to head E and bar F, substantially as described.

2. A jointed fender, attached to arm *a* by means of a pivot-joint, and provided with a stop, *c*, substantially as described.

90,377.—WILLIAM MOREHOUSE, Buffalo, N. Y.—*Locking-Nut.*—May 25, 1869.

Claim.—The within-described spring-plate C, of bowing form, and with corrugated or serrated projections *b a′*, on its surface, the said spring and projection being united together, and used in connection with a screw-nut and bolt, all in the manner and for the purpose herein shown and described.

90,378.—EUSTIS P. MORGAN, Saco, and JAMES H. MCMULLAN, Biddeford, Me.—*Roving-Frame.*—May 25, 1869.

Claim.—1. The system or series of curved levers, driven by a segment-gear and pinion, or their equivalents, and having the free or outer end of each lever of such a curve as will impart to the bolster-rail, and the bobbins supported by it, a uniform motion in all positions of the lever

2. In combination with the system of levers or arms, herein set forth, the spiral pulley X, and the counterpoise Z, or their equivalents, substantially as herein described, and for the purpose specified.

90,379.—PETER MUNZINGER, Philadelphia, Pa.—*Leveling Hydraulic Gas-Mains.*—May 25, 1869.

Claim.—The use and application of leveling-screws, either fixed or movable, substantially for the purpose shown.

90,380.—ELIJAH MYRICK, Harvard, Mass.—*Chimney-Cap.*—May 25, 1869.

Claim.—1. A chimney-cap, when constructed of separate sections, held in position by means of flanges, substantially as described.

2. A chimney-cap, constructed in sections, held together by means of lips, recesses, and starts, substantially as described and set forth.

90,381.—J. D. S. NEWELL, Tensas Parish, assignor to himself, A. G. BRICE, E. TOMATIS, and THOMAS PICKLES, New Orleans, La.—*Breech-Loading Fire-Arm.*—May 25, 1869.

Claim.—The breech-piece A, when the same is solid at its front extremity, and provided with the wedge-like projection *e* on its front, and the angle *c* at its rear end, and actuated by direct contact with the jaw of the hammer, and the removable plate *i*, when the same is combined with the hammer B, and is actuated thereby, by means of the hooked bar C, and is locked, at the moment of the explosion of the charge, by the action of the angle *d* against the angle *c*, as herein set forth.

90,382.—JOHN S. PALMER, Providence, R. I.—*Device for Setting Button-Hooks.*—May 25, 1869.

Claim.—1. In combination with the jaws A A′ and fixed die-block *h*, the sliding-plate B, for holding the button-hook, substantially as described.

2. The combination of the sliding-plate B with the jaw A and the gauge-plate *d*, substantially as described.

90,383.—GEORGE O. PARKMAN, Lincolnville, and JOHN M. TRUSSELL, Belfast, assignors to themselves and AMBROSE STROUT, Belfast, Me.—*Filter.*—May 25, 1869.

Claim.—The arrangement and combination of perforated bottom-boards B C, the series of frames A A′ A″, the layers *a* of sponge, and the clamp-screws and nuts, the whole being substantially as and for the purpose hereinbefore specified.

90,384.—J. FRANKLIN PECK, Springfield, Mass.—*Spring Bed-Bottom.*—May 25, 1869.

Claim.—The application of the cushions to the metal strips at each intersection of the same, and the construction of the circular corner-pieces with slots, in the manner set forth, and for the purposes described.

90,385.—WALTER PECK, Rockford, Ill.—*Wind-Wheel.*—May 25, 1869.

Claim.—The fan H, standard G, stop L, chain I, roller K, and weighted lever C, with its connections, when combined and arranged as and for the purpose described.

90,386.—H. W. PERSING, Chicago, Ill.—*Coffee-Roaster.*—May 25, 1869.

Claim.—A coffee-roaster, having perforated corrugated bottom B B, wire-gauze inner bottom D D, and stirrer E E, arranged and constructed to operate substantially as described.

90,387.—H. W. PERSING and J. F. PEASE, Chicago, Ill.—*Apparatus for Making Tea and Coffee.*—May 25, 1869.

Claim.—The combination of the pipe E, water-distributer *e*, percolator *d*, with the coffee-pot A, having partition A′, inner bottom *a a*, having flange *b*, with hole *c*, all constructed and arranged to operate in the manner and for the purpose described.

90,388.—W. R. POMEROY, Millersburgh, Ohio.—*Dental Instrument.*—May 25, 1869.

Claim.—The adjusting-screw *a*, yoke F, arm E,

bracket A, mallet G, and plugger C, combined and arranged to operate in the manner substantially as described, and for the purpose specified.

90,389.—JOHN L, PORTER, Kirksville, Mo.—*Abdominal Supporter.*—May 25, 1869.

Claim.—As a new article of manufacture, the within-described abdominal supporter, consisting of the body A, divided horizontally from either end, as shown in the drawing, and provided with the straps B B and D D, strip C, and openings *b b*, all constructed and arranged to operate as and for the purpose shown.

90,390.—EDWARD S. POUCHER, New York, N. Y.—*Carpet-Cleaning Machine.*—May 25, 1869.

Claim.—1. The combination of a portable folding-frame, A B, having beating-arms *s*, a brush, F, and carpet-rollers D D^1 D^2, arranged upon it, substantially as and for the purposes described.

2. The combination of the suction-device G G^1 G^2 with the carpet-cleaning machine, substantially as described.

3. Tappet-carrying shafts E E, arranged so as to be driven by roller C′, and to operate upon beaters, which are pivoted on opposite sides of frame A, substantially as described.

4. The combination of the endless bands *e e* with the beaters *s s* and carpet-rollers, substantially as and for the purposes described.

5. In combination with the folding-frame A B, the rollers D D^1 D^2, and the beating-arms *s s s*, arranged substantially as described.

90,391.—SAMUEL G. RICE, Albany, N. Y.—*Washing-Machine.*—May 25, 1869.

Claim.—1. The arrangement of a compresser, G *g*, loosely within a slatted drum, so as to operate substantially as described.

2. The double-beveled and rounded-edge blades or slats *a*, arranged around a swiveling blade, *g*, substantially as described.

90,392.—LUCIEN M. RICE, Hartford, Conn., and SIDNEY E. ADAMS, Charlestown, Mass.—*Apparatus for Treating Hydrocarbon Oils.*—May 25, 1869.

Claim.—The combination and arrangement of the sprinkler C and its pipe B with the pan A and pipe D, for the purpose of treating and refining hydrocarbon oils, substantially as herein described.

90,393.—JOHN P. RIDER, Brooklyn, N. Y.—*Manufacture of Flexible Hose, Tube, or Pipe for Conveying Fluids Under Pressure.*—May 25, 1869.

Claim.—Reinforcing the ends of the vulcanized rubber hose to which the couplings are applied by means of one or more extra plies of cloth, duck, or equivalent material, coated with rubber, and applied to and united with the body of the hose, substantially in the manner herein set forth.

90,394.—DAVID ROBERGE, Mooers, N. Y.—*Horseshoe.*—May 25, 1869.

Claim.—A horseshoe, in which the weight of the animal is taken upon a central support, in the manner specified, so as to allow the hoof to conform to the position required by the other parts of the leg, as forth.

90,395.—HENRY ROUNDY, San Francisco, Cal., assignor to THOMAS M. CASH, same place.—*Paint for Ships' Bottoms.*—May 25, 1869.

Claim.—The above-described composition for paint, made of the ingredients named, mixed or compounded as enumerated, in about the proportions specified.

90,396.—GIDEON A. RUSSELL, Chicago, Ill.—*Window.*—May 25, 1869.

Claim.—1. The combination of the strips *a b* upon window-sash, to operate within the grooves *e*, in the manner and for the purposes set forth.

2. The arrangement of the strips *d* upon the lower sash, in the manner and for the purposes described.

3. The arrangement of the movable strip *c*, in combination with the sash A, to operate in the manner specified.

90,397.—JUNIUS SCHENCK, Brooklyn, N. Y.—*Manufacture of Hose, Tubing, and other Rubber Fabrics.*—May 25, 1869.

Claim.—1. The application of the preservative compound herein mentioned, or their equivalents, to hose, belting, and the like fabrics, so as to preserve the same, substantially as described.

2. The improved hose, belting, packing, and other fabrics, prepared by combining the substances herein named with the fibrous material composing the same, substantially as described.

90,398.—STEPHEN SCOTTON, Richmond, Ind.—*Tree-Box.*—May 25, 1869.

Claim.—The combination of the slats B B with the iron rod A, formed and secured substantially as described, and for the purposes herein set forth.

90,399.—JOHN L. SHILLITO and WILLIAM M. WALKER, Wellsville, Pa.—*Rein-Holder.*—May 25, 1869.

Claim.—As a new article of manufacture, the within-described line-holder, consisting of the bifurcated frame A, clasp D, spring-catch *a*, detent *d*, and rubber-pads *c* and *d′*, substantially as and for the purpose shown.

90,400.—A. D. SMITH, Grafton, Ohio.—*Metallic Door-Strip.*—May 25, 1869.

Claim.—The combination of the latch-strip A with a latch-catch, C, when so arranged, in relation to each other and to the adjoining parts, that by closing the door the latch-strip A is made to rise up from the inside on to the latch-catch C, and latch down on the opposite and outside of it and the door B, substantially as herein shown and described.

90,401.—HENRY SMITH, Southington, Conn.—*Flue-Stopper.*—May 25, 1869.

Claim.—The combination of the socket *d*, spring *c*, and register *a*, the whole combined and arranged with a flue-stopper, substantially as described, and for the purposes herein set forth.

90,402.—WARREN SMITH, Alexandria, Ind.—*Fly-Trap.*—May 25, 1869.

Claim.—1. The combination of the transparent vessel D, the conduit C, and feed-chamber A, substantially as shown and described.

2. In combination with the feed-chamber A and its cover B, the spring H, arranged substantially as as and for the purpose described.

90,403.—WILLIAM B. SNOW and WILLIAM A. ELMENDORF, Chicago, Ill.—*Truss-Rocker Beam.*—May 25, 1869.

Claim.—1. A truss-rocker beam for car-trucks, consisting of the diagonal bars D D and braces C C, constructed and arranged to brace the sills of a car, and support its weight on the trucks, as and for the purpose specified and shown.

2. The combination of the truss D C, center-plate E, sills A, and draught-timbers I I, as specified.

90,404.—SIMON SOULES, Dowagiac, Mich.—*Potato-Digger.*—May 25, 1869.

Claim.—The bars *a a*, shovels *x x*, and the teeth 1, 2, 3, 4, 5, 6, 7, 8, 9, when constructed, combined, and arranged as set forth.

90,405.—THOMAS STEWART, Philadelphia, Pa., assignor to himself and WILLIAM C. STILES, same place.—*Filter.*—May 25, 1869.

Claim.—The cylinder C, with its detachable strainer F, the cylinder D, with its detachable or changeable filtering-medium G, and outlet-tube I, and the intermediate chamber E, with its outlet-tube *e′*, the said parts being combined together and arranged within a suitable chamber, at B, so as to operate substantially in the manner described, for the purpose specified.

90,406.—CHARLES E. SWENEY, Geneseo, Ill.—*Neck-Yoke.*—May 25, 1869.

Claim.—The combination of the lever J and spring P, with the lever H, hook B, and plate D, and thumb-key L, substantially as described, and for the purpose set forth.

90,407.—Warren Tanner, Chicago, Ill., assignor to himself and Oliver Bascom, Whitehall, Vt.—*Device for Sharpening the Cutters of Mowing-Machines.*—May 25, 1869.

Claim.—The within-described device for sharpening harvester and mowing-machines cutters, consisting of the standards G^1 G^2, shaft D, grinding-wheel A, driving-sheave or pulley E, clamp-washer and nut B C, the whole arranged as and for the purpose herein set forth.

90,408.—Henry H. Thomas, Titusville, Pa.—*Torpedo for Oil-Wells.*—May 25, 1869.

Claim.—The plunger *k*, fixed and movable rods *g* and *i*, primers *h h*, and weight *l*, arranged to operate substantially in the manner and for the purposes set forth.

90,409.—James Thomson, Gibsonville, Cal.—*Amalgamator.*—May 25, 1869.

Claim.—1. The inside cylinder D, with its perforated cover E, confining-ring P, and clamp O, in combination with the feed-pipe B, constructed and operating substantially as described.

2. The wooden bottom J, provided with a concave surface-cover, I, in combination with the perforated water-pipe C, substantially as and for the purpose herein set forth.

3. The heater K, adapted for steam or fuel, in combination with the amalgamator, substantially as herein described.

90,410.—Charles D. Tisdale, Boston, Mass., assignor to himself and Joseph H. Clapp, same place.—*Railway-Car Wheel and Axle.*—May 25, 1869.

Claim.—1. The combination and arrangement of the wedge-keys *b b*, the stop-piece *c*, and the grooves *a o*, in the wheel-hub and axle, the whole being applied to the wheel and axle in manner as set forth.

2. The combination and arrangement of the helix-coil or key *e*, with the stop-piece *c*, and the wedge-keys *b b*, applied to the wheel and axle in manner as explained.

90,411.—Lewis W. Turner, Yalesville, Conn.—*Broom-Holder.*—May 25, 1869.

Claim.—The holder, composed of the body A, screw B, and spring clamps or clasps *d* and *e*, when the whole is constructed, attached, and fitted for use, substantially as herein described and set forth.

90,412.—T. H. Tyndale, Belleville, Ill.—*Attaching Handles to Axes.*—May 25, 1869.

Claim.—The combination of the handle B, band C, and staple E, when all the parts are constructed and arranged to operate as shown and described.

90,413.—Orsamus A. White, Norwalk, Ohio.—*Churn-Dasher.*—May 25, 1869.

Claim.—The combination, with the rigid radial arms C, constructed with slanting sides, and provided with a wire coil or series of rings, of the adjustable radial arms B, formed also with slanting sides that incline in the direction opposite to that of the sides of the rigid arms, said adjustable arms being also provided with the wire coil, or series of rings specified.

90,414.—A. G. Wilkins, G. N. Crodle, and F. L. Niner, Cooperstown, Pa.—*Churn.*—May 25, 1869.

Claim.—1. The removable and reversible partition F, perforated, provided with wings P P, and arranged within an oscillating churn-box, substantially as described.

2. The construction of the dash-arms C, of one piece, of the curved form described, in combination with the oscillating churn-box A A′ and partition F, substantially as and for the purposes described.

3. The removable dash-rod C, the removable partition F, and the oscillating churn-box, combined and arranged to operate substantially as described.

90,415.—Lewis John Wolf, Port Richmond, Philadelphia, Pa.—*Ale, Beer, and Water Cooler.*—May 25, 1869.

Claim.—The construction of the cooler A, with its inside movable cooler C, sieve G, coiled pipe H, branches K, L, and M, water-pipe N, and thermometer B, when arranged and combined as herein described, and for the purposes set forth.

90,416.—J. B. Woolsey, Bloomfield, Iowa.—*Washing-Machine.*—May 25, 1869.

Claim.—1. The construction and the arrangement, with relation to each other and the heads of the washing-cylinder, of the over-lapping metallic plates which constitute the body of the said cylinder, as herein shown and specified.

2. The arrangement, in connection with the cylinder-heads and metallic plates, constructed and applied to each other as specified, of the bars J K, held between the cylinder-heads, the former being placed close to and extending across the center of the metallic plates, or thereabouts, the latter being placed at a distance from said plates and over the apertures formed for the ingress and egress of the water, as and for the purposes herein shown and set forth.

90,417.—John Zengeler, Chicago, Ill.—*Ink Powder and Dye from Aniline Colors.*—May 25, 1869.

Claim.—The preparation of an ink or dye material, in the form of a dry powder, the same being prepared in the manner above described, or in any equivalent manner.

90,418.—Sidney E. Allen, Company's Shops, N. C.—*Pocket-Case for Railroad-Schedules.*—May 25, 1869.

Claim.—The case A, composed of several sections, hinged together, and constructed and arranged substantially as and for the purpose specified.

90,419.—V. M. Baker, Preston, Minn.—*Turbine-Wheel.*—May 25, 1869.

Claim.—1. The tube G, having a flange, *g′*, upon its lower end, to serve as a cap for the box C, in combination with the box C, ring-plate K, and shaft A, substantially as herein shown and described, and for the purposes set forth.

2. The gates J, constructed, arranged, and operating in connection with the wheel H and chutes I, substantially as herein shown and described, and for the purpose set forth.

3. The long levers L, short or hook-levers M, and ring-plate K, in combination with each other and with the gates J and case D, substantially as herein shown and described, and for the purpose set forth.

4. The buckets h^1 h^2, constructed, arranged, and operating substantially as herein shown and described, and for the purpose set forth.

5. The combination of the box C and adjustable blocks E, with the grooved shaft A and case D, substantially as herein shown and described, and for the purpose set forth.

90,420.—Charles L. Bates, New York, N. Y.—*Rose for Door-Knobs.*—May 25, 1869.

Claim.—The plate C, provided with the hollow projections extending through the porcelain rose A and the shank-socket B, holding the plate C and rose A together, all arranged as described, for the purpose specified.

90,421.—Francis C. Brown and Cyrus Allen, Palmyra, N. Y.—*Gate.*—May 25, 1869.

Claim.—The double-braced triangular frame A B C, carrying the sliding-gate, when hinged by means of the hinges *h h*, directly to the inner face of the gate-post *b′*, centrally of the same, as herein shown and described, for the purpose specified.

90,422.—Arnout Cannon, Jr., Poughkeepsie, N. Y.—*Dumb-Waiter.*—May 25, 1869.

Claim.—1. The combination of the heavy or weighted pulley N with the endless hoisting-rope L and hoisting-wheel K, substantially as herein shown and described, that is to say, in such a way that the axis of the suspended heavy pulley N may be in the same vertical plane with the axis of the hoisting-wheel K, as and for the purposes set forth.

2. The combination and arrangement of the rope C, guide-pulley D, large pulley E, guide-pulleys G and H, and weight J, with each other, with the

hoisting-wheel K, and waiter B, substantially as herein shown and described, and for the purpose set forth.

90,423.—PETER CARY, Coeymans, N. Y.—*Hoisting-Attachment for Portable Horse-Power.*—May 25, 1869.

Claim.—In combination with a horse-power, the hoisting-attachment herein shown and described; that is to say, the shaft A, with ratchet B, bars F, and ropes G, with the pawls and lever connected therewith, arranged and operating for the purpose set forth.

90,424.—THEODORE A. CASE, Ellington, N. Y.—*Cream-Pump.*—May 25, 1869.

Claim.—The arrangement of the elevated vessel A, having the spout B, the tubular pendent extension G, the removable cylinder *d*, carrying the strainer *a* and valve *e* and the piston-rod C and valve-bucket *h*, as herein described, for the purpose specified.

90,425.—ALBERT CLARK, Cadiz, Ohio.—*Hay Raker and Loader.*—May 25, 1869.

Claim.—1. The chute A, supported on the supplementary axle, and connected to the wagon-rack by means of the bars B, arranged as specified.

2. The combination with the jointed fingers of the rods E, crank-shaft F, handles H, spring-braces and rake-head G, all substantially as specified.

90,426.—JOHN L. CLARK, Providence, R. I.—*Corpse-Preserver.*—May 25, 1869.

Claim.—1. A corpse-preserver, so constructed that the box is detachable from the bottom, A, so that the body may be laid out on the perforated plate E, which rests on the bottom, without requiring it to be at once placed into the box, substantially as herein shown and described.

2. The combination of the separate bottom A and perforated plate E, with the box B, surrounded by felt, the cover C and roof-shaped partition D, the latter having the air-pipes *a*, all constructed and arranged substantially as herein shown and described.

90,427.—CHARLES A. CONDÉ, Indianapolis, Ind.—*Governor Stop-Valve for Steam-Engines.*—May 25, 1869.

Claim.—The combination and arrangement of the valve-seat B, valve D, and steam-chamber C, with the ports or spaces *i* and *j*, formed by a series of rings, connected by ribs, substantially as herein shown and described.

90,428.—ABEL CROOK, New York, N. Y.—*Lamp.*—May 25, 1869.

Claim.—1. The passages *f* and *g*, tubes *a a*, plate *b*, provided with the elliptical opening *c*, and lateral opening *d*, and the cone made in sections, when constructed, arranged, and combined as set forth.

2. The plate *b*, constructed and adapted for shaping the inflowing air, as described, and combined with the tubes *a a* and the burner, substantially as specified.

90,429.—REUBEN DANIELS, Woodstock, Vt.—*Vegetable-Crusher.*—May 25, 1869.

Claim.—Two or more crushing-rollers of different diameters, provided with an equal number of ribs, and arranged and operated in such a manner that they shall make the same number of revolutions, and the respective ribs scrape or clean the opposite roller while the fruit or other substance is being crushed between said ribs, substantially as specified.

90,430.—F. W. DEAN, Tremont, Ill.—*Harness-Buckle.*—May 25, 1869.

Claim.—The harness-buckle, consisting of the metallic loop B, provided with the semicircular case *b*, formed centrally upon its side, to receive and inclose the curved pivoted tongue *d*, whose free end engages with the edge of the slot *e*, formed in the lower plate of the loop, all constructed as herein described, for the purpose specified.

90,431.—LEVI DEDERICK, New York, N. Y.—*Hay and Cotton Press.*—May 25, 1869.

Claim.—1. The arrangement of the chains and bars F, with reference to the inner ends of the pointed levers E, as herein described, for the purpose specified.

2. The arrangement of the jointed or flexible connecting-bars or chains G and levers E, with reference to each other and the frame A, as herein described, for the purpose specified.

90,432.—PATRICK S. DEVLAN, Jersey City, N. J.—*Railway Car Truck.*—May 25, 1869.

Claim.—The double-flanged wheel D, when secured to the axle B, at about the middle thereof, in combination with the central rail F, as and for the purpose specified.

90,433.—A. S. DINSMORE, New York, N. Y.—*Needle-Sharpener.*—May 25, 1869.

Claim.—The needle-sharpener, constructed as described, of the plates A B, secured together by screws, and having their upper proximate edges beveled and roughened, one of said plates being formed with the shoulder *a*, fitting over the bevel upon the opposite plate, as herein described, for the purpose specified.

90,434.—W. G. DOWD, Scranton, Pa.—*Miners' Lamp.*—May 25, 1869.

Claim.—The wire C, bent over the outer edge of the wick-tube B, with its outer portion sliding in the guide, and its inner portion bent to form an eye, *e*, to which are hung the fork *g*, and plate *h*, all constructed as described, for the purpose specified.

90,435.—WILLIAM V. DUBOIS, Covington, Ind., assignor to himself and W. A. and J. G. SANGSTER, same place.—*Knitting-Machine Register.*—May 25, 1869.

Claim.—The herein-described arrangement of the disk A, provided with the ratchet-teeth, the scale, the pointer G, and the pins H, the oval-plate C, grooved table B, slide F, spring-pawl E, and the alarm-mechanism, as herein described, for the purpose specified.

90,436.—C. F. DUNDERDALE, New York, N. Y.—*Carbureter.*—May 25, 1869.

Claim.—1. The combination of the pipe B, heater C, pipe D, carbureting-vessel E, and pipe F, to conduct the carbureted air to the burner, with each other and with an ordinary gas-fixture, substantially as herein shown and described, and for the purpose set forth.

2. An arrangement of mechanism, by means of which the air to be carbureted is heated by the flame which it is designed to feed, substantially as herein shown and described, and for the purpose set forth.

90,437.—JOHN L. ELLITHORP and PETER SLOAN, Canajoharie, N. Y.—*Coal-Scuttle.*—May 25, 1869.

Claim.—1. A coal-scuttle, provided with a pivoted hood, B, which has side-plates, *b b*, extending into the scuttle, to prevent the lateral discharge of the contents, substantially as herein shown and described.

2. The pivoted hood B, whose sides work in sheaths of the scuttle, substantially as herein set forth and described, to operate as specified.

3. The hinged cover C, when arranged in combination with the scuttle A and hood B, substantially as herein set forth and described.

90,438.—ALPHEUS C. FORD, Lynn, assignor to himself and ROBERT B. SWISHER, Springville, Pa., and WILLIAM C. LARZELAIR, Blairstown, N. J.—*Composition for Cleaning Marble, Stone, &c.*—May 25, 1869.

Claim.—An improved composition for cleaning marble, stone, &c., formed of the ingredients and in the proportions and manner substantially as herein described and set forth.

90,439.—L. P. GARNER, Ashland, Pa.—*Coal Breaker and Separator.*—May 25, 1869.

Claim.—1. The arrangement of the perforated spiked curb C, grate G, and ledge H, with reference to the spiked breaker A and rotary screen I, as herein described, for the purpose specified.

2. The combination, with the curb C and stationary or rotary screen I, of the grate G, when arranged substantially as specified,

3. The combination with the breaker A, of the breaker K and screen I, when arranged substantially as specified.

4. The spikes arranged in the recesses L, and secured by the bolts M, substantially as specified.

90,440.—DAVID H. GEIGER, St. Clair, Pa.—*Apparatus for Collecting and Forcing Gases from Blast, Puddling, and other Furnaces.*—May 25, 1869.

Claim.—1. A fan-blower, constructed with hollow shaft, arms, and wings, substantially as herein shown and described.

2. Circulating the heated gases and products of combustion of blast-furnaces, or furnaces used for other purposes, by passing them through a water-protected fan-blower, substantially as described.

90,441.—F. A. GEISLER, Bristol, R. I.—*Revolving Christmas-Tree.*—May 25, 1869.

Claim.—The arrangement and combination of the shaft A with the shelves A′, the frame composed of the rods or posts C, cap D, base B, and wind-wheel F, substantially as and for the purposes herein shown and described.

90,442.—KINGSTON GODDARD, Richmond, N. Y.—*Detachable Calks for Horseshoes.*—May 25, 1869.

Claim.—The detachable calk B, constructed and secured to the shoe A, substantially in the manner shown and described, and for the purpose set forth.

90,443.—SOLOMON GRADENWITZ, New York, N. Y., assignor to B. OLLENDORFF, same place.—*Composition for Making Imitation Ivory, Wood, Horn, &c.*—May 25, 1869.

Claim.—1. A composition for making imitation ivory, wood, jet, horn, and other similar articles, which is compounded of the materials, in or about the proportions and substantially in the manner herein set forth.

2. Grinding sawdust to an impalpable powder, and adding it to pasty substances, to make them appear like wood, as set forth.

90,444.—WILLIAM ALBERT GRAY, New York, N. Y., assignor to J. HOWARD WAINWRIGHT, same place.—*Apparatus for Distilling and Producing Fresh, Potable Water.*—May 25, 1869.

Claim.—The combination and arrangement of the vessel A, chambers C D, cooler F, and filter R, with the tubes and parts connected therewith, substantially as and for the purposes herein shown and described.

90,445.—J. W. GROAT, Fremont, Ohio.—*Gas-Machine.*—May 25, 1869.

Claim.—1. Connecting the tank A of a gas-machine, by means of a pipe, F, with the carbureter, so that the gas-holder, when raised, will cause air to be drawn through the carbureter into the tank, and to absorb enough gasoline during such passage through the carbureter as to be converted into illuminating-gas, substantially as herein shown and described.

2. Arranging an annular vessel, I, around the carbureter, substantially as and for the purpose shown and described.

3. Providing the porous column H within the carbureter G, so that the gasoline may be exposed to the action of the air that is drawn through the carbureter, substantially as herein shown and described.

4. A gas-machine, consisting of the tank A, gas-holder B, pipe F, carbureter G, porous column H, or its equivalent, and weight E, or its equivalent, all made, combined, and operating substantially as herein shown and described.

90,446.—STEPHEN J. HALSTEAD, Margarettville N. Y.—*Horse-Rake.*—May 25, 1869.

Claim.—The combination of the swinging-bar J with the rock-shaft F, arm *e*, rod *f*, and rake-head, all arranged and operating so that the height of the teeth above the ground, while raking, can be regulated at will, substantially as herein shown and described.

90,447.—THOMAS HARDCASTLE, of the Bradshaw Works, near Bolton, England.—*Composition Bowl for Mangles, Washing-Machines, &c.*—May 25, 1869.

Claim.—1. The application of cocoa-nut fiber, or coir, or other fibers of palm-trees, to the manufacture of bowls for starching and other mangles, washing-machines, squeezers, calenders, and other purposes.

2. As new articles of manufacture, bowls or rollers for washing-machines, mangles, and other purposes, when provided with a covering made of cocoa-nut fiber, coir, or other fiber of palm-trees, as set forth.

90,448.—NATHAN HARPER, Philadelphia, Pa.—*Blank for Rake and Hoe Combined.*—May 25, 1869.

Claim.—The method, herein described, of forming a combined hoe and rake from one piece of metal, for the purpose specified.

90,449.—ELIHU HOAG, Coxsackie, N. Y.—*Adjustable Bed-Bottom.*—May 25, 1869.

Claim.—The combination of the cams F, shaft G, ratchet-wheel I, and lever-pawl J, with the movable hinged part E of the bed-bottom, and with the side-rails C of the bedstead, substantially as herein shown and described, and for the purpose set forth.

90,450.—JAMES HOWARD and EDWARD TENNEY BOUSFIELD, Bedford, England.—*Steam-Generator.*—May 25, 1869.

Claim.—1. The construction and arrangement of the vertical and horizontal tubes, and the conical-screwed nozzles E and F, substantially as described.

2. The zigzag pipes D, arranged with reference to each other and the upper ends of the vertical tubes, substantially as set forth.

3. The combination of the supports *a*, of the tubes A, and the division-plates G, arranged with reference to the vertical pipes, substantially as herein described.

90,451.—JOHN E. HUNTER, Mechanicsburgh, assignor to himself and T. MARTIN, Catawba, Ohio.—*Corn-Shock Binder.*—May 25, 1869.

Claim.—The ratchet-wheel D, spring-bolt F, G, and cap E, in combination with the pointed crank-shaft A C, plate B, and cord H, substantially in the manner herein shown and described, and for the purpose set forth.

90,452.—ENOS B. JOHNSON, Milwaukee, Wis.—*Drawer for Furniture, &c.*—May 25, 1869.

Claim.—The combination of the shaft C, gear-wheels D, and toothed racks E, with the drawer B and frame A, as herein shown and described, and for the purpose set forth.

90,453.—JOHN KEANE, New York, assignor to himself and GEORGE H. BROWN, Milbrook, Washington Hollow, N. Y.—*Water-Closet Apparatus.*—May 25, 1869.

Claim.—1. A supply water cock or valve, A, operated by means of a pinion or sector-rack, in combination with a retarding-cylinder, arranged substantially as shown and described.

2. The combination of the levers F and K with the projections *t* and *u* and latch *v*, and the retarding-cylinder *x*, all constructed, arranged, and operating substantially as herein shown and described.

3. The combination of the arm D′, slide R, and latch *v*, substantially as and for the purpose specified.

4. The combination of the spring J, levers F and K, pin D, sector E, cylinder *x*, with its piston and rod *y*, and latch *v*, arranged and operating substantially as and for the purposes set forth.

90,454.—JOSEPH J. LOVELL, New York, N. Y., assignor to himself and GEORGE W. MILLAR, same place.—*Eaves-Protector.*—May 25, 1869.

Claim.—An adjustable eaves-protector, for hoisting hose upon roofs, constructed substantially as herein described.

90,455.—THOMAS E. LUTNER, Philadelphia, Pa.—*Crank-Axle for Wagons.*—May 25, 1869.

Claim.—Cranked axles for wagons, having the vertical portions *d* thereof reduced in the direction of the length of the axle, and widened correspondingly in the direction transversely to the said vertical parts, substantially as and for the purpose described.

90,456.—NATHAN P. MAKER, Providence, R. I.—*Drop-Press.*—May 25, 1869.

Claim.—The bed for drops, trip-hammers, &c., consisting of the fixed base A, provided with the semi-spherical cavity, and the plate C, provided with the semi-spherical projection D, and adjusted by means of the set-screws *a* or *b*, in combination with the oscillating-frame B, and the hammer, as herein described, for the purpose specified.

90,457.—G. B. MASSEY, New York, N. Y.—*Measuring-Funnel.*—May 25, 1869.

Claim.—In combination with a funnel, the perforated cylinder H, float I, valve B, and revolving-wheel J, constructed, arranged, and operated substantially as shown and described, for the purposes set forth.

90,458.—FRANCIS MILLS, Mount Vernon, Ind.—*Device for Setting Wagon-Tires.*—May 25, 1869.

Claim.—The table B, provided with the rollers F, and arranged on the journals C, in the framing A, the pin D, adjustable in the block H, the segmental block E, adjustable by means of the slotted bar B, and the trough G, connected to the projecting ends of the sills of frame A, as and for the purpose herein described.

90,459.—J. A. MINER and H. J. TORREY, Wellsville, N. Y.—*Stove-Pipe Shelf and Oven.*—May 25, 1869.

Claim.—1. A stove-pipe shelf, composed of the two parts A B, and provided with the hooks C′, lugs D, and the central recesses, all substantially as specified.

2. The combination with a shelf, constructed as described, of the cover I, substantially as specified.

3. The combination with the shelf, constructed as described, of the sectional collars E, arranged as specified.

90,460.—ABEL MORRALL, Studley, England.—*Sewing-Needle.*—May 25, 1869.

Claim.—As a new article of manufacture, the hand-sewing needle *a*, having the lower portion of the eye *b* enlarged, the upper portion, *c*, reduced, and the point of communication between *b* and *c* provided with a narrow neck, *d*, as herein described, for the purpose specified.

90,461.—SAMUEL PRETTYMAN MUMFORD and JOHN WALIS, Greenwich, England.—*Machine for Dressing Millstones.*—May 25, 1869.

Claim.—The improved millstone-dressing machine, composed of the vertical shaft *b*, arranged to rotate in the vertical axis of the stone, and provided with the arm C and sliding tool-holder, actuated as set forth, all substantially as and for the purpose set forth.

90,462.—IRA A. NEWHALL, Crooked Creek, Pa.—*Washing-Machine.*—May 25, 1869.

Claim.—The combination of the roller-frames B, pivoted, below their centers, to the side of the box A, the end strips C having their lower ends beveled, and the frame D, provided with two rows of rollers *d*′, all arranged and operating as described, for the purpose specified.

90,463.—L. D. PITCHER, Pitcherville, Ill.—*Hay and Manure Fork.*—May 25, 1869.

Claim.—A hay and manure fork, consisting of the sheet-metal tines, fitted over the cross-bar B and under the head C, and of the handle A, fitted over the head C and under the bars B, substantially as herein shown and described, all arranged as specified.

90,464.—FRANCIS RAITH, Calumet, Mich.; assigns one-third to EDMUND F. KRELLWITZ, same place.—*Coal-Stove.*—May 25, 1869.

Claim.—The stove, consisting of the three compartments B C D, and provided with the pipes *f* E, and spiral annular pipes F, and with the pipes G, A, and I, all arranged, combined, and operating substantially as herein shown and described.

90,465.—WILLIAM C. RICE, Oquawka, Ill.—*Paddle-Wheel.*—May 25, 1869.

Claim.—The arrangement of the eccentric hoop *a*, eccentric ring *b*, arms D, and cranks *d*, with the shaft A and wheel B E C, as herein described, for the purpose specified.

90,466.—ANDREW SHELINE, Edon, Ohio.—*Wagon-Seat.*—May 25, 1869.

Claim.—An improved seat, formed by the combination of the upper part A, lower part B, slides or bars C, levers D, and coiled springs E, with each other, substantially as herein shown and described, and for the purpose set forth.

90,467.—J. M. SHUCK, Oskaloosa, Iowa.—*Washing-Machine.*—May 25, 1869.

Claim.—The board E, when pivoted at its upper end, and connected to the crank-shaft D at the same point, by means of the pitman H, in combination with the board B, also connected to the crank-shaft D, all operating as described, for the purpose specified.

90,468.—J. C. SMITH, Mahanoy, Pa.—*Water-Wheel.*—May 25, 1869.

Claim.—Spiral buckets, whose bottom edges extend in radial lines from the hub, about one-third their lengths, and then change into curves as they approach the periphery, and whose top edges are radial lines, the length of which exceeds the radial length of the bottom edges, in proportion to the thickness of the wedge-shaped piece cut from the inner side of the outer rim, as described.

90,469.—WILLIAM H. SNYDER, Phelps, N. Y.—*Water-Wheel.*—May 25, 1869.

Claim.—The hollow bucket F, of triangular form, the base whereof is in excess, so as to form an external lip or point on the periphery, all substantially as described.

90,470.—L. H. SOULE, Mount Morris, N. Y.—*Velocipede.*—May 25, 1869.

Claim.—1. Securing the rear wheels H H to pivoted levers J, that can be swung apart or together, for the purpose of allowing the wheels to be brought apart or together, substantially as herein shown and described.

2. The combination of the wheels H H with the hinged plates I, bars J, braces K, and levers L, all arranged and operating substantially as herein shown and described.

3. Connecting the braces K by means of a pin, *e*, which has a forked or slotted part, *f*, that embraces the reach D, as set forth, for the purpose of controlling the position of the rear wheels, as specified.

4. In combination with the foregoing, the rods F F, provided with the foot-rests *c c*, and connected with the pivoted steering-lever E, having projecting handles, and with the cranks of the driving-axle, all arranged and combined as herein described, for the purpose specified.

90,471.—JOHN STARK, Thomasville, Ga.—*Automatic Dough-Raiser.*—May 25, 1869.

Claim.—1. The can B, when provided with an adjustable cover, D, which can be moved up and down by means of or on a screw or rod, C, substantially as herein shown and described.

2. The lug *h* and the rod *g*, having the head *f*, and the spring *i*, for closing the end of the pipe F or H, when arranged in combination with the lever G, for opening the said pipe, as set forth.

3. The automatic dough-raiser, consisting of the pail A, can B, cover D, and screw or rod C, in combination with the cover E, pipe F or H, sliding pipe-compresser *g*, and lever G, all made and operating substantially as herein shown and described.

4. The devise set forth in the foregoing clause, in combination with the vessel I and siphon J, arranged and operating as set forth.

90,472.—Richard R. Sylands, Millburn, N. J., assignor to himself and John S. Reeve, same place. —*Submerged Centrifugal Pulp-Washer.*—May 25, 1869.

Claim.—1. In combination with a paper or pulp engine, the revolving sieve or perforated disk F, arranged in the bottom of the engine, and operating substantially as and for the purposes described.

2. The washing-vessel B, in combination with a revolving sieve, arranged substantially as set forth.

3. The arrangement shown and described, (or any equivalent arrangement,) whereby a sieve or perforated disk or screen may be revolved, so as to discharge the water and impurities from the bottom of a pulp-engine.

90,473.—J. Newton Thatcher, Martinsburgh, W. Va.—*Carriage-Jack.*—May 25, 1869.

Claim.—The combination, with the stand A, having an elongated foot, of the lever D, notched holding-bar G, and loop F, all substantially as specified.

90,474.—William Veber, Jr., Shingle Creek, N. Y.—*Knife for Paring Vegetables, &c.*—May 25, 1869.

Claim.—The vegetable-knife, constructed as described, with the curved bits A B, of unequal lengths, formed in continuation of the edge and back, as herein set forth, for the purpose specified.

90,475.—Edward Wiard, Louisville, Ky.—*Plow.*—May 25, 1869.

Claim.—The standard B, mold-board C, and recessed landside-support D, all cast in one piece, in combination with the landside E, when secured to the recessed support D by means of the hook *a* and single bolt *b*, all arranged as described, for the purpose specified.

90,476.—Isaac Adams, Jr., Boston, Mass.—*Mode of Melting, Casting, and Hardening Nickel.*—May 25, 1869.

Claim.—The combining of nickel with silica or carbon, or both, for the purpose of making it harder, increasing its fusibility, and giving it qualities which enable it to be used in casting.

90,477.—John B. Aikin, Somerton, Ohio.—*Boot-Crimper.*—May 25, 1869.

Claim.—1. The bent rod N, having the part O articulated to it, as shown at *o*, and adapted to be attached to the crimping-board by means of the pin *m*, rack *m'*, and hook P, substantially as and for the purposes set forth.

2. In combination with slide F, wheels G *g*, and crank *g'*, the bent rod J, having the notch at its upper end, and adapted to operate in connection with the stop *t*, attached to the crimping-board, substantially as and for the purposes specified.

3. The combination of the spring-standard D with the nut *c*, screw-rod C, and movable jaw *B'*, when employed in a boot-crimper, substantially as and for the purposes set forth.

90,478.—John Alexander, Greenpoint, and Nathaniel J. Burchell, New York, N. Y.—*Iron Front for Buildings.*—May 25, 1869.

Claim.—In the ornamentation and protection of the walls of buildings, the plates A A, with their inward-projecting flanges, bolted or riveted together in the manner described, and attached or fastened to the walls by means of the metallic hooks or rods *a*, and the eyes formed on the inner sides of the outer plates, all constructed and arranged substantially in the manner and for the purpose herein described.

90,479.—Cyrus W. Baldwin, Boston, Mass.—*Fluid-Meter.*—May 25, 1869.

Claim.—1. In a liquid-meter, in which an elastic diaphragm is employed for the purpose specified, the improved construction of such meter, whereby nearly the entire surfaces or area of such diaphragm are covered, at each extreme of its movement, by a portion or portions of the case of the instrument, and by a disk or grating, the same being for the purpose of compelling a uniform action of the diaphragm, under all conditions, with resulting advantages before stated.

2. In combination with the elastic diaphragm of a liquid-meter, of the class before alluded to, the foraminous disks *c c'*, when connected with and operating the valve or valves of such meter, and when also acting as a stop or abutment to determine a uniform operation of the diaphragm, for the purpose before set forth and explained.

3. The levers *d d'*, when pivoted to the case G, and combined with the diaphragm C and disks *c c'*, to operate the valve Q, substantially in manner and for the purpose as before explained.

4. The arrangement of the inlets, and the general conduit or passage M, in connection with the valve Q and the ports N O P, whereby a liquid-meter may possess several points of ingress and departure for liquid, substantially as before premised.

90,480.—Edwin P. Ball, Chicopee, Mass.—*Steam-Engine.*—May 25, 1869.

Claim.—1. The primary valve I, with the ports *b*, b^1, and b^2, the intermediate valve B^8, with the ports in the cylinder B, and the piston A^1, with the ports *a* and a^1, said valves and piston operating to control each other in their movements, substantially as herein described.

2. The primary valve I in connection with the ports *b*, b^1, and b^2, and the port c^4, all operating to cause the intermediate valve B^8 to perform two distinct movements during its entire upward stroke, substantially as set forth.

3. The devices for regulating the passage of the exhaust steam from out the ends of the cylinder B, so that the intermediate valve B^8 may operate fast or slow during each stroke, substantially as herein described.

4. The exhaust-apertures *x* and x^1, in the cylinder B, in connection with small ports c^4 and c^5, for the purpose of retaining the intermediate valve B^8 in its proper position while at rest, at each end of its stroke, substantially as herein described.

5. The primary valve I, with the ports *b*, b^2, b^3, and b^4, the intermediate valve B^8, with the ports c^4 and c^5, and the piston A^1, with the ports *a* and a^1, all constructed and arranged substantially as and for the purposes specified.

90,481.—Darius Banks, New York, N. Y.—*Friction-Clutch.*—May 25, 1869.

Claim.—The combination of the loose pulley B, provided with the friction-hub C, the shell L, arranged loosely on the pipes A, the clamping-levers E, pivoted to said shaft, and the conical hub G, sliding thereon and operated by the hand-lever H, all the parts being constructed, arranged, and operating as set forth.

90,482.—Henry Barth, Cincinnati, Ohio.—*Feed-Table for Printing-Presses.*—May 25, 1869.

Claim.—1. The provision of a finger or fingers, E, bent or inclined upward from the delivery-edge of a paper-feed board, substantially as and for the purpose set forth.

2. A feed-board, A, having fingers E, and capable of being set to any desired angle, substantially as described.

90,483.—F. H. Bartholomew, New York, N. Y.—*Automatic Valve.*—May 25, 1869.

Claim.—The lift-valve F, constructed to operate in connection with an inlet, B, and outlets C and D, to the valve-box A, substantially as herein described, whereby, on a valve or faucet being opened to establish a drain through the upper outlet D, supply of the fluid is automatically cut off from the lower outlet C, substantially as specified.

90,484.—John F. Bartlett, Winsted, Conn.—*Lamp-Chimney.*—May 25, 1869.

Claim.—The chimney above described, consisting substantially of the tube A, frame-work B, and glass sections C, substantially as described.

90,485.—S. Y. Beach, Seymour, Conn.—*Belt Awl.*—May 25, 1869.

Claim.—A belt-awl, constructed with a slitted shank-end, substantially in the manner and for the purpose set forth.

90,486.—NELSON W. BECKWITH, MeDonough, N. Y.—*Hot Closet for Stove-Pipes.*—May 25, 1869.

Claim.—A hot closet, constructed in sections, and provided with clamping-devices, for attachment to a stove-pipe, substantially as herein described.

90,487.—WILLIAM BELLOWS, Cincinnati, Ohio.—*Lathe-Chuck.*—May 25, 1869.

Claim.—The construction and arrangement of the sliding-bed, right and left hand screw, and jaws A and B, substantially in the manner specified, and for the purposes set forth.

90,488.—ANDREW C. BLACK, Kaukauna, Wis.—*Plow-Clearer.*—May 25, 1869.

Claim.—The combination and arrangement of the lever L, cord *c*, spring D, cord *e*, and stop B, in the manner and for the purpose described.

90,489.—P. J. BORIS, Boston, Mass.—*Velocipede.*—May 25, 1869.

Claim.—1. In combination with the leader-wheel of a velocipede, whose steering-wheel is in the rear, the frame *k*, adjustable about its axis, and carrying the foot-driven cranks, geared to the main axle, substially as described.

2. In combination with the adjusting-bar *m*, the brake *t*, arranged to be operated substantially as described.

90,490.—BRANSON BREEDEN, Lexington, Va.—*Washing-Machine.*—May 25, 1869.

Claim.—The washing-machine herein described, consisting essentially of the furnace H, rotary tub A, cog-rim *a*, gear B, crank and shaft C C^1, pegged or toothed cylinder C, beaters D, provided at their upper ends with weights W W^1 W^2, the plate G, and lever L, all constructed and arranged in the manner and for the purpose specified.

90,491.—WEBB BROOMHALL, Circleville, Ohio, assignor to himself and ACKER KING, same place.—*Coffin.*—May 25, 1869.

Claim.—1. The combination of the flanged pieces *a a'* with the flanged and slotted pieces *b b'*, as and for the purpose set forth.

2. The combination of the foregoing with the hook and eye *d d'*, substantially as described.

90,492.—GEORGE W. BROWN, Galesburgh, Ill.—*Machine for Bending Metals Edgewise.*—May 25, 1869.

Claim.—1. The turning-piece D, having its narrow chamber D^1, and the provision, G, for securing the material when in a straight form, with the concentric part A', and its groove B, arranged to operate on straight, thin pieces of material, and to bend them edgewise by the turning of the part D, substantially and in the manner and for the purpose herein set forth.

2. The thin grooved wheel H, arranged, as represented, relatively to the thin chamber B in the part A', and the thin chamber D^1 in the part D, for the purposes herein set forth.

3. The stop I, operated, as represented, and arranged to serve relatively to the chamber D^1, and to the bender D and its connections, substantially in the manner and for the purpose herein shown and described.

90,493.—HIRAM L. BROWN and CALVIN P. BROWN, Manchester, N. Y.—*Machine for Distributing Guano.*—May 25, 1869.

Claim.—1. In combination with a hopper, A, having at the bottom orifices A^1, the fingers B^1, and bar B, arranged in relation to the hopper, substantially as and for the purpose set forth.

2. The jointed lever, constructed substantially as shown and described.

90,494.—JOHN BURT, Detroit, Mich.—*Manufacture of Iron.*—May 25, 1869.

Claim.—1. The manufacture of "crude bloom," by mixing the molten or cast metal and oxidizing or carbonizing agents employed in a closed or open crucible or mold, substantially as and for the purposes set forth.

2. Maintaining the heat in the crucible during the formation of the "crude bloom," by heating the same externally, or by mixing suitable heating-agents with the mass within the crucible, substantially as and for the purposes set forth.

3. The employment, in the manufacture of the "crude bloom," of a closed reversible crucible or mold, to effect the thorough mixture of the ingredients placed within it, substantially as set forth

4. The mixture, within a closed or open crucible, of the molten cast-metal with a mixture of oxides, fine cast or wrought scrap and carbons, for the purpose of increasing the quantity of the metal in the "crude bloom," substantially as herein set forth.

90,495.—M. E. BURTLESS, Seneca Falls, N. Y.—*Ditching-Machine.*—May 25, 1869.

Claim.—A ditching-machine, composed of the frame A, clevis-bar B, adjusting-wheels C, with bearings D, screw E, scoop G, coulters I I, and adjustable mold-board K, the whole arranged as described, and operating in the manner and for the purpose specified.

90,496.—J. W. BYERS, Mechanicsburgh, Pa.—*Farm-Gate.*—May 25, 1869.

Claim.—The within-described gate, consisting of the horizontal bars A A, &c., pivoted within the uprights B, C, and D, and provided with the diagolal brace G, pivoted at its lower end to the lower bar, and secured at its upper end to upper bar, by means of the pin *g*, substantially as shown, and for the purpose set forth.

90,497.—WELLINGTON CAMPBELL, Millburn, N. J.—*Composite Paper for Hangings and for other Purposes.*—May 25, 1869.

Claim.—A paper, having adjacent strips of its breadth of different strength, each strip of greater strength being produced by combining, with the damp sheet of paper material, a damp strip of paper material of the required breadth, and by consolidating the whole by pressure, the article produced constituting a new article of manufacture.

90,498.—LEVI CHAPMAN, New York, N. Y.—*Handle for Umbrellas and Canes.*—May 25, 1869.

Claim.—The handle, formed of a plastic composition, pressed to shape around a tubular metallic socket, that receives the cane or stick, as and for the purposes set forth.

90,499.—EDWIN CHESTERMAN, Tremont, N. Y.—*Insole for Boots and Shoes.*—May 25, 1869.

Claim.—1. An insole, made of leather, supported on strips or bearings of rubber, constructed and arranged in the manner and for the purpose set forth.

2. An insole, formed of a suitable material pervious to air and moisture, supported upon bearings of a water proof or non-absorbent material, all constructed, arranged, and operating as described, for the purpose specified.

90,500.—CHARLES B. CLARK, Buffalo, N. Y.—*Blind-Hinge.*—May 25, 1869.

Claim.—The locking-tongue *d*, recess *f*, incline *e'* and *i*, and oval hole *g*, arranged and combined to operate as herein described.

90,501.—FRANCIS CLAUSEN, San Francisco, Cal.—*Belt-Buckle.*—May 25, 1869.

Claim.—The projecting lip *a*, fixed relatively to the plate of the buckle, and provided with short or friction teeth, in combination with the smooth, vibrating, slotted bar *b*, arranged to press the ribbon against said teeth, substantially as described.

90,502.—BENJAMIN R. COLE, Buffalo, N. Y.—*Water-Closet.*—May 25, 1869.

Claim.—1. The combination and arrangement, with the side lever C, of the auxiliary lever I, weighted connection M, and push-rod *k*, operated by seat L, substantially as set forth.

2. The segment P, fulcrum-standard J, and lever I, provided with slot *n*, and notches *s*, for rendering the lever adjustable, and securing it in place, all arranged and combined as set forth.

90,503.—GEORGE N. COMPTON, Canton, Ohio.—*Spring-Whiffletree.*—May 25, 1869.

Claim.—1. The peculiar arrangement of the center-bar A A, end levers B B, and spring K, the several parts being combined substantially as and for the purpose specified.

2. The center-bar A A, composed of the two parts A A, constructed and united as shown, when said parts form both the center-bar of the whiffletree and a box which incloses the draught-spring K and inner ends of levers B B, substantially as and for the purpose specified.

3. The scales N N, on the levers B B, when used in combination with pointers O O on the center-bar A A, for the purpose of indicating the amount of draught applied to the whiffletree, substantially as and for the purpose herein specified.

4. The stop-pins E E, when used in combination with the levers B B and spring K, substantially as and for the purpose herein specified.

5. The improved spring-whiffletree herein described, composed of the center-bar A A, with center-pin D, stop-pins E E, axial pins F F, points O O, and spring K, clevis C, draught-levers B B, with scales N N, and trace-hooks H H, the several parts being constructed, combined, and arranged substantially as and for the purpose specified.

90,504.—JOHN J. COWELL, Newark, N. J.—*Hinge and Spring Combined.*—May 25, 1869.

Claim.—The arrangement, with the casing A, shaft C, and spring D, of the arms E, and F, and rod or link G, so as to form a combined hinge and spring, or spring alone, substantially as herein set forth.

90,505.—JOHN H. CRANE and CHARLES W. CRANE, Charlestown, Mass.—*Process of Making Ornamental Signs, &c.*—May 25, 1869.

Claim.—The process described for the manufacture of signs, &c., and as a new manufacture, signs, &c., produced by the described process.

90,506.—BENJAMIN CRAWFORD, Allegheny City, Pa.—*Steam-Generator.*—May 25, 1869.

Claim.—1. A steam-generator, constructed of nests of tubes, the ends of which are secured in boxes or chests, such chests communicating directly with one another, substantially in the manner herein set forth.

2. Boxes or chests, each containing a plurality of tubes, and constructed with removable doors, substantially in the manner herein described.

3. The water-reservoir N, connected with the steam-drum S, or other part, in combination with the inclined tubes of the generator, substantially as described.

4. The diaphragm R, in combination with the inclined tubes, and the chimney D of the generator, all arranged substantially as herein specified.

5. The combination of the mud-well M, inclined tubes G, chambers S and N, and boxes J *e*, substantially as herein specified.

90,507.—C. O. CROSBY, New Haven, Conn.—*Sewing-Machine for Making Boots and Shoes.*—May 25, 1869.

Claim.—1. The vertical last-carrying spindle F^2 in the carriage F, and arranged to move in the swinging-frame F^1, whereby a universal movement may be imparted to the said last, substantially as set forth.

2. In combination with the mechanism of the first clause of claim, the former *e*, for controlling the movement of the last-carrying spindle, substantially as set forth.

3. The reciprocating bar T^1, with one or more inclines, T, in combination with the last-supporting spindle, carried in a swinging-frame, so as to hold the said spindle in the required position vertically, substantially as set forth.

4. The adjustable stationary guide L, in combination with the mechanism of the first clause of claim, so as to govern the extent of the vertical movement of the last-supporting spindle, carrying the boot or shoe being sewed, substantially as set forth.

90,508.—C. O. CROSBY, New Haven, Conn.—*Machine for Making Tatting.*—May 25, 1869.

Claim.—1. In a machine for making tatting, the eye-pointed needle, when provided with a reed-finger, and operating substantially as and for the purpose set forth.

2. The hook or looper, constructed as described, with the notch 13 at its base, so as to operate in the manner specified.

3. The combination of the needle and looper, both constructed as described, and operating together substantially as set forth.

4. The needle-operating devices, arranged and operating as described, so that the needle may be gradually depressed, and at the proper time be operated to beat up, substantially as and for the purpose herein set forth.

5. In combination with a needle and hook, operating in the manner described, the jaws L, arranged and operated as specified, so as to grasp and hold the work, substantially as set forth.

6. In combination with the needle and hook, operating as described, the warp-thread carriers 1, 2, 3, more or less in number, and arranged so as to present the proper threads at the required instant, substantially as and for the purpose specified.

7. In combination with the needle and hook, operating as described, the arrangement of mechanism for letting off the warp-threads as required, substantially as and for the purpose set forth.

90,509.—JOSEPH DAVIDSON, Xenia, Ohio.—*Dough-Mixing Machine.*—May 25, 1869.

Claim.—1. A dough-mixing machine, consisting of the cylinder A, having a shaft, C, with radial T-headed arms attached, and provided with an opening, K, and slide, J, communicating with a conical receiver, D, having a screw, E, therein, mounted on a shaft, F, the whole constructed and arranged to operate substantially as herein described.

2. The combination of the cylinder A and the conical or tapering receiver D, with screw E mounted therein, when arranged with a communicating opening, K, provided with slide J, substantially as herein described, and for the purpose set forth.

90,510.—MILES B. DODGE, Brooklyn, N. Y.—*Ore-Crusher.*—May 25, 1869.

Claim.—The application of soft wrought-iron faces to the rollers of a quartz-crusher, as and for the purpose herein set forth.

90,511.—DAVID DONALDS, New York, N. Y.—*Sad-Iron.*—May 25, 1869.

Claim.—The screw *g* and wheel *h*, in combination with the jaw *e*, handle *c*, rib *b*, and iron *a*, the parts being constructed as and for the purposes specified.

90,512.—SOLOMON H. DWIGHT, Decatur, Ill., and CALVIN WELLS, Pittsburg, Pa.—*Compound Mold-Board for Plows.*—May 25, 1869.

Claim.—A mold-board for plows, made of steel, welded between two plates of iron, then properly shaped and hardened, and afterward so ground as to remove the iron from one side and expose a facing of steel, all substantially as and for the purpose herein set forth.

90,513.—ZEBINA EASTMAN, Chicago, Ill.—*Running-Gear of Street-Cars.*—May 25, 1869.

Claim.—In combination with the reach *a*, and crossed diagonal reaches *b b*, the center-bolt *c*, substantially as and for the purpose set forth.

90,514.—ERNEST EDWARDS, Firs Willesden, Great Britain.—*Photographic Printing.*—May 25, 1869.

Claim.—Gelatine, gum, albumen, fibrine, and such like organic substances, prepared and rendered insoluble substantially as herein described, when employed for the purpose of receiving, during the process of washing, and of subsequently permanently retaining, gelatine photographs.

90,515.—ABIAL ELLIOT, South Wolfborough, N. H.—*Construction of Reverberatory and Melting Furnaces.*—May 25, 1869.

Claim.—1. The manner of arranging the hot-air pipes, for heating the blast longitudinally in a chamber under the hearth, so as to receive, and in this manner utilize, the whole waste heat of the furnace

through their entire length, and which chamber forms a part or continuation of the main flue, and entirely incloses the heating-pipes.

2. The construction and arrangement of the two parts *a* and *c*, combined with the coal-hopper or reservoir, operating for the purpose and in the manner substantially as described.

3. The construction of the auxiliary grate, arranged and combined with the bridge-wall *b* and the main grate *a*, so as to prepare the fuel, and also push it forward when required, and distribute it upon the main grate, substantially as described.

4. The slotted plate and slide $g\ g^1\ g^2$, by which the separate chamber under grate *c* is provided, and by and through which the admission of the hot air from the blast, under grate *c*, may be regulated, in the manner and for the purpose substantially as described.

90,516.—Matthew H. Fairchild, Newtown, Coun.—*Horn Comb.*—May 25, 1869.

Claim.—In the manufacture of horn combs, constructing the back with the two parts *a* and *d*, of the form described, with the groove *c* between, substantially as and for the purpose specified.

90,517.—Henry Felthoff and Lucas D. Tingley, Prince William, Ind.—*Ditching-Machine.*—May 25, 1869.

Claim.—1. The spade-wheel H, in combination with standards C′ and M, slides F and L, and adjusting bolts and tops *a′*, *z*, and *c*, and pins *t*, all substantially as herein set forth.

2. The crank P and lever Q, in combination with the scraper *u*, substantially in the manner and for the purpose herein set forth.

90,518.—Charles E. Fisk, New York, N.Y.—*Printers' Shears.*—May 25, 1869.

Claim.—In combination with printers' shears or rule-cutter of otherwise ordinary construction, the miter-cutter *a*, with corresponding indentation *a′*, and the gauge or holder *b*, substantially as described and for the purposes specified.

90,519.—Henry G. Fiske, Springfield, Mass.—*Apparatus for Lighting Gas.*—May 25, 1869.

Claim.—1. The combination of the electro-magnet, having the extension-poles C passing through a non-magnetic substance, with the armature operating within a chamber, in the manner substantially as described.

2. An apparatus for letting on and lighting gas by electricity, consisting of the two poles C of a horse-shoe magnet, brought within a chamber and operating the valve, the insulator E′, burner, and one or more insulated lighting-wires *b*, all constructed and operating substantially as herein described and specified.

90,520.—Samuel Gantz, Beaver Creek, Md.—*Mop-Head.*—May 25, 1869.

Claim.—The mop-head above described, consisting essentially of the handle A, fixed jaw B, movable jaw C, having a slot, *m*, slightly larger than the handle A, and rod D, constructed and operating substantially as and for the purposes set forth.

90,521.—Benjamin George George, London, England.—*Machinery for Bronzing Printed Work.*—May 25, 1869.

Claim.—1. Fitting to the distributing roller or rollers or brush or brushes of bronzing-machines, a spreader, for the purpose set forth.

2. Throwing the bronze-distributers and the clearing-brush and polisher out of action, in the manner and for the purpose above described.

90,522.—Washington L. Gilroy, Philadelphia, Pa.—*Implement for Cutting Green Corn from the Cob.*—May 25, 1869.

Claim.—An implement consisting of the shell A B, provided with a series of cutters, D, and a springy bar, E, constructed and combined together, substantially as and for the purpose described.

90,523.—John H. Goodfellow, Troy, N.Y.—*Filtering-Funnel.*—May 25, 1869.

Claim.—The filtering-funnel, provided with springs C′, substantially as described, and for the purpose set forth.

90,524.—John H. Goodfellow, Troy, N.Y., assignor to himself and R. S. Goodfellow, same place.—*Coal-Stove.*—May 25, 1869.

Claim.—1. The air-chamber formed in the upper part of the stove by the combination of the perforated inverted conical plate N, dished plate M, and pipe L, with each other, and with the top and sides of the case C, substantially as herein shown and described, and for the purpose set forth.

2. The plate E, in combination with the outer case C, inner perforated case A, plate F, and base H of the stove, substantially as herein shown and described, to produce the arrangement of the flues D G I, herein set forth.

3. The fire-box A, having the perforations *a* in its side, and lined with the fire-brick B, perforated with holes corresponding with those in the fire-box, substantially as and for the purpose specified.

90,525.—George W. Gregory, Watertown, N.Y.—*Metal Pulley-Block.*—May 25, 1869.

Claim.—1. A pulley-wheel, made or cast in two parts, and having secured between its parts strips of lead, or equivalent material, substantially as and for the purpose described.

2. A pulley-wheel, having attached thereto the bearing-hubs, made hollow, and provided with inlet and outlet passages for oil, substantially as set forth.

3. The combination of a divided frame and swivel, constructed as described, with a wheel having a grooved lining, as described.

4. The combination of a divided frame and swivel, as described, with a wheel, and means for lubricating and packing the bearings of the same, substantially as set forth.

90,526.—Henry Gross, Middletown, Pa.—*Manure Hook or Drag.*—May 25, 1869.

Claim.—1. Locking the tine-shaft of a manure-drag by means of a trap-lever plate, when the same is hinged to the main beam, and works in a recess formed in the upper surface of the same, substantially as described, as and for the purpose specified.

2. The trap-lever plate C and handle E, when the same are arranged in combination with a tine-shaft, D, having ears *d d*, substantially as described, as and for the purposes specified.

90,527.—Henry Gross, Middletown, Pa.—*Manure Hook or Drag.*—May 25, 1869.

Claim.—1. The yoke or staple B, having a recess, *b*, when the same is in combination with the lever D, spring E, and ratchet-arm F, substantially as described, as and for the purpose specified.

2. The tine-shaft H, having ears *h′ h′*, when the same is in combination with the handles C C′, having recesses *c′ c′*, substantially as described, as and for the purpose specified.

3. The combination of the handles C C′, yoke or staple B, lever D, spring E, arm F, and shaft H, when the whole is so arranged as to operate substantially as described, as and for the purpose specified.

90,528.—Julius Gutmann, Berlin, Prussia.—*Sewing-Machine.*—May 25, 1869.

Claim.—1. The rotary and vertically reciprocating needle-bar C, having two or more needles, substantially as and for the purpose herein set forth.

2. In combination with the above, the mechanism for operating the bar *a*, substantially as set forth.

3. In combination with the tubular needle-bar C, the separating-finger *f*, for the two threads, substantially as set forth.

4. The movable finger *e*, in combination with the supporting-table, operating substantially as described, so as to form a guide for the work.

5. In combination with the finger *c*, the lever T, arranged so as to arrest the feed, substantially as set forth.

90,529.—Lewis A. Haines, Wakefield, Md.—*Time-Lock.*—May 25, 1869.

Claim.—1. The combination of the shaft *s* with

the pinion F, pulley *i*, and spring *p*, all constructed and arranged to operate substantially as set forth.

2. The bar *n* and rod *l*, arranged in relation to the lever L, substantially as shown and described.

90,530.—William Hall, Jr., North Adams, Mass.—*Skating Rod and Stool.*—May 25, 1869.

Claim.—The rod A, when constructed as described, and provided with seat B, strap C, and foot D, and operating substantially as and for the purposes set forth.

90,531.—Daniel Halladay, and Burton H. Ruggles, Batavia, Ill.—*Iron Grinding-Plate.*—May 25, 1869.

Claim.—The method of constructing grinding-plates with their upper and under surfaces serrated, substantially as described, and for the purposes hereinbefore specified and set forth.

90,532.—John Hamilton, L. E. Hanson, George W. Hamilton, and Joseph Hamilton, Wheeling, W. Va.—*Ore-Crusher.*—May 25, 1869.

Claim.—The arrangement herein described of the arms I, secured to the upright shaft, the braces K K, extending out beyond the wheels, the rods L L on the axle G, and the detachable sleeves H H, for keeping the wheels in place, all constructed and operated in the manner set forth.

90,533.—William Harris, Washington, Mo.—*Machine for Threading Rods, Bolts, &c.*—May 25, 1869.

Claim.—The improved screw-cutting machine herein described, having frames A and C, wheels D, G, and H, and the quadrangular opening *s*, constructed, arranged, and operating substantially as herein specified.

90,534.—John J. Harris, St. Louis, Mo., assignor to himself, Richard Morgan, and John Gayso.—*Sawing-Machine.*—May 25, 1869.

Claim.—Connecting the two driving-wheels of a sawing-machine by a slotted pitman, which acts upon and is guided by a shaft passing horizontally through it, all constructed and operating substantially as described.

90,535.—Thomas C. Hargrave, Boston, Mass.—*Water-Meter.*—May 25, 1869.

Claim.—1. A rolling or sliding counterbalance-weight, G, in combination with the oscillating measuring-chambers B C, operating substantially in the manner and for the purpose described.

2. The measuring-chambers B C, balanced upon a hollow tube or axis, D, provided with ports, through which the liquid is received, in combination with a rolling or sliding counterbalance weight, G, and the casing A, substantially as set forth.

3. The valves *k*, and stationary stops *l*, in combination with the oscillating measuring-chambers B C, and a rolling or sliding counterbalance-weight, G, operating substantially as described.

90,536.—Russell Hathaway, Jr., and Joel D. Stetson, Fair Haven, Mass., assignors to the American Tack Company, same place.—*Machine for Finishing Galvanized Tacks.*—May 25, 1869.

Claim.—1. A machine so constructed that articles that have been dipped in tin, lead, zinc, &c., may be freed from the superfluous metal adhering to them, by being thrown violently against some surface, substantially as herein set forth.

2. The arrangement of the frame A, cylinder B, vertical plate C, and inclined plates D and F, substantially as shown and described.

3. The arrangement of the horizontal shaft I, miter-wheels H and J, vertical shaft L, disk M, and hopper O, all substantially as shown and described.

90,537.—John H. Helm, Pittsburgh, Pa.—*Coal-Stove.*—May 25, 1869.

Claim.—The circular, bottle-shaped shell A, with openings B, extending around its base; guides C, vertically moving doors D, supporting-ring G, standards H, revolving basket-grate K, and concave receptacle L; the whole being constructed, combined, and arranged, with relation to each other, substantially in the manner shown and described.

90,538.—Charles Herrmann, Evansville, Ind.—*Saw-Set.*—May 25, 1869.

Claim.—1. A saw-set, consisting of the stock A, treadle D, vertical bar C, plate B, adjustable slide E, and adjustable rest G, constructed and arranged to operate substantially as herein described.

2. The treadle D, and vertical bar C, with head *e*, in combination with the plate B, constructed and arranged to operate substantially as herein described, and for the purpose set forth.

90,539.—John Heuermann, Davenport, Iowa.—*Cover for Drinking-Vessel.*—May 25, 1869.

Claim.—The cover described, consisting substantially of the cover A, serrated flange *a a'*, orifices B, with the cover C, and its orifices *c c*, substantially as described.

90,540.—Richard A. Hill, Washington, D. C.—*Fire-Plug.*—May 25, 1869.

Claim.—1. The screw-nut *c*, in combination with the hollow valve-stem *a*, and the waste-water openings, as described, substantially as and for the purposes set forth.

2. The case E, surmounted by a cap and containing a plurality of plugs, as above described, and constituting a common receptacle for the leakage, all substantially as described.

3. The combination of the parts A and E of the case, with an intermediate plate, in which a plurality of plugs is seated, substantially as described.

90,541.—R. A. Hill, Washington, D. C.—*Branch Stop-Cock for Mains.*—May 25, 1869.

Claim.—The hollow plunger C, with its openings D, the four-way branch, as described, the ratchet-plate G, standard *s*, pinion *u*, and conducting-pipe H, combined, arranged, and operating substantially as set forth.

90,542.—John Houpt, Springtown, Pa.—*Steam-Engine Condenser.*—May 25, 1869.

Claim.—1. A casing, into which project perforated tubes D, through which steam is discharged, and perforated pipes F, communicating with the external air, substantially as described.

2. The arrangement of the compartments A and A', perforated tubes D and F, and fan G, the whole being constructed substantially as set forth.

3. The combination of the compartments A and A', tubes E and F, and inclined partition *i*, substantially as herein described.

4. The valve C, operated by a bell-crank lever, *r*, slotted eccentric rod *s*, and spring *t*, substantially in the manner set forth.

90,543.—James L. Howard, Hartford, Conn.—*Bracket-Basket for Railroad-Cars.*—May 25, 1869.

Claim.—The combination of the bracket-basket, made substantially as described, with the cords described, or their equivalents, the whole constructed, arranged, and operating as and for the purposes described.

90,544.—James S. Huffman, Brownsburgh, Va.—*Churn.*—May 25, 1869.

Claim.—1. In a churning-apparatus, having the upright shaft D and crank J, with which to operate the dasher B, making the staff vertically adjustable in a stand, C, by means of the set-screw *d*, or its equivalent, substantially as and for the purpose specified.

2. The combination of the parts E E' *e*, when constructed with a recess to fit around the side of the churn, and adapted to receive and hold the latter, in manner and for the purpose substantially as described.

90,545.—W. W. Hughes, Philadelphia, Pa.—*Process of Drying Malt.*—May 25, 1869.

Claim.—The mode or process, substantially as herein set forth, of drying malt; that is to say, by agitating and overturning the malt in an air-tight vessel, subjected to heat, and communicating with a condenser and vacuum-pump, or their equivalents, substantially in the manner described.

90,546.—ELON HUNTINGTON, New York, N. Y. —*Velocipede.*—May 25, 1869.

Claim.—1. In combination with a body suspended beneath the axle, the means employed for actuating the wheels, consisting of the crank-shaft F, and pulleys *f f* and G G, connected by means of cords or their equivalents, substantially as shown and described.

2. The combination and arrangement of the collars *b b*, and clutches *a a*, substantially as and for the purpose shown.

3. The means employed for disengaging the clutches from the collars, consisting of the bands H H, constructed and operated substantially as described.

4. In combination with the disengaging devices above mentioned, the brake-shoes *h h*, constructed substantially as described, and operated by the brake-beam K and rods I I, as and for the purpose shown.

90,547.—GEORGE HUTCHINS, New York, N. Y. —*Ratchet-Drill.*—May 25, 1869.

Claim.—The arrangement herein described of the spring-pawls P P′, in the bifurcated handle L, at right angles to its longitudinal axis, and the combination of those parts, so arranged with the toothed inner surface of the gear-wheels W W′, and with the sleeve C, as and for the purpose set forth.

90,548.—SULLIVAN HUTCHINSON, Bristol, N. H. —*Propagating Trees and Shrubs.*—May 25, 1869.

Claim.—The grafting of roots or root-producing scions *d d*, into limbs B B, previous to surrounding them with earth, for propagating trees and shrubs, substantially as and for the purposes herein specified.

90,549.—GUSTAVUS A. JASPER, Charlestown, Mass.—*Apparatus for Drying Sugar and Cooling Charcoal, &c.*—May 25, 1869.

Claim.—1. The rotary cylinder A, provided with means for carrying a current of air through it, substantially as described, for the purpose of drying the sugar and like articles, and cooling the charcoal and like articles, by the action of the air.

2. The combination of the rotary cutter L and rollers M M with a tunnel, substantially as described, for the purpose described.

90,550.—WILLIAM JOHNSON, Milwaukee, Wis. —*Cask-Washing Machine.*—May 25, 1869.

Claim.—1. A barrel-washing machine, constructed with bed-frame A, standards B B B B, cylinder D, cylinder-rod E, bevel-wheels F and G, driving-shaft H, slides K K, cross-heads L L, pitman M, and keepers O and P, substantially as described.

2. Cask-holder Q, screws R, springs S S, operated by cylinder-rod E, substantially as described.

3. Cylinder D, pipes T and V, sprinkler W, and holes U, in cylinder-rod E, for the purpose of supplying water, substantially as described.

90,551.—WILLIAM FREDERICK JOBBINS, New York, N. Y.—*Boot and Shoe.*—May 25, 1869.

Claim.—The sheet or cap D, provided with an elastic shank, F, and secured between the outer and the inner sole of a boot or shoe, and overlapping the edges of said inner sole, substantially as shown and described.

90,552.—JOHN THOMAS JONES, New York, N. Y.—*Sewing-Machine.*—May 25, 1869.

Claim.—1. The combination of the throat-plate and the intermittent tension-nippers, to make tension upon the shuttle-thread, the whole being constructed to operate upon the under thread, substantially as before set forth.

2. The combination of the throat-plate, the spring-nippers, the mechanism for adjusting the tension of the spring that presses one jaw of the nippers toward the other, the whole being constructed to operate substantially as before set forth.

90,553.—ROBERT V. JONES, Canton, Ohio.—*Ladies' Work-Basket.*—May 25, 1869.

Claim.—The improved ladies' work-basket and spool-stand, herein described, composed of the basket A B B, constructed as specified, and the standard C, with handle G, ring E, with pin or emery ball F, and spool-arms D D, with spool-pins J, the several parts being constructed and arranged substantially as and for the purpose specified.

90,554.—FREDERICK J. KALDENBERG, New York, N. Y.—*Smoking-Pipe.*—May 25, 1869.

Claim.—1. The cup C, when constructed of meerschaum in its natural state, and applied to the bowl of a meerschaum pipe, to operate substantially in the manner described.

2. The cup C, when provided with a saucer, *c*, and openings *d*, leading into the saucer, arranged to operate as and for the purpose described.

90,555.—JOHN KELLER, Paducah, Ky., assignor to himself, F. J. FAIRBANK, and J. W. COLE, same place.—*Brick-Machine.*—May 25, 1869.

Claim.—1. The series of plungers N, working radially to press the bricks between two series of radial slides, Q U, which open and close the tops and bottoms of the molds, in combination with the vertical plungers M, for discharging the bricks upon the table X, all constructed and arranged substantially as described.

2. The series of molds *h*, with the reciprocating plungers N and slides Q U, the rotating-table X, and guide-bars B X, all constructed, arranged, and operating as and for the purposes herein set forth.

90,556.—JOHN F. KELLER, Hagerstown, assignor to HAGERSTOWN AGRICULTURAL IMPLEMENT MANUFACTURING COMPANY, Hagerstown, Md.—*Combined Seed-Drill and Fertilizer.*—May 25, 1869.

Claim.—1. The cranks and shafts R R, when constructed solid, as herein described, and for the purposes set forth.

2. The stationary bar *s*, when constructed as a support and bearing for the solid crank-shafts R, to keep the shafts in line and preserve their vertical position, as herein described.

3. The slides K K, when constructed so as to open from the center, to gauge the quantity of grain, and having their side-pieces at the openings inclining down to a point between the rollers F and G, for the purpose of preventing any lateral discharge of the grain, as herein described.

90,557.—JOHN S. KENDALL, Northfield, Minn., assignor to himself, RALPH EMERSON, and WILLIAM A. TALCOTT, Rockford, Ill.—*Railway Stock-Car.*—May 25, 1869.

Claim.—1. Providing a railway stock-car with a water space or reservoir, B, substantially as described, in which water can be transported, for the purpose of watering or sprinkling stock while *in transitu*.

2. A railway stock-car, when constructed with a double top or roof, substantially as and for the purposes described.

3. Dividing a reservoir, for containing water on a railway stock-car, into connected apartments, by placing divisions, partly or entirely, across said tank, in such manner as to prevent or retard the surging of water therein from end to end while the car is in motion, the reservoir being located overhead, and the partitions serving as supports to the roof, or as transverse braces to the car.

90,558.—GEORGE KING, Frederick, Md.—*Sash-Lock.*—May 25, 1869.

Claim.—Loose metal dogs, working upon pendent rods, and resting on the bottom or square of the slot or mortise when the window is descending, as hereinbefore described and set forth.

90,559.—RICHARD KNOTT, Suisun City, Cal.—*Stake-Puller.*—May 25, 1869.

Claim.—In combination with the lever A, and its fulcrum, the ring B, pivoted at one side to the end of said lever substantially in the manner and for the purpose set forth.

90,560.—STEPHEN E. KNOTT, Chicago, Ill.—*Door for Grain-Cars.*—May 25, 1869.

Claim.—1. The plates A, having flanged guides *a*, pivoted to the frame of the car-door, the cams B,

and the trapezoidal door C, substantially as and for the purposes set forth.

2. In combination with the above, the chains *c*, rods *d*, brackets E, and latches D, or their equivalent, when constructed, arranged, and operating substantially as described, and for the purposes specified.

90,561.—L. B. Lathrop, San José, Cal.—*Machine for Reaping and Thrashing Grain.*—May 25, 1869.

Claim.—1. The device herein shown and described, for raising and lowering the sickle-bar, or rather the whole front of the apparatus, said device consisting of the upright screw *b*, nut *c*, on arm *d*, the latter being hinged to the tongue C, while the screw *b* is swiveled in the frame-work of the machine, the tongue C being hinged, at its rear end, by a horizontal bolt, j^2, substantially as and for the purpose herein shown and described.

2. The spring *l*, attached by means of a link to the off-end of the sickle-bar, substantially as and for the purpose herein shown and described.

3. The application of the fan d^1 in the cylinder I′, immediately below the inner end of the apron Z, and under and in front of the thrashing-cylinder, substantially as and for the purpose herein shown and described,

4. In combination with the roller S and thrashing-cylinder D′, the separator J′, when operated in an inclined box, M′, by two or more eccentric shafts, K′, substantially as herein shown and described.

5. The method herein shown and described, of moving the endless apron C′ by means of two flexible or rubber rollers, Q′ and *l*′, which bite the under side of the apron, substantially as herein shown and described.

6. Lining the edges of the endless apron C′ with cords or strings m^1, substantially as and for the purpose herein shown and described.

7. The manner herein shown and described, of regulating the blast of the fan *n*′ in the cylinder R′, by means of the sliding inclined plate P′, substantially as set forth.

8. The application of a blast of air, which is created by means of a fan, g^2, in a drum S′, and tube I′, for the purpose of elevating grain to the hopper U′, substantially as herein shown and described.

9. The bag-holder, when consisting of the U-shaped bar *s*′, which is hinged to the side of the frame of the machine, and which is combined with the bar V′ and plates *w*′ and a^2, the latter being operated by a lever, e^1, and all being made and operated substantially as herein shown and described.

10. The combination with the above, of an up-and-down adjustable board, W′, substantially as set forth.

11. The combined comb and rake, consisting of the bar X, hinged rod *m*, tines Y, revolving toothed reel B′, all made and operating substantially as and for the purpose herein shown and described.

90,562.—Joseph Law, New York, N.Y.—*Mop.*—May 25, 1869.

Claim.—A looped mop, as a new article of manufacture, consisting of the woven center A C and the looped ends B, made and arranged as described.

90,563.—Benjamin S. Lawson, New York, N. Y.—*Velocipede.*—May 25, 1869.

Claim.—The seat K, having a wedged-shape bottom, held by a clasp upon the spring, and adjustable on said spring by the wedge only, substantially as and for the purposes specified.

90,564.—R. O. Lowrey, Salem, N. Y.—*Composition for Rendering Fabrics Water-Repellent and for Fixing their Colors.*—May 25, 1869.

Claim.—1. The compound, consisting of the ingredients herein mentioned, united in the manner and proportions substantially as described, and for the purposes set forth.

2. The process of rendering fabrics water-repellent, and of fixing their colors, substantially as herein described, and for the purposes set forth.

3. The product, resulting from the process herein described, as a new article of manufacture.

90,565.—William John Lynd, Golden City, Col. Ter.—*Process of Separating Iron and other Metals from Potters' Clay.*—May 25, 1869.

Claim.—1. The process of removing iron, copper, and other discoloring matters from potters' clay and other argillaceous substances, by subjecting the clay when in solution to the action of one or more magnets, in the manner and for the purposes set forth.

2. The method of precipitating the iron and other discoloring matter in the clay solution, by passing through the bath containing such solution a current of electricity, as and for the purposes set forth.

3. The mode of preparing potters' clay and like substances from which discoloring matter is to be removed, by subjecting such substance, in solution, first to the action of a current of electricity, and afterward to magnetic action, in the manner and for the purposes specified.

90,566.—George E. Marshall, Louisville, Ky.—*Preparation of Paper-Stock.*—May 25, 1869.

Claim.—1. The herein-described process of preparing paper-stock, that is to say, cooking or treating fibrous material in an alkaline solution and introducing superheated steam directly into the vessel in which said material is being cooked or treated, substantially as described.

2. The combination of a boiler for generating steam, a furnace for superheating the steam, and a vessel for cooking the stock, when arranged to operate substantially as described.

90,567.—Harvey McCown, Enon Valley, Pa.—*Nut-Lock.*—May 25, 1869.

Claim.—The washer D, for locking nuts, when constructed substantially as described, and for the purpose set forth.

90,568.—Peter McIntyre, Norwich, Conn.—*Bedstead-Fastening.*—May 25, 1869.

Claim.—A bedstead-fastener, consisting of a mortise and a notched tenon, secured by a latch, H, having an armature, *m*, attached to its lever K, to take against the outer lever N, by which outer lever the latch H is lifted and retained out of the notch G, of the tenon E, when required, constructed, and operating in the manner and for the purpose substantially as described.

90,569.—John McLain and Jared Kelsey, St. Mary's, Ohio, assignors to themselves and Snyder Filson, same place.—*Automatic Car-Coupling.*—May 25, 1869.

Claim.—1. The coupling-box B, constructed as described, with hinged top *a*, and flanges *f f*, forming an inclined plane along its sides, substantially as and for the purposes herein set forth.

2. The coupling-link E, constructed as described, with V-shaped notches *m m*, substantially as and for the purposes herein set forth.

3. The combination of the coupling-box B, plunger D, link E, pin *e*, and top *a*, all constructed and operating substantially as and for the purposes herein set forth.

90,570.—Ellis Michael, LaPorte, Ind.—*Fanning-Mill.*—May 25, 1869.

Claim.—1. The combination of the grain-board K and the adjustable board K′ with the intervening hinged board L, substantially as set forth.

2. The arrangement of the grain-boards K, L, and K′, in connection with the secondary grain-board N, substantially as herein described.

3. The side-delivering spout O, in combination with the opening *c*, and adjustable board K′, arranged to operate substantially as described.

4. The grain-sieves *f*, having the meshes at their front made smaller than at the rear, and having the wires attached to the under side of the front bar and to the upper side of the rear bar, as described,

5. Suspending the shoe F at its front by means of an arm, R, pivoted in front of the front posts B, substantially as described.

6. The spring-bar *o*, arranged to hold the slide M of the hopper, as set forth.

7. The slides D, having the pivoted bar *h* attached as set forth.

8. The slides E, arranged to slide in the opening

in the side of the case A, and be flush therewith, as described.

90,571.—BENJAMIN MOSER, Philadelphia, Pa.—*Curtain-Fixture.*—May 25, 1869; antedated May 19, 1869.

Claim.—1. Tightening the pulley-cord, by means of the rotating screw-spindle, substantially as described.

2. The swinging-button B and the jam-nuts E, in combination with the screw-spindle, substantially as and for the purpose described.

3. The pin F, in combination with nut H, for concealing the fastening between plate D and section A, in combination with the screw-spindle, substantially as described.

90,572.—CARLTON NEWMAN, San Francisco, Cal.—*Lamp-Extinguisher.*—May 25, 1869.

Claim.—1. The short sliding tube E and the link F, in combination with the lid *a*, whether attached directly to the lid or not, the whole constructed and operating substantially as herein described.

2. The curved rod *c c c'* and the weight H, when in combination with the link F and tube E, substantially as herein described.

3. In combination with the tube E, link F, and lid *a*, the curved rod *c*, and weight H, substantially as described.

90,573.—WILLIAM B. PARSONS, Short Tract, N. Y.—*Car-Coupling.*—May 25, 1869.

Claim.—The car-coupling, consisting of the rotating spear-headed bolt C, with the weight F, attached, in connection with the lever G, link H, spring-catch I, and pin L, all substantially as described.

90,574.—O. S. PERKINS and L. A. CRANDALL, New Haven, Conn.—*Corn-Husker.*—May 25, 1869.

Claim.—The vertical slide C, cutter *d*, lever E, with its handle F, in combination with the block G and treadle D, the whole constructed and arranged so as to operate substantially as and for the purpose specified.

90,575.—GEORGE W. R. POLLOCK, Boston, Mass.—*Spring Burglar-Alarm for Doors.*—May 25, 1869.

Claim.—The combined door spring and alarm, constructed and arranged as described, so as to close the door with which it may be connected, and to sound an alarm both in the opening and in the closing of the door.

90,576.—ANDREW J. PRITCHARD, Liverpool, Ohio.—*Pump.*—May 25, 1869.

Claim.—The herein-described pump-plunger, when constructed with a noteh, E, wherein the valve is inclined, substantially as and for the purpose specified.

90,577.—JOSEPH REPETTI, Philadelphia, Pa.—*Cake-Machine.*—May 25, 1869.

Claim.—1. The combination of the automatic stopping-device, consisting of the finger *l*, roek-shaft *i*, arms *h* and *h'*, rod *d*, spring *f'* and stopper *g*, with the plunger *j*, screw *k*, and pulleys *a* and *a'*, or their equivalents, substantially as and for the purpose herein described.

2. The combination of the upright shaft *m* with the projection r^2, dough-box 10, with its hinged and removable door 7, plunger *j*, and screw *k*.

3. The combination of the revolving eutter s^1 with the dough-box 10, substantially as and for the purpose set forth in this specifieation.

4. The combination of the single non-revolving screw *k*, with the plunger *j*, ratchet-wheel 1, pawl 2, oscillating arm 3, and adjustable crank 4, substantially as speeified.

5. The eombination of the loose or removable pins or "combs" *x*, with the dough-box, substantially as and for the purpose specified.

6. The combination of the bevel-wheels 7 and 8, and hand-wheel 9, with the non-revolving screw *k*, revolving nut *z*, and plunger *j*, substantially as and for the purpose specified.

7. The combination of the slide 6 with the movable bottom y^2 and dough-box 10, substantially as and for the purpose set forth in this specification.

8. The combination of the cutter, Fig. 6, composed of the wire s^1, frame s^2, and shank s^3, with a revolving shaft, *m*, substantially as herein specified.

90,578.—WILLIAM S. REYBURN and EDMUND A. W. HUNTER, Philadelphia, Pa.—*Lightning-Rod Coupling.*—May 25, 1869.

Claim.—The lightning-rod coupling for connecting angular lightning-rods, provided with the slots *e* and *d*, and constructed substantially as and for the purpose herein shown and described.

90,579.—JAMES REYNOLDS, Brooklyn, N. Y., assignor to himself and JOHN J. MARSHALL, New York City.—*Velocipede.*—May 25, 1869.

Claim.—1. The arrangement of the seat C on the independent rear frame D, carrying the steering-wheel F, and pivoted, as at *a*, to the main frame, which carries the driving-wheels E E, substantially as shown and described.

2. The arrangement of the slotted hand-levers I I, and treadles J J, relatively to each other and the cranks *k k* and *l l*, substantially as specified.

90,580.—MAURICE M. REILY, New Haven, Conn.—*Ventilator.*—May 25, 1869.

Claim.—In the basement of buildings, forming a communication beneath the floors and around the walls to flues, constructed so as to admit external air, for the purpose of ventilation, substantially as set forth.

90,581.—MARCUS W. RIKER and DANIEL T. TORREY, Hastings, Mich., assignors by mesne assignments to DANIEL T. TORREY.—*Washing-Machine.*—May 25, 1869.

Claim.—1. The combination, in a washing-machine, of the brush *g* and rollers F F with the cylinder *a*, substantially as set forth.

2. The combination, in a washing-machine, of the brush *g* and friction-roller *b* with the cylinder *a*, all operating substantially as described.

3. The combination, in a washing-machine, of the following elements, namely, a revolving cylinder, adapted to carry the clothes with it in its revolutions, a series of rollers which shall press the clothes against said cylinder, a brush for scouring the clothes, and a rub-board.

90,582.—JOHN L. RITER, Brownsville, Ind.—*Grain-Drill.*—May 25, 1869; antedated November 25, 1868.

Claim.—1. The plates *m m*, in combination with the seed-cells *a a a* and arms O O, substantially in the manner and for the purpose set forth.

2. The slide D, in combination with the thumb-screw *c*, substantially as and for the purpose herein set forth.

90,583.—HENRY R. ROBBINS, Baltimore, Md., assignor to himself and J. J. MORAN, same place.—*Cooking-Range.*—May 25, 1869.

Claim.—1. The vertical chamber M, when formed around the bulging front wall of a range or stove, as shown and described, and provided with the vertieal slots *u u*, and with covers, substantially as and for the purposes specified.

2. The arrangement, in a stove or range, of the four chambers *a a''*, *b b'*, the chamber *b* containing a large grate, adapted for common use for cooking, &c., and the chamber *b'* containing a small grate, *b''*, at its center, and holes through its rear wall, by means of which cold air may be admitted, all constructed to operate as and for the purposes set forth.

90,584.—JOHN ROBERTS, Cincinnati, Ohio.—*Step-Cover and Wheel-Fender for Carriages.*—May 25, 1869.

Claim.—The combined arrangement of the flexible fender G, attached and strengthened at its upper end, the guards or cushions I J, and step D E F, all constructed to operate as and for the purposes set forth.

90,585.—PHILIP C. ROWE, Boston, Mass.—*Velocipede.*—May 25, 1869.

Claim.—1. A velocipede, made with a body reaching nearly to the ground, and pendent between two supporting-wheels, one of which is arranged to be turned either to the right or left, when provided with steadying-wheels on either side of the body, made adjustable as to position, and operating substantially as described.

2. The combination of the springs *x* with the steering-wheel, when arranged to operate substantially as described.

3. The combination, in one vehicle, of a central leading and a central trailing-wheel, when one is arranged as a steering wheel, and when each wheel is provided with a pair of cranks, and each crank of each pair is arranged at an angle of about one hundred and eighty degrees with reference to its fellow, and one pair is provided with means for being operated by the feet, and the other pair by the hands of the rider.

4. The combination, with the steering-wheel; of flexible connections and leaders therefor, arranged substantially as and for the purpose set forth.

90,586.—JOHN A. RUMSEY, Seneca Falls, N. Y. —*Non-Corrosive Cast-Iron Pump.*—May 25, 1869.

Claim.—A galvanized iron pump, as an article of manufacture, substantially as and for the purpose specified.

90,587.—R. J. RUSSELL, Wheeling, West Va.—*Skate.*—May 25, 1869.

Claim.—The combination of the spring B C B, the rest E F, the point G, the point on the toe D, the T on the heel of the skate-runner, at A, all in Fig. 4, and the heel-plate I H, in Fig. 1, substantially as described and set forth.

90,588.—FRANCIS S. RUTSCHMAN, Philadelphia, Pa., assignor to himself, JOHN RUTSCHMAN, and WILLIAM RUTSCHMAN, same place.—*Meat-Cutter.*—May 25, 1869.

Claim.—The frame A, shaft B, connecting-rod D, sliding-block *f*, adjustable cutter-bar C, cutter-frame E, knives F, revolving block G, carrier H, and track I, combined and arranged for operation, substantially as specified, whereby an efficient and convenient meat-cutter is obtained.

90,589.—DAVID SAUNDERSON, St. Louis; assigns one-half his right to A. B. M. THOMPSON, Webster Groves, Mo.—*Metallic Roofing.*—May 25, 1869.

Claim.—The method, herein described, of laying metallic roofing, when the sheets A are provided with slots for the nails, the strips or sheets being nailed and bent so as to cover the nail-heads, substantially as and for the purposes specified.

90,590.—CHRISTIAN SHARPS, Philadelphia, Pa. —*Propeller.*—May 25, 1869.

Claim.—1. A recess, *f*, on the under side of the vessel, at the side of the keel, where the blades of the propeller enter the water, as herein set forth, for the purpose specified.

2. The propeller-shaft, so arranged as to be lower at the rear than in front, in combination with an inclined propeller-wheel, having a limited dip in the water, as set forth, for the purpose specified.

90,591.—FREDERICK SHICKLE, St. Louis, Mo., assignor to SHICKLE, HARRISON & CO., same place. —*Apparatus for Molding Pipe.*—May 25, 1869.

Claim.—1. Supporting the flasks C C′ and pattern-frame D vertically, by hinges, upon bearings B B′, substantially as set forth.

2. The half flasks C C′, and their terminal ribs F F′, combined with the movable patterns E, and the devices for moving the same into and from contact, substantially as and for the purposes set forth.

3. The flasks C C′, arranged with openings e^2, for ramming the sand about bell-ends and similar projections, substantially as set forth.

90,592.—A. J. SHUNK, Millersburgh, Ohio.—*Horse-Rake.*—May 25, 1869.

Claim.—1. The combination and arrangement of the crank *a*, bolt or catch *b*, and lever *e*, substantially as shown and described.

2. The combination and arrangement of crank *a*, bolt or catch *b*, and a lever, for tilting the rake, with and in reference to the uprights K, hinges L, and cross-bar I, all substantially as and for the purpose set forth.

90,593.—GEORGE F. SIMONDS, Fitchburgh, Mass., assignor to the SIMONDS MANUFACTURING COMPANY, same place.—*Method of Making Serrated Sickle-Sections.*—May 25, 1869.

Claim.—1. The improved process of serrating sickle-sections, by first cutting the groove on the beveled surface upon a flat bed, next bending down the whole edge of the bevel, and, finally, grinding off the edge, substantially as described.

2. Sickle-sections made by the improved process described.

90,594.—JOSEPH SISSONS, Horncastle, England. —*Ice-Cream Freezer.*—May 25, 1869.

Claim.—The construction and arrangement of the frame *a*, vessel *m*, crank *c*, fly-wheel *d*, shaft *b*, wheels *e f*, stationary shaft *h*, sleeve *g*, bracket *l*, rotating cylinders *n p*, and stationary knives or scrapers *r r*, when combined and operating substantially as and for the purposes herein set forth.

90,595.—JOSEPH SIMPSON, Newark, Ohio.—*Velocipede.*—May 25, 1869.

Claim.—The treadles F, pivoted near their centers to the guide-pillar H, and connected to the straps G, in combination with the pulleys C, flanges D, axle B, and springs E, of a two-wheeled velocipede, substantially as set forth.

90,596.—SAMUEL SIMPSON, Wallingford, Conn., assignor to SIMPSON, HALL, MILLER & CO.—*Die for Raising and Trimming Metal.*—May 25, 1869.

Claim.—A die for raising sheet-metals, constructing the same in two parts, A and C, the part C removable from the part A, for the purpose set forth.

90,597.—ALBA F. SMITH, Norwich, Conn.—*Railway-Rail.*—May 25, 1869.

Claim.—In railroad-tracks, the rounded form of the notches *a a′* in the rails A, arranged as and for the purposes herein set forth.

90,598.—CHARLES P. SNOW, Freeport, Ill.—*Washing-Machine.*—May 25, 1869.

Claim.—A rubbing-frame, consisting of the curved levers L, hand-hold M, slats *y y*, and rollers *n*, when constructed and arranged as shown, and operating in combination with the ways W and spring-roller bed J J, with guides C, in the manner and for the purposes herein set forth and described.

90,599.—GEORGE K. SNOW, Watertown, Mass. —*Paper Cuff.*—May 25, 1869.

Claim.—A wristband, containing two button-holes of different shapes, substantially as and for the purposes specified.

90,600.—THOMAS S. SPEAKMAN, Camden, N. J. —*Chimney-Cowl.*—May 25, 1869.

Claim.—A chimney-cowl, consisting of two hollow cones A A′, in combination with a ring, C, arranged to operate substantially as herein described.

90,601.—CHARLES SPRING, Hyde Park, and ANDREW SPRING, Weston, Mass.—*Veloeipede.*—May 25, 1869.

Claim.—1. In a jointed perch, a grooved sleeve or tube on one part and a tongued spindle on the other, these parts being constructed substantially as described, so that, when connected ready for use, they shall be self-locked by means of the tongue.

2. The above, in combination with the pin and slot, to allow a determined extent of rotative tipping, substantially as shown and set forth.

90,602.—JOHN STACKER, West Winsted, Conn., assignor to FRANKLIN MOORE and EDWARD CLARK, same place.—*Machine for Pointing Bolts or Rivets.* —May 25, 1869.

Claim.—The gauge-rod D, constructed as described, when combined with the hammer E and anvil-block B, in the manner and for the purpose described.

90,603. — GEORGE K. STILLMAN, Cincinnati, Ohio.—*Roller-Skate.*—May 25, 1869.

Claim.—The strap or fastening-device F, which encircles the foot of the skater, and attaches it to the foot-board A of a skate in such a manner that the rollers or runners will be turned or adjusted thereby, so as to run the skate in a curved line, right or left, substantially as described.

90,604.—OLE O. STORLE, Norway, Wis.—*Plow-Point.*—May 25, 1869.

Claim.—1. Plow-point B, with its socket G, in combination with plow-frame A, substantially as described.

2. Adjustable plow-point B, substantially as described.

90,605. — LEVI SUMNER, Oskaloosa, Iowa.—*Band-Cutter for Thrashing-Machines.* — May 25, 1869.

Claim.—1. A band-cutting apparatus, consisting of the frame A, having the belts B arranged as described, with a saw, I, located beneath the frame, and having its periphery projecting through an opening therein, all as herein shown and described.

2. The shafts D E, provided with arms *n*, and arranged to have a reciprocating transverse and rotary motion combined, for separating or spreading the bundle of grain, as set forth.

90,606.—JOHN THOMPSON and JAMES GEORGE INGRAM, London, England; said INGRAM assigns his right to JOHN THOMPSON.—*Cap for Feeding-Bottles for Infants and Invalids.*—May 25, 1869.

Claim.—The forming caps of feeding-bottles, substantially as herein described, from vulcanizable India rubber compounds, molded to form in dies, by pressure, and subsequently vulcanized or changed.

90,607.—WILLIAM TIBBALS, South Coventry, Conn.—*Metallic Cartridge.*—May 25, 1869.

Claim.—The cup or reinforce B, when inserted within the flanged metallic case A, in such a manner as to cover and protect the flange, substantially as described.

90,608. — THEODORE R. TIMBY, Saratoga Springs, N. Y.—*Toilet Pin-Case.*—May 25, 1869.

Claim.—As a new article of manufacture, the toilet pin-case herein described, consisting of a box, B, with one or more covers, C, and one or more diaphragms, D, adapted to receive and hold the pins, in the manner specified.

90,609.—NATHANIEL TUFTS, Boston, Mass.—*Gas-Light Governor-Case.*—May 25, 1869.

Claim.—1. A gas-light governor-case made in two parts, and with the conduits *h* and *e*, with flanges about their adjacent ends, for reception of the yielding washer *l*, substantially as and for the purpose specified.

2. The lower part of a gas-light governor-case, when made with the flange *b*, projecting above the joint flange *a*, substantially as and for the purpose set forth.

90,610.—WILLIAM ULRICH and CHARLES HACHMEISTER, Newark, N. J.—*Harness-Ornament.*—May 25, 1869.

Claim.—The rosette, consisting of the metallic base B, plate D, hard-rubber piece A, and bolt E, as an improved article of manufacture, all arranged and constructed in the manner and for the purpose set forth.

90,611.—GEORGE UNGER, Danville, Pa.—*Fence-Post Socket.*—May 25, 1869.

Claim.—The construction and use of a post-socket, formed of cast-iron plates, with sockets and flanges, connected with rods, and arranged substantially for the purpose as hereinbefore described.

90,612.—ADRIEN VIRIDET, Glasgow, Ky.—*Bridle-Bit.*—May 25, 1869.

Claim.—1. A bridle-bit without a cross-bar, to pass through the mouth of the horse, constructed substantially as described.

2. In combination with the frame A, the cheek-plates B, flanges C, and short connecting-bars *a*, substantially as and for the purpose described.

90,613.—HUGO VOGEL and VICTOR VOGEL, St. Louis, Mo., assignors to HUGO VOGEL and FRANK JUSTIN.—*Piano-Stool.*—May 25, 1869.

Claim.—1. The half-seats D and seats E, when pivoted upon a rest-bracket, B, substantially in the manner hereinbefore specified.

2. The seat-locks *g d* and *g e*, rods *h*, lever *i*, and knob I, when combined with the seats D and E, substantially as and for the purposes set forth.

90,614.—FRIEDRICH VON MARTINI, Frauenfeld' Switzerland.—*Breech-Loading Fire-Arm.*—May 25 1869.

Claim.—1. The tilting-lever and cocking-lever, in combination with the hinged and vertically swinging breech-block, under the arrangement and for operation as herein shown and set forth.

2. The combination, with the cocking-lever and main tilting-lever, of the hinged and vertically swinging breech, and the firing-pin, and its spring, arranged within the breech-block, and operated by the lever which moves said block, substantially in the manner and for the purposes set forth.

3. The combination, with the cocking-lever, constructed and connected with the hinged breech, and firing-pin, and tilting-lever, as described, of the trigger, by which said lever is caused to compress the spring of the firing-pin, and hold said pin in its cocked position during the raising of the breech-block, substantially in the manner shown and specified.

4. The combination, with the swinging breech and sliding firing-pins, of the indicator-pin, arranged in the rear of the breech-receiver, and in juxtaposition with the breech and firing-pin, as and for the purposes set forth.

90,615.—LUTHER R. WALLACE, Adrian, Mich.—*Steam-Boiler Furnace.*—May 25, 1869.

Claim.—1. The arrangement of the register S, furnace or fire-chamber B, combustion-chambers D E, and flues *f*, substantially as represented and described, for the purpose set forth.

2. The water-space A, between the fire-furnace B and fire-box E, substantially as set forth and described.

3. The oblique backs *b* and *b'*, in combination with the doors *a* and *a'*, for the purposes set forth and described.

90,616.—CARL FRIEDRICH LUDWIG WANDEL, Waldau, near Bernburg, North German Confederation, assignor to F. O. MATTHIESSEN and W. A. WIECHERS, New York, N. Y.—*Refining Sugar.*—May 25, 1869.

Claim.—The use of hydrate of magnesia or phosphate of magnesia, or both combined, as neutralizing and clarifying agents in the process of sugar-refining, substantially as specified.

90,617.—CARL FRIEDRICH LUDWIG WANDEL, Waldau, near Bernburg, North German Confederation, assignor to F. O. MATTHIESSEN and W. A. WIECHERS, New York, N. Y.—*Purification of Animal-Charcoal.*—May 25, 1869.

Claim.—The use of the above-named salts, as oxidizers, in the revivification of animal-charcoal, substantially as specified.

90,618.—GEORGE F. WATERS, Boston, Mass.—*Pruning-Implement.*—May 25, 1869.

Claim.—The combination of a saw with a pruning-instrument, substantially as shown and described, so that the saw may be brought into operative action or confined point downward upon the handle, without interfering with the position or action of the cutter.

90,619.—JOHN HARVEY WILLIAMS, New York, N. Y.—*Bird-Cage.*—May 25, 1869.

Claim.—1. A bird-cage, constructed of glass tubes *a*, with metal cores *b*, in combination with the top *e*, annular base *d*, and guide-rings *e*, all as shown and described.

2. The dish B, of a bird-cage, constructed of seg-

ments *f*, of horn, secured in a metallic frame, *g*, as shown and described.

90,620.—CHARLES V. WOERD, Waltham, assignor to AMERICAN WATCH COMPANY, Boston, Mass.—*Lathe for Grinding and Polishing Pivots of Watch-Work.*—May 25, 1869.

Claim.—1. In combination with the head-stock of a lathe, a shaft or slide, *l*, provided with a back-center bearing-piece, *m*, and a guide, *n*, or its equivalent, substantially as described.

2. The combination, with a lathe, of a swinging frame or bearing, a polishing-wheel, and a grinding lap or laps, arranged to operate substantially as described.

3. The combination, with a polishing-wheel, of a gauging-stop, arranged to operate substantially as described.

90,621.—GEORGE W. N. YOST, Corry, Pa., assignor to CORRY MACHINE COMPANY, same place.—*Harvester.*—May 25, 1869.

Claim.—The arrangement of a level-bar, X′, with a lever, X, floating-bar S, and finger-bar U, operating as described, for grass and grain cutting machines.

90,622.—JOHN YOUNG of C. Fair View, and C. I. GRUMBINE, Frederick, Md.—*Machine for Boring Posts and Pointing Rails.*—May 25, 1869.

Claim.—1. In combination with the slotted metallic brackets I I^1 I^2, set nuts and screws *i i* and lever J′, the vertically adjustable frame J, carrying the boxes for the auger-mandrels, and shaft M, all constructed as shown and described, for the purpose specified.

2. The combination of the eccentric-headed lever P, pawl *p*, ratchet-plate R, block O, and clamping-box C, when the several parts are constructed to operate in the manner and for the purpose specified.

3. The machine herein described, for boring posts and sharpening rails, consisting essentially of the disks K K′, carrying the curved adjustable cutting-blades T T, the carriage G, and the clamping-box C, and its appendages, all constructed and arranged to operate in the manner and for the purpose specified.

90,623.—EMANUEL ANDREWS, Williamsport, Pa.—*Strap for Saws.*—June 1, 1869; antedated May 21, 1869.

Claim.—The straps B, for the ends of reciprocating saws, formed of one piece of metal, when made and arranged as described, and for the purposes set forth.

96,624.—CHARLES F. ANNAN, Boston, Mass., assignor to B. S. BINNEY, same place.—*Paper-Bag Machine.*—June 1, 1869.

Claim.—1. The segment-gear wheel C^7, in combination with a tucker-frame, P^3 P^3 P^4, operating substantially as described, and for the purpose set forth.

2. The tucker-frame P^3 P^3 P^4, in combination with the pivoted sides P^2 P^2 and the guides P^7 P^7, substantially as described, and for the purpose set forth.

3. The tucker P^6, in combination with the opener T′, operating substantially as described, and for the purpose set forth.

4. The combination and arrangement of the four rollers S S′ and R^3 R^4, operating together substantially as described, and for the purpose set forth.

5. Combining, with the rollers R^3 R^4, the device consisting of the standard K^4, links K^3 K^2, lever K^1, and cam K, or its mechanical equivalent, operating as described, and for the purpose set forth.

6. The rollers S S′ and R^3 R^4, in combination with the vertical tucker H^7 and horizontal tucker L^6, operating as described, and for the purpose set forth.

90,625.—FRANKLIN BABCOCK and FREDERICK BABCOCK, Middletown, Conn.—*Blind-Fastener.*—June 1, 1869.

Claim.—1. The projections on the inner side of the hollow screw-shell, which holds the hook in position, in combination with the spring C, for the purposes set forth.

2. The threaded single shell A A, with the pivot D, in combination with the hook *b b*, and spring C, all constructed as and for the purpose set forth.

90,626.—ARTHUR BARBARIN, New Orleans, La.—*Apparatus for Lighting Gas by Electricity.*—June 1, 1869.

Claim.—1. The method of closing the circuit in an electrical gas-lighting apparatus, by means of the pressure of the gas escaping to the burner, acting upon a lever, key, or piston, or equivalent circuit, closed, substantially as herein shown and specified.

2. The method of street-gas lighting, by the employment, in connection with each burner, in which the flow of the gas is regulated by means of a reservoir of quicksilver or other suitable liquid, in combination with the gas-induction pipe, as herein described, of an independent battery, combined and arranged to operate with the gas-lighting apparatus over the burner, as and for the purposes herein set forth.

3. Connecting the ends of the wires *a* a^1, by means of an asbestos thread, carrying beads of platinum, or its equivalent, and arranged above the orifice in the tip of the gas-burner, as described.

90,627.—A. A. BARKER, Lewiston, Me.—*Stop-Motion for Looms.*—June 1, 1869.

Claim.—The combination, with the weft-fork, pattern-cylinder, and shuttle-box operating-cam, of the rods *e*, *i*, *n*, and *q*, and levers *o m*, for stopping the pattern cylinder and shuttle-box cam when the weft fails, substantially as described.

90,628.—CALEB BATES, Kingston, Mass.—*Revolving Harrow.*—June 1, 1869.

Claim.—1. The paddle M, in combination with the tooth K, working as described, and for the purpose set forth.

2. The bent knife L, in combination with the axle H and tooth K′, as described, and for the purpose set forth.

3. In combination with the harrow, the bars N N′, when arranged to operate substantially as described, and for the purpose set forth.

90,629.—EDWIN E. BEAN, Boston, Mass.—*Apparatus for Lighting and Extinguishing Gas by Electricity.*—June 1, 1869.

Claim.—1. The within-described method of operating gas-valves, by means of a current of electricity passing alternately through separate wires, in combination with the springs *k s*, and cam *o*, or equivalent device, for automatically breaking the circuit through the electro-magnet, and causing the current to pass to the next apparatus, substantially as described.

2. Breaking and closing the electric lighting circuit at any desired point, for the purpose of producing the sparks to ignite the gas, by means of the cam *i′*, upon the shaft of the gas-cock, operating the lever *e′*, or their equivalents, substantially as described.

3. In combination with the mechanism by which the gas-valve is operated, the cam *i′*, and lever *e′* or equivalent device for breaking the electric lighting-circuit, so arranged that, as the gas-valve is opened, the sparks will be produced at the required point, to ignite the gas, substantially as set forth.

90,630.—P. D. BECKWITH, Dowagiac, Mich.—*Hot-Air Furnace.*—June 1, 1869.

Claim.—1. The combination, with a stove having outlets, F F, of zigzag descending-flues G G, horizontal flue G′, and upright escape-flue L, arranged to operate substantially as described.

2. Inclined deflecting-plates J J, applied to their arms *c c*, to the outer wall of a stove or furnace, and arranged between the same and a casing, H, so as to operate substantially as described.

3. The combination of deflectors J and zigzag flues G G, arranged within a hot-air furnace, in the manner substantially as described.

90,631.—JOSEPH F. BLOOD, Providence, R. I.—*Button-Fastening.*—June 1, 1869.

Claim.—1. The L-shaped shank B, with its cam-shaped projections, secured to the back of the stud or button, in the manner and for the purposes specified.

2. The improved shirt stud or button herein described, consisting of the front A, shank B, having

cam-shaped projections, and spring-arm C, constructed and operating substantially in the manner and for the purpose specified.

90,632.—CLAUDIUS V. BOUGHTON, Titusville, Pa.—*Safety-Attachment for Pockets.*—June 1, 1869.

Claim.—The combination of the hook A and spring B with the clamping-plates C E, substantially as and for the purpose set forth.

90,633.—HARVEY BRISCO and JOB W. BLACKHAM, Brooklyn, N. Y., assignors to themselves and JAMES H. PRENTICE, same place.—*Felting-Machine.* June 1, 1869.

Claim.—The yielding covers H, arranged to operate in connection with the shover or shovers D^1 D^2, and yielding casing B C, and with the mass M to be felted, whereby the operation of felting is accomplished rapidly and advantageously, even upon hats of delicate fur, substantially as herein set forth

90,634.—HERBERT BUFFINGTON, South Coventry, Conn.—*Gun-Capper.*—June 1, 1869,

Claim.—A gun-capper, constructed substantially as described, having the orifice *a*, for the reception of caps, protected by the spring *s*, and the two-forked spring *c*, attached in the manner described, turning at right angles *c' c'*, all operating as described, for the purposes described.

90,635.—WILLIAM K. CAVETT, Allegheny City, Pa.; assigns one-half to JAMES L. ANDERSON, same place.—*Steam-Engine Slide-Valve.*—June 1, 1869.

Claim.—The cap D, with the spring D^1, set-screw D^2, in combination with the chamber A b and base A, metallic ring B, follower C, and tube A e, when constructed and arranged substantially as herein described and set forth.

90,636.—H. D. CHANCE, Allentown, Pa.—*Burglar-Alarm.*—June 1, 1869.

Claim.—1. The charged rack C, button E, and spring-hammer B, all constructed, arranged, and operating as specified and shown.

2. In combination with the above, the plate D and block F, as and for the purpose set forth.

90,637.—ISAAC H. CLARK, Boston, Mass., assignor to PAUL P. TODD, same place.—*Chemical Fire-Engine.*—June 1, 1869.

Claim.—1. Adapting the air-chamber of a fire-engine to the double purpose of an air-chamber and of a receptacle for containing chemical ingredients of such nature as to remain inert until acted upon by the flames upon which they are thrown, for the purpose substantially as before explained.

2. In combination with the air-chamber C, adapted as before explained, the pipes *e* and *d*, provided with the valve *e*, and operating as before set forth and explained.

90,638.—HYMEN CLENDENEN, Washington County, Ohio.—*Saw-Set.*—June 1, 1869.

Claim.—1. The rule A, with its temper-screw *f*, in combination with the gumming-board C, with its shoulders *e e*, substantially as and for the purpose set forth.

2. The gauge B, with the screw *c*, in combination with the rule A, with its temper-screw *f*, as and for the purpose set forth.

90,639.—WILLIAM G. COMSTOCK, East Hartford, Conn.—*Hand Cultivator and Weeder.*—June 1, 1869.

Claim.—The combination and arrangement of the slotted frame B and adjustable rakes A, all as constructed and operated as described.

90,640.—ABEL LEE CROW, Pennville, Ind.—*Corn-Planter.*—June 1, 1869.

Claim.—The combination of the arms D, loose band E, and the hub, as shown and described.

90,641.—E. A. CROWNHART, Bridgeport, N. Y.—*Trace-Buckle.*—June 1, 1869.

Claim.—The trace-buckle, consisting of the frame C, curved up at the front, and cast with the broad, flat bottom *c*, ears *e e*, and side loops, and the clamping-plate D hung on rod *f*, between the ears *e e*, and having the projection *d*, heel *i*, and part *g*, all constructed and arranged substantially as herein described.

90,642.—SAMUEL B. DODGE, Roslyn, assignor to himself and DANIEL D. WINANT, Brooklyn, N. Y.—*Forging-Hammer.*—June 1, 1869.

Claim.—The forging-hammer, provided with the standard *m*, carrying the fulcrum, and adjustable, as set forth, in combination with the revolving crank-pin *i*, adjustable link *r*, spring *s*, hammer *k*, and anvil *n*, as and for the purposes specified.

90,643.—SAMUEL DUNBAR, New York, N. Y.—*Steam-Engine Cut-Off.*—June 1, 1869.

Claim.—1. The yokes E and F, when constructed substantially as shown and described.

2. The combination of the yokes E and F with the toes G and H, when constructed substantially as shown and described.

3. The cam I and yoke F, when constructed as shown and described.

4. The cam I and lever J, when constructed and arranged to operate as shown and described.

90,644.—CLEAVELAND F. DUNDERDALE, New York, N. Y.—*Apparatus for Generating and Carbureting Gas.*—June 1, 1869.

Claim.—1. The manufacture of carbureted hydrogen gas, by so placing the hydrocarbon liquid and the diluted acid in different vessels or compartments, not in contact with each other, but under the same cover and near each other, as herein described and set forth.

2. The combination and arrangement of the cover B, containing the funnel-shaped cylinder D, and annular chamber E, with pipes F, and outlets *m*. The chamber D as a regulator, conductor for the hydrogen gas, and supporter for the hydrocarbon chamber E, the tank A, water-chamber C, and feed-pipe H, the whole being combined in the manner and for the purpose substantially as herein set forth and described.

90,645.—B. W. DUNKLEE, Boston, Mass.—*Grate.*—June 1, 1869.

Claim.—The fire-grate A B, constructed substantially as shown and described.

90,646.—THOMAS A. EDISON, Boston, Mass., assignor to himself and DEWITT C. ROBERTS, same place.—*Electrographic Vote-Recorder.*—June 1, 1869.

Claim.—1. The combination of a switch or switches, *e e'*, types and cylinder *p*, with an electric battery, connected and operated substantially as and for the purpose set forth.

2. The combination of switch *e*, strips *o o'*, types, and the separated and insulated rollers *q q'*, magnets *v v''*, armature, escapement, pointer, and dial-plate, with the battery *b*, connected and operated substantially as and for the purpose above described.

3. The combination of switch, types, cylinder *p*, rollers *q q'*, strips *o o'*, and insulators *j j'*, magnets *v v''*, armature &c., constructed in the manner and for the purpose above specified.

90,647.—JULIUS ELSON, Boston, Mass.—*Attaching Hands to Watches.*—June 1, 1869.

Claim.—The spiral spring *c*, in combination with the center-wheel and pinion C, and cup *b*, on spindle *a*, as described.

90,648.—BERNHARD ESCH, Sandusky, Ohio.—*Boot-Crimping Machine.*—June 1, 1869.

Claim.—1. The application, to a crimping-board, A, of jointed bars B B^1, and an adjusting-screw, D, arranged so as to adjust both of these bars simultaneously, substantially as described.

2. Arranging the screw D and guides C C, in parallel lines, and applying these parts to the crimping-board and stretching-bars, substantially as described.

90,649.—I. B. FARQUHAR, Bloody Run, assignor to himself and J. W. LINGENFELTER, Bedford, Pa.—*Bee-Hive.*—June 1, 1869.

Claim.—1. The slotted honey-board D, and ven-

tilating and feeding chamber F, in combination with each other and with the frames C, and semi-cylindrical hive A, substantially as herein shown and described, and for the purpose set forth.

2. The supports B, and entrance-board b', in combination with the pivoted semi-cylindrical hive A a^1, substantially as herein shown and described, and for the purpose set forth.

90,650.—WILLIAM E. FISCHER, Boston, Mass., assignor to himself and G. H. JOHNSTON, same place.—*Hand-Nailer for Lasting Boots and Shoes.*—June 1, 1869.

Claim.—1. The combination of a stationary cutter, a sliding nail-blank holder, and a sliding nail-driver, when arranged to operate substantially as described.

2. A nail cutter and driver, in which the nail-blank is composed of a series of shank-forming teeth, united at top, each tooth being severed from the blank, (to be driven,) substantially as described.

3. The feed-spring or pawl, operating to present the end of the nail-blank to the action of the cutter, substantially as described.

90,651.—WILLIAM E. FISCHER, Boston, Mass., assignor to AMERICAN LASTING-MACHINE COMPANY, same place.—*Toe-Piece for Lasting-Machine.*—June 1, 1869.

Claim.—In combination with or for use upon a lasting-machine, the tipping-socket or toe piece, having provision for adjustment, substantially as described.

90,652.—CYRUS P. FISHER, Leesville, Ohio.—*Rotary Harrow.*—June 1, 1869.

Claim.—1. The revolving flexible harrow, constructed substantially as described, and operating as and for the purposes set forth.

2. The combination of the revolving flexible harrow with a two-wheel carriage, constructed substantially as described, and operating as and for the purposes set forth.

3. The manner herein described for raising and lowering the harrow, constructed substantially as described, and operating as and for the purposes set forth.

90,653.—JOHN F. FISHER, Greencastle, Pa., assignor to himself and DANIEL BREED, Washington, D. C.—*Guano-Attachment for Seed-Drills.*—June 1, 1869.

Claim.—1. The quarter-pinion F and reciprocating rack-bar E, or their equivalents, placed under the hopper, in combination with the swinging fingers or stirrers inside of the hopper, substantially as set forth.

2. In combination with the stirrers and quarter-pinion, the reciprocating-bar E, the rod D, crank C, pinion B, and gear-wheel A, substantially as set forth.

90,654.—WILLIAM FLETCHER, New York, N.Y.—*Bell.*—June 1, 1869.

Claim.—Forming that part of the inner circumference of a bell against which the clapper strikes with cross-grooves, substantially as and for the purpose set forth.

90,655.—GEORGE FOWLER, Philmont, N. Y,—*Apparatus for Adjusting Eccentrics to Connecting-Rods.*—June 1, 1869.

Claim.—Attaching a connecting-rod to its eccentric by means of an elastic metallic strap, capable of being tightened or loosened at pleasure, substantially in the manner as described.

90,656.—WILLIAM FRANKEL, Springfield, Ohio.—*Velocipede.*—June 1, 1869.

Claim.—1. The arrangement of the guide-rods *r r* with the T-head G on the guide-fork F, the slotted cross-levers *m m*, with the coupling-bar D, connecting-rods *c c*, and levers S S, as shown and described.

2. Operating a three-wheeled velocipede by the oscillating-seat motion and switching-seat attachment, as shown and described.

3. The combination of the oscillating-seat motion with the treadle-movement and switching-attachment, as shown and described.

90,657.—PERRY G. GARDINER, New York, N.Y.—*Air-Spring for Railroad-Cars.*—June 1, 1869.

Claim.—1. The rubber cylinder A, having a closed end, A′, and flange *a*, whereby it is secured to the plate B, having a cock, *d h*, said cylinder A being encircled by a spring, *m*, and covered by a plate, D, connected with the lower plate by rods b', which serve as guides, all substantially as herein shown and described.

2. The combination of the outer cylinder A A′, *a*, inner cylinder E, plates B D *p*, and spring *m*, all constructed and arranged substantially as and for the purpose herein set forth.

3. The combination of the cylinder A A′ *a*, plates B, *w x u*, supporting-springs J, and spring *m*, all substantially as herein described, for the purpose specified.

90,658.—DAVID GARRISON, Philadelphia, Pa., assignor to HALL & GARRISON, same place.—*Device for Applying Gilding Preparations to Oval Frames.*—June 1, 1869.

Claim.—Preparing "insides" for frames by revolving them in an oval or circular holder, that is revolved upon its edge, and without the use of a face-plate, in combination with a scraper, operating substantially as described.

90,659.—THOMAS S. GATES and ALEXANDER H. FRITCHEY, Franklin County, assignors to themselves and THOMAS WARD, Columbus, Ohio.—*Vapor-Burner.*—June 1, 1869.

Claim.—The combination, with the main burner, having the chambers B and G, of the vertical tube E, connected thereto and communicating therewith, substantially as and for the purpose set forth.

90,660.—A. F. GRAVES and T. J. CLARK, Red Wing, Minn.—*Coal-Stove.*—June 1, 1869.

Claim.—1. The combination of the air-pipes B with the cold-air chamber F, provided with the valve G, with the fire-chamber of the stove, of the general construction herein shown and described.

2. The combination of the damper-plate L and damper K with the fire-chamber of the stove A, and with the depressed middle part of the hot-air chamber C, substantially as herein shown and described, and for the purposes set forth.

90,661.—JAMES L. HALL, Abingdon, Mass.—*Bolt-Machine.*—June 1, 1869.

Claim.—The reciprocating lever H and toggles *h h′*, in combination with the holding-jaws A A′, knives B B′, gauge E, and heading-plunger C, all arranged and operating together, in the manner described.

90,662.—THOMAS C. HARGRAVE, Boston, Mass.—*Water-Meter.*—June 1, 1869.

Claim.—1. The oscillating measuring-chambers B C, balanced upon a knife-edge, *e*, or its equivalent, within a casing, A, in combination with a rolling or sliding counterbalance-weight, H, and the pipes *f g*, partitioned box D, and inlet-pipe G, or equivalent device for admitting the liquid alternately to the measuring-chambers, substantially as described.

2. The air-chamber J, in combination with an air-tight casing, A, and the mechanism contained therein, as above recited, and the inlet and outlet pipes G K, operating substantially in the manner and for the purpose set forth.

90,663.—BERTRAND JOSEPH HOFFACKER, Melrose, N. Y.—*Envelope.*—June 1, 1869.

Claim.—The hookwise combination of the four flaps, as set forth.

90,664.—CHARLES HOLMES, Boston, Mass., assignor to CHESTER GUILD, Jr., same place.—*Machine for Scouring and Setting Out Leather.*—June 1, 1869.

Claim.—1. The combination of the screw-nut or block E, and the arm F, pivoted together and connected with the carriage, substantially as described, with the tool-lifter rod, and its screw, as set forth.

2. The combination of the handle *q*, the rod *o*, and the notched slide-bar G, arranged, connected, and

applied to the carriage, and to the series of arms F F, of the lifter-rods, substantially as specified.

3. The combination and arrangement of the spouts or gutters *e*, and the oil-receiver B, with the lower carriage-guides *b b*.

4. The combination of the buffers or dampers *h*, with the tool-carrier lifter-rods *f*, and the rocker-plate D.

5. When the spouts and drip-pan are employed with the lower guides of the carriage, as described, the arrangements of the heads of the screws T T beneath and against the shelf *q'*, such being as and for the purpose set forth.

90,665.—GAYLORD JONES, Grand Rapids, Mich., assignor to himself and JAMES C. STEWART, same place.—*Churn.*—June 1, 1869.

Claim.—1. The apparatus, consisting of the bellows E F, operated by means of lever D and arms A B, valves G H I J, and funnel K, when operating to churn cream in any vessel, independent of and separate from the above apparatus, as and for the purposes described.

2. In combination with the above, the perforated cone M, substantially as and for the purposes set forth.

90,666.—J. HERVA JONES, Rockford, Ill.—*Harvester.*—June 1, 1869.

Claim.—1. The combination, with the grain-receptacle, of a binding-table, on the inner or grain-side, and at or near the front end of said receptacle.

2. The combination, with the grain-receptacle, of a binding-table, on the inner or grain-side, and at or near the rear end of said receptacle.

3. The combination of the binder's foot-board, on the inner side of the grain-receptacle, with binding-tables respectively attached to the front and rear of the grain-receptacle.

4. The combination of the elevating conveyer with the curved bottom *f* of the grain-receptacle, as set forth.

90,667.—JOHN W. KINGMAN, North Bridgewater, Mass.—*Metallic Roofing.*—June 1, 1869.

Claim.—1. As an improvement in sheathing, a surface with metallic plates, the arrangement of the strips of hair-felt, saturated with oil-paint, or other water-proof drying equivalent, with the jointed or lapped plates, their fastening-nails, and the roof or surface to which the same may be applied.

2. The arrangement of the auxiliary plate or strip *c*, the strip of hair-felt, its saturating material or oil-paint, the jointed or over-lapped plates, the fastening-nails, and the roof or surface to which the same may be applied, the whole being substantially as herein-before set forth.

90,668.—MOSES KLEEMAN, Columbus, Ohio.—*Brad-Setter for Glaziers' Use.*—June 1, 1869.

Claim.—The combination of the setter or driver C, the spring D, and the opening or slot H, substantially as and for the purpose specified.

90,669.—JOHN L. KREIDER, Chestnut Level, Pa.—*Appliance to Hames and Means of Hitching Horses to Vehicles.*—June 1, 1869.

Claim.—1. The vibrating bar E and hook D, when connected by the rods F and applied to hames of substantially the described construction, for the purpose set forth.

2. The hook D, constructed substantially as described, when combined with the loop G, upon the end of the shaft or pole, as and for the purpose set forth.

3. The turning-bar U, constructed substantially as described, when used in connection with the hook D, as and for the purpose set forth.

90,670.—SAMUEL LAUCHLI, St. Louis, Mo., assignor to himself and FREDERICK SHICKLE, same place.—*Drilling-Apparatus.*—June 1, 1869.

Claim.—The combination and arrangement of the handles D and D', each having a collar, *d*, about the flanges *a*, with the rollers C and cheek-nuts E, upon the stock A, substantially as and for the purposes set forth.

90,671.—JACOB E. LUTZ, East Cocalico Township, Pa.—*Horse-Power.*—June 1, 1869.

Claim.—The combination and arrangement of the loose cogged hub *f*, with its spur-wheel F, when on the vertical shaft *d*, of the master-wheel E, and on the same horizontal plane, so that both act jointly upon two pairs of pinions, *g*, on their shafts G G, and impart motion to a pinion, H, on the pulley-shaft *h*, substantially in the manner and for the purpose specified.

90,672.—JACOB MAERHOFFER, Boonville, Mo.—*Cider-Press.*—June 1, 1869.

Claim.—The arrangement herein described of the nut F, provided with rollers R, arms G, and hooks I, in combination with the nurse K and eyes J, all constructed as and for the purpose set forth.

90,673.—JOSEPH MAYER, Brooklyn, N. Y., assignor to himself and JULIUS WATERMAN, New York City.—*Hoop-Skirt.*—June 1, 1869.

Claim.—A lady's skirt, formed of a woven or similar fabric, and provided with holes, through which the hoops are threaded, and for the purposes set forth

90,674.—WALTER S. MCMANUS and ROBERT S. MERRYMAN, Brunswick, Mc.—*Churn.*—June 1, 1869.

Claim.—The machine herein described, composed of all the described parts conjointly for operating the churn-dasher *z*, viz, base A, wheel *p*, crank *j*, rod *h*, arm *e*, standard *b*, rod *t*, arm *v*, with its hinged part *a'*, clamps *y y*, and support *w*, as herein set forth.

90,675.—EMILY W. MEYERS, Lincoln, Ill.—*Composition for the Production of Wax Flowers, Fruit, &c.*—June 1, 1869.

Claim.—The within-described compound, for the production of artificial flowers, fruits, &c., substantially as shown and described.

90,676.—JAMES MONTGOMERY, New York, N. Y.—*Coffee-Pot, Boiler, Digester, Oven, and Lamp.*—June 1, 1869.

Claim.—1. The combination, with the outer vessel, of an inner cylinder, arranged to move telescopically and automatically therein, substantially as and for the purpose described.

2. The combination, with the inner vessel, of a rod, G, or its equivalent, to control or extinguish the flame of the lamp, substantially as and for the purpose described.

3. The employment, as an additional heating-surface, of a tube extending upward through the liquid, and serving also as a steadying post or guide for the rising and falling cylinder, and a sheath for the adjusting-rod.

4. The means, substantially as described, for the preliminary adjustment of the height to which the inner vessel shall ascend before diminishing the flame of the lamp.

5. Within the oil-chamber, a boat-like top floating therein, and operating substantially as set forth.

6. The combination of the perforated tubes descending into the combustible matter, with the sliding-sleeves, having metallic lips, and operating automatically, substantially as and for the purpose set forth.

7. In combination with the means, substantially as described, of giving to the current of atmospheric air a course downward, then underneath the lamp, and then upward along its inner sides, the covered boat 4 serving to confine the current, and direct its exit only through the openings 6, surrounding the wick-tubes.

8. A lamp, constructed and operating substantially as set forth.

90,677.—CHARLES W. MOORE, San Francisco, Cal.—*Reducing Sulphur-Ore.*—June 1, 1869.

Claim.—The use of black oxide of manganese, burnt lime, and charcoal, in combination or together, as a desulphurizer, substantially in the proportion and manner and for the purposes specified.

90,678.—GEORGE RODNEY MOORE, Philadelphia, Pa.—*Gas and Water Meter.*—June 1, 1869.

Claim.—1. The rocking-valves *e e*, in combination with the water-ways *a b c d*, operated by the partition D, substantially in the manner and for the purpose herein set forth.

2. The pawls *k* and *l*, arranged to hold the valves, and to be operated by the partition D, substantially in the manner and for the purpose herein set forth.

3. The arrangement of the rotating piston D, with grooved edges, in combination with springs *g* and *h* and rods *j j*, substantially in the manner and for the purpose herein set forth.

4. The flanges 1 1 and underlapping edges 2 2, with a space between them, so as to allow a direction of current outward from D, or contrary to its direction when in motion, and thus constituting a self-acting fluid-packing, substantially in the manner and for the purpose herein set forth.

90,679.—CHARLES MURDOCK, Hartford, Conn.—*Barrel-Stave.*—June 1, 1869.

Claim.—The stave above described, when sawed so as that the transverse curvature at the center or bilge is on a longer radius than at the two ends, substantially as described.

90,680.—JOHN H. NALE, Decatur, Ill., assignor to himself and JOHN O. SLOAN, same place.—*Wagon-Seat.*—June 1, 1869.

Claim.—1. The combination and arrangement of the spring-slats B B and C C, and the supports D D, &c., with the seat A, substantially as and for the purpose shown and described.

2. The employment of the adjustable blocks D D, &c., in combination with the seat A and spring-slats C C, &c., for the purpose of increasing or lessening the tension of said springs, substantially as herein described.

90,681.—JOHN S. PALMER, Providence, R. I.—*Machine for Making Button-Hooks.*—June 1, 1869.

Claim.—1. In combination with the intermittently revolving table of a machine for forming button-hooks and like articles, the employment of a supplemental disk-plate, C, carrying a series of punches, A, arranged to operate substantially as described.

2. The combination of the punch-bearing disk-plate C and the concentric guide-plate H, or its equivalent, substantially as described, for the purposes specified.

3. The combination and arrangement of the disk-plate C, provided with a series of punches, as described, the intermittently revolving table F, the plunger D, and the guide-plate H, substantially as herein set forth.

90,682.—OLIVER E. PILLARD, New Britain, Conn., assignor to FREDERICK H. NORTH, same place.—*Combination-Lock.*—June 1, 1869.

Claim.—1. The arrangement of the slot *e* in the tumbler A, in combination with the tumbler B, pin *d*, slot *d'*, and latch *a*, so that when the latch *a* falls into the slot *e*, and allows the bolt D to withdraw, the slot *e* shall be on a line with the centers of the tumblers A and B, substantially as and for the purposes described.

2. The combination of the sleeve F, shaft E, pins *o o*, and grooves *m* and *n*, substantially as described, and for the purposes set forth.

90,683.—OLIVER E. PILLARD, New Britain, Conn., assignor to FREDERICK H. NORTH, same place.—*Permutation-Lock.*—June 1, 1869.

Claim.—Wholly or partially removing an occasional tooth, as at *e e'*, of the tumbler A, for the purpose of making the backlash in the teeth of tumblers A and B vary at irregular distances, substantially as described and for the purpose set forth.

90,684.—JOSEPH F. POND, Cleveland, Ohio.—*Chimney-Cowl.*—June 1, 1869.

Claim.—1. The curved overlapping revolving hood or shield D, so inclined and supported by its spindle C, upon the branched step B, that its lower edge will project below and beyond the top of the pipe A, without touching any part thereof, as shown, and for the purpose set forth.

2. The branched step B, when connected with the chimney or pipe A, in the line of its axis, as shown, and with the hood D, by means of the spindle C, socket *v*, and pin *f*, or their equivalents, substantially as shown, and for the purposes herein set forth and described.

90,685.—WILLIAM P. POTTER, Pittsburgh, Pa., assignor to "PITTSBURGH FORGE AND IRON COMPANY."—*Nut-Lock.*—June 1, 1869.

Claim.—The slot or slots in the plate or washer, and the slot or slots in the under side of the nut, and a key or pin driven into these slots or grooves, when matched or in line, which effectually prevents the nut from turning, and without the necessity of bending up the end or ends of the key, substantially as described.

90,686.—LEWIS PRESTON, Elizabeth Port, N. J.—*Spring-Butt.*—June 1, 1869.

Claim.—The rods D D, the shoulder C, and notches *n*, when used in connection with the butt B and spring E, substantially as and for the purpose specified.

90,687.—HENRY RATHMANN and GEORGE H. JOHNSON, Buffalo, N. Y.—*Velocipide.*—June 1, 1869.

Claim.—In a two-wheel velocipede, the forwardly projecting tiller N, cast or formed with the bifurcated bar L, arranged beneath the seat, and provided with the foot-rest and steering-plate *n'*, in combination with the frame B, carrying-frame C, and pulleys H I, and having said bar L jointed to its rear, through the medium of spindle *m*, as described.

90,688.—H. O. REED and JOSEPH W. FOWLE, Boston, Mass.—*Dry-Earth Water-Closet.*—June 1, 1869.

Claim.—The apparatus described in Figs. 1 and 2, including the application and combination of the valves and valve-rod, inclosed in the conductor *e*, in the manner and for the purposes shown and set forth.

90,689.—ISAAC S. ROLAND, Reading, Pa.—*Spoke-Lathe.*—June 1, 1869.

Claim.—1. The combination of the carriage F' with the chuck-carrier F, the rack-bar O, and the shaft P, substantially in the manner herein set forth.

2. The peculiar arrangement of parts for communicating the required longitudinal movements to the carriage F', and the respective operating-parts that are combined therewith, viz, the bevel-wheel *v*, secured to the loose pulley Q on the shaft P, and gearing with the bevel-wheel *u* on the transverse shaft *a*, the pinion *d'* on the shaft *a*, gearing with the toothed wheel I on the transverse shaft *t'*, the sliding pinion *u'* on the shaft *t'*, whose teeth can, by the action of the hand-lever *q*, be made to gear with the teeth of the rack-bar O, all substantially in the manner herein described.

3. The herein-described combination of parts by which I am enabled to impart such a compound series of movements to a spoke-blank, that a series of rotating cutters, *b b*, is enabled to reduce said blank to the desired spoke-shape, viz, commencing with a circular shape at the outer end of the spoke, and changing from that to a gradually widening oval shape toward the butt-end of the same, all substantially as herein set forth.

4. The herein-described combination of parts by which I am enabled to impart the requisite movements to the spoke to enable the rotating cutters *b b* to give the desired shape to the butt-portion thereof, (shown by Fig. 5½,) all substantially in the manner herein set forth.

5. The combination of the hand-lever J with the weighted lever *p*, the shaft *z*, and the auxiliary spoke-blank holder *a' f'*, Fig. 3, substantially in the manner and for the purpose herein set forth.

90,690.—BENJAMIN D. SANDERS, Wellsburgh, W. Va.—*Manufacture of Bungs.*—June 1, 1869.

Claim.—1. The mode of making bungs, plugs, taps, and jar-covers, by the means substantially as herein shown and described.

2. Two longitudinally converging grooved surfaces, made with the bottom of the grooves beveled or inclined in opposite directions, so as to operate in

reducing, by compression, a cylindrical blank to a taper form, substantially in the manner described.

3. A grooved segmental roller-plate, A, adjustable in a frame, B, substantially as described, so as to increase or lessen the eccentricity of the grooved wheel A′ with reference thereto, for the purposes set forth.

4. A roller taper-bung, made substantially as described, as a new article of manufacture.

90,691.—F. Le Roy Senour, Eaton, Ohio.—*Combined Hoe and Rake.*—June 1, 1869.

Claim.—1. The described construction of the rake, in such manner that it will fold, as set forth.

2. The combination of a rake thus constructed with a hoe, in the manner set forth.

90,692.—Nicholas Seubert, Syracuse, N. Y.—*Alarm-Lock.*—June 1, 1869.

Claim.—1. The triangular cam H, in combination with the cams *d d*, or their equivalent, and the arm G, substantially as and for the purpose shown.

2. The pivoted angular arm G, operated upon by both knob and bolt, through the cams *b* and *g*, or their equivalents, substantially as and for the purpose herein described.

3. The within-described alarm, consisting of the arm G, cams *b*, *d d*, *g*, and H, hammer F, and bell E, when applied to a lock, substantially as and for the purpose set forth.

90,693.—Thomas Shaw, Philadelphia, Pa., assignor to himself and Philip S. Justice.—*Riveting-Machine.*—June 1, 1869.

Claim.—1. Arranging said combination of devices in the manner described, in frame *b a*, and combining therewith the anvil post or block *u*, and the screw and wedge *s* and *r*, for preventing lateral play of the hammer, substantially as described.

2. In combination with the combinations first mentioned in the foregoing clause, the disk *g*, or an equivalent pulley, the friction-belt *x*, and mechanism which shall simultaneously tighten the driving-belt and slacken the friction-belt, or slacken the driving-belt and tighten the friction-belt, substantially as and for the purpose set forth.

90,694.—Joel Shedd, Waltham, Mass.—*Wash-Boiler.*—June 1, 1869.

Claim.—The combination and arrangement of the double cover E E, D D, with the drop-channels C C and the tubes B B, substantially as described, and for the purpose set forth.

90,695.—H. Julius Smith, Boston, Mass., assignor to himself and Richard Smith.—*Paper and Print Roller.*—June 1, 1869.

Claim.—As a new article of manufacture, and an improvement in the arts of paper-making, cloth-printing, and other analogous arts, the rollers made, as hereinbefore specified, of nickle, or of metal coated with nickel by electro-deposition or otherwise.

90,696.—William Smith, Philadelphia, Pa.—*Steam-Engine Governor.*—June 1, 1869.

Claim.—The combination of the weights G G′, having inclines *g* and the springs H H, arranged substantially in the manner and for the purpose set forth.

90,697.—Alvin Soule, Yarmouth, Me.—*Mowing-Machine.*—June 1, 1869.

Claim.—1. The combination of wheel *i*, arms *l o m n*, with crank-shaft *q*, and arms connecting it with the cutters, as herein set forth.

2. The arrangement of wheels *b*, shaft *a*, gears *d e*, wheel *i*, arms *l m n o*, and crank-shaft *q*, as herein described.

3. The arrangement of brace *c′*, and arm jointed at *g*, to prevent the shoe from striking the wheel *b′* when the cutters are raised, as herein illustrated and described.

90,698.—M. M. Sprinkle, Rochelle, Va., assignor to himself and Robert C. Garnett, same place.—*Corn-Planter and Fertilizer.*—June 1, 1869.

Claim.—1. The slide M, constructed and operating, in connection with the part J, as and for the purposes specified.

2. In combination with slide M and bottom J, the levers L O, catch *o*, and cams *k k′*, constructed and operating as described.

3. The adjusting-plates *r r*, and screws *s s*, in combination with the sliding-plate M, and bottom J, substantially as and for the purpose specified.

90,699.—James J. Steward, Big Prairie, Ohio.—*Locking-Burr.*—June 1, 1869.

Claim.—1. The base *a*, provided with projection *c* and spring *d*, in combination with the grooved screw *b*, substantially in the manner and for the purpose described.

2. The nut *e*, formed on its lower surface with steps *g g g*, in combination with base *a*, provided with projection *c* and spring *d*, and grooved screw *b*, arranged and operating substantially as described.

90,700.—Luke W. Taylor, Weathersfield, Vt.—*Automaton-Hoop.*—June 1, 1869; antedated May 28, 1869.

Claim.—1. The arrangement as well as the combination of the annulus A, the frame B, the driving-wheel C, and its crank or crank-wheel D.

2. The arrangement of the automaton E, and its supporting-frame B, with the annulus A, and the driving-wheel C.

3. The combination for effecting the movements of the body and legs of the automaton, such combination consisting of the posts or standards *e e*, the shaft F, with its four cranks, the crank-wheel D, or its equivalent, and the branched connecting-rod, the whole being applied to the body and legs of the automaton, as set forth.

4. The combination of the auxiliary arms *l* with the primary arms *c*, and the body and legs of the automaton, provided with mechanism as described, for operating them, in manner as set forth.

90,701.—Daniel E. Teal, Norwich, N. Y.—*Spring Rocking-Chair.* — June 1, 1869; antedated May 19, 1869.

Claim.—1. The box or mortise C, when used in connection with the shaft D, as and for the purpose specified.

2. The combination of spider B, box or mortise C, shaft D, and springs F F, as and for the purpose herein described.

90,702.—Stephen D. Tucker, New York, N. Y.—*Lithographic Inking-Roller.*—June 1, 1869.

Claim.—A roller, for inking lithographic stones, formed of a metal core, A, surrounded by a coating of rubber, B, combined with an outer covering of leather, C, or its equivalent, substantially as described and specified.

90,703.—J. J. Tucker, Eugene, Ill.—*Hedge-Planter.*—June 1, 1869.

Claim.—1. Plow H, with plow-standard C and adjustable apparatus of levers F and K and spring *b*, as above described, substantially as and for the purpose aforesaid.

2. Hopper B, in connection with plow H and adjustable plow-standard C, as before set forth, substantially as and for the above-named purpose.

3. Earth-rollers D D, in combination with plow H, adjustable plow-standard C, and hopper B, all as described, substantially as and for the purpose before mentioned.

4. Covering-shovels E E, adjustable laterally in mortises *f f*, by screws *g g*, in combination with earth-rollers D D, plow H, adjustable plow-standard C, and hopper B, substantially as and for the purpose before named.

5. The hedge-planter, herein described, consisting of wagon-body A A, mounted upon wheels, with plow H, adjustable plow-standard C, hopper B, earth-rollers D D, and covering-shovels E E, operated and constructed as aforesaid, substantially as and for the purpose described.

90,704.—S. D. Tuttle, Eaton, Ohio.—*Combined Punch and Screw-Driver.*—June 1, 1869.

Claim.—The bar A, provided with rectangular projections *b b* and screw-driver C, substantially in the manner and for the purpose described.

60,705.—C. VON BONHORST, Lancaster, Ohio.—*Dental Mouth-Meter.*—June 1, 1869; antedated May 15, 1869.

Claim.—1. An adjustable or spring mouth-meter, adapted to be used in the process of inserting artificial teeth, substantially as described.

2. The mouth-meter, combining the spring and index, made in one piece, substantially as described.

90,706.—C. VON BONHORST, Lancaster, Ohio.—*Dental Articulating-Cup.*—June 1, 1869; antedated May 15, 1869.

Claim.—1. A dental articulating-cup, constructed substantially as described, for obtaining the "bite" of the mouth.

2. The articulating-cup, provided with a graduated scale, for indicating the length of the upper lip, and of the teeth to be inserted, substantially as described.

90,707.—ALMERN B. WALTERS, Philadelphia Pa.—*Coffee-Pot.*—June 1, 1869.

Claim.—The application of the tube T, constructed as set forth, to the lid L of coffee-pots, substantially as and for the purpose specified.

90,708.—D. J. WALTZ, H. A. SOLIDAY, and WILLIAM HAMSHER, Doylestown, Ohio.—*Railway-Gate.*—June 1, 1869.

Claim.—The combination of the connecting-rod C and hinged links D, and weight G, when used to operate gate A, by the means and in the manner substantially as described.

90,709.—GEORGE E. WARING, Jr., Newport, R. I., assignor to the EARTH-CLOSET COMPANY, Hartford, Conn.—*Deodorizing Water-Closets.*—June 1, 1869.

Claim.—1. The movable platforms *i* and *j*, substantially as herein described.

2. The combination of the hopper *g* with the movable platforms *i* and *j*, for the purposes of an earth-closet, substantially as specified.

3. The movable platform *i*, with its projection *i'*, for carrying forward the proper quantity of earth, in combination with the hopper *g*, substantially in the manner herein described.

4. The platform *j*, at a given depth below the seat, so that the earth may always be transferred to the same place to cover the excrement, substantially as specified.

90,710.—GEORGE H. WHITE, Huntington, N. Y.—*Ferrule for Shoe-Strings.*—June 1, 1869; antedated May 20, 1869.

Claim.—A metal binding for shoe-strings, and other laces constructed of a blank, which is folded in the manner shown, substantially as and for the purpose specified.

90,711.—JOSEPH W. WHITE, Weymouth, Mass.—*Machine for Manufacturing Webbing for Ladies' Fans.*—June 1, 1869.

Claim.—1. The combination of the slotted roller D with a cement-supplying roller, C, in a machine for producing fan-webbing, substantially as described.

2. The combination of calendering-rollers with a roller, D, which is slotted or grooved, substantially as described.

3. In a machine adapted for producing fan-webbing, the printing of one of the sheets with a cementing-substance on its way to heated calendering-rollers, substantially as described.

4. A roller, D, which is slotted or grooved, substantially as and for the purpose described.

90,712.—DANIEL D. WHITNEY, Leominster, Mass.—*Stove-Shelf.*—June 1, 1869.

Claim.—1. The combination, with a stove-shelf, C, of the spring-catch D, for holding the same at the desired height, by contact with a projection or shoulder upon the supporting-standard, substantially as described.

2. The combination of the shelf C, provided with a spring-catch, D, with the vertical standard A, having horizontal grooves or recesses B, substantially as and for the purpose set forth.

90,713.—JACOB P. WILE, Nashville, Mich.—*Harrow.*—June 1, 1869.

Claim.—1. The arrangement of the extension-pole C and attached seat S, with the carriage-axle and wheels A B, and hinged harrow-sections D D, constructed, connected, and operated substantially as and for the purpose specified.

2. In combination with a wheel-carriage and hinged sectional harrow, the pulley E, crank *n*, and chain G, when said pulley and crank are elevated in front of the driver's seat, and the chain hooked to the harrow-sections, substantially as and for the uses set forth.

90,714.—ELBRIDGE G. WOODSIDE, San Francisco, Cal.—*Carriage-Wheel.*—June 1, 1869.

Claim.—The elastic packing-rings B, with their projections *e* and recesses *g*, and with or without shoulders *b b*, *f*, applied to the ends of the box C, in combination with the hub A, the ends of the interior of which are of a form corresponding to that of the rings B, substantially as and for the purpose described.

90,715.—HENRY ADOLPH, Clinton, Kansas.—*Medical Compound.*—June 1, 1869.

Claim.—The compound formed of the ingredients (in about the proportions) herein named, substantially as and for the purposes set forth.

90,716.—JOHN AGATE, Pittsford, N. Y.—*Beer-Cooler.*—June 1, 1869.

Claim.—1. The coupling C, constructed and operating substantially as and for the purposes set forth.

2. The application of the faucet F, so constructed and arranged, in connection with the pipes *i*, *j*, and *l*, so as to operate in the manner and for the purposes set forth.

3. The arrangement of the beer-channels B within the vat A, substantially as shown, so as to form the circuitous water-spaces by the channels themselves, for the purpose set forth.

4. The overflow-pipe *p*, arranged and operating as and for the purposes shown and described.

5. The arrangement of the induction beer-pipes *i* and *j*, and exit-pipe P, in combination with the inlet water-pipe *y'*, and discharge pipes *k*, or their equivalents, for the purpose of producing a double counter-current of the two liquids.

90,717.—R. N. ALLEN, Pittsford, Vt.—*Water-Meter.*—June 1, 1869.

Claim.—The sleeve F, provided with ports or openings, and the tubular shaft, having also ports or openings, in combination with the vibrating box and diaphragm M, substantially as and for the purpose herein specified.

90,718.—JOHN S. APPEL, Kulpsville, Pa.—*Pumping-Lever.*—June 1, 1869.

Claim.—The arrangement of the adjustable clips *n*, the removable levers *m*, the notched brake-beam L and the looped rods C, as herein described, for the purpose specified.

90,719.—MARGARET ARMSTRONG, West Alexander, Pa.—*Cooking-Stove.*—June 1, 1869.

Claim.—1. The arrangement of the hearth H, fire-chamber F, large oven C, smaller rear extension O', pipe P, and ash-box R, extending from the front edge of the hearth to the rear edge of the small oven, as and for the purposes specified.

2. In connection with a stove, constructed substantially as herein described, the detachable ornamental pieces A B C, each having the flat part *a b c*, and the vertical flange or flanges a^1 b^1 c^1, a^2 b^2 c^2, substantially as and for the purpose specified.

90,720.—A. C. BACON, Bergen, N. J.—*Steam-Heater.*—June 1, 1869.

Claim.—1. The arrangement of the heater A and water-reservoir B, with reference to the fire-place of the heater, whereby to produce steam for heating purposes, as set forth.

2. The arrangement of the steam-heat radiator E and pipe *a* with the water-reservoir B, arranged

within the heater, substantially as herein shown and described.

3. The arrangement of the condensing-pipe *c*, steam-heat radiator E, and water-reservoir B, as set forth.

90,721.—ALFRED BAILEY, Oswego, N. Y.—*Rotary Steam-Engine.*—June 1, 1869.

Claim.—1. The arrangement of the devices whereby the steam is admitted to and exhausted from the cylinder, substantially as herein described and shown.

2. The construction of the abutments G, arranged substantially as herein described.

90,722.—NATHAN BREED, Jeffersonville, Ind.—*Cotton-Seed Planter.*—June 1, 1869.

Claim.—1. The adjustable seed box or boxes G, constructed with an adjustable hinged bottom, L, substantially as herein shown and described, and for the purpose set forth.

2. The adjustable sleeve or sleeves K, provided with arms or teeth N, in combination with the seed box or boxes G, and axle or shaft, from which they receive motion, substantially as herein shown and described, and for the purpose set forth.

3. The scrapers O, in combination with the seed-box G and arms N, substantially as herein shown and described, and for the purpose set forth.

90,723.—GEORGE C. BUELL, New Haven, Conn.—*Velocipede.*—June 1, 1869.

Claim.—The application to velocipedes of either a flat, spiral, or other kind of spring, of any shape or form whatsoever, to the supports, rising from the axle of either or both wheels, for the purpose set forth and described.

90,724.—JOSIAH BURGESS, Zanesville, Ohio.—*Portable Soldering-Furnace.*—June 1, 1869.

Claim.—The soldering-furnace, constructed as described, of the case C, having its slotted bottom provided with lips D, the hood E, and the perforated top H, arranged with the burner A and tube B, as herein set forth, for the purpose specified.

90,725.—D. S. BUTLER, Otterville, Mo.—*Tug-Buckle.*—June 1, 1869.

Claim.—An improved tug-buckle, formed by the combination of the body A a^1 a^2 and tongue-piece C c^1 c^2 with each other, said parts being constructed, arranged, and operating substantially as herein shown and described, and for the purpose set forth.

90,726.—LUKE CHAPMAN, Collinsville, Conn.—*Machine for Forming Bits for Axes.*—June 1, 1869.

Claim.—1. The bit-forming dies E C, made of cast iron, and constructed and arranged substantially as specified.

2. The dies C, made in two parts, *a*, and secured to the recesses in the support B, having the passages D, by keys, as specified.

3. The combination of the feeding-tables H, arms I, shaft K, arms L, N, R, hub O, spring P, and stud Q, on the driving-wheel, all substantially as specified

90,727.—ROBERT A. CHESEBROUGH, New York, N. Y.—*Mode of Preventing Canals, &c., from being Closed by Ice.*—June 1, 1869.

Claim.—1. One or more heating-pipes, *a*, arranged in sections of convenient length, and connected with boilers or furnaces located at suitable intervals along the line of a canal or water-course, substantially as and for the purpose described.

2. Inclosing locks or other portions of a canal or water-course with a shelter, whose walls are transparent, or in part transparent, and its ends movable vertically, substantially as and for the purpose described.

90,728.—ISAAC CHURCH, Jr., Norwalk, Conn.—*Steam-Engine Lubricator.*—June 1, 1869.

Claim.—The arrangement of the two vertical stem-valves I K, substantially as herein set forth.

90,729.—A. B. COOK, Manchester, Tenn., assignor to WILLIAM S. HUGGINS, same place.—*Anti-Friction Metal.*—June 1, 1869.

Claim.—The metallic composition herein described, to be used as an anti-friction bearing for shafts, &c., as specified.

90,730.—JOHN W. CURRIER, Springfield, Mass. *Car-Coupling.*—June 1, 1869.

Claim.—The hunters A and B, provided with laps H and H, and sockets G, when combined with the link F, constructed with flange *a*, in the manner and for the purpose shown and described.

90,731.—JOHN W. CURRIER, Springfield, Mass.—*Device for Holding Interfering-Bands in Place.*—June 1, 1869.

Claim.—In combination with the rubber band A, the wire or metal hook B, constructed as herein described, and for the purpose set forth.

90,732.—JAMES CURTIS, Chicago, Ill.—*Projectile.*—June 1, 1869.

Claim.—The slots or cuts B and C, (more or less in number,) in a musket-ball or elongated conical shot, arranged and formed substantially as and for the purposes described.

90,733.—H. T. CUSHMAN, North Bennington, Vt.—*Composition Paper-Polisher.*—June 1, 1869.

Claim.—1. The herein-described compound of matter, composed of the ingredients, mixed as specified, and adapted for polishing paper, as set forth.

2. A paper-polishing implement, composed of a handle, A, of ivory or other substance, and a mass, B, of the compound herein specified.

90,734.—SAMUEL C. DARDEN, Connersville, Miss.—*Cotton-Cultivator.* June 1, 1869.

Claim.—A convertible cotton-cultivator, constructed and operating substantially as herein shown and described; that is to say, with the driving or traction-wheels B B′, gear-wheel and pinion D and F, shafts C and E, revolving teeth or harrow G, and choppers H′, and triangular harrow I, arranged substantially as and for the purposes set forth.

90,735.—MILLINGTON EASLEY, Rush, Ill.—*Bee-Hive.*—June 1, 1869.

Claim.—The application to a bee-hive of the cloth A, substantially as and for the purpose specified.

90,736.—ELIAS EVANS, Montgomery, Ala.—*Clevis.*—June 1, 1869.

Claim.—The clevis herein described, consisting of the shank S and curved body A, having the holes *a* *a*, D, together with the bolts C C′ and nuts *e*, when adapted to be employed in connection with a plow-beam having the gain *b*, substantially as and for the purposes set forth.

90,737.—CHARLES H. FINSON, Bangor, Me., assignor to himself and JOSEPH SEMPLE, same place.—*Meat-Chopper.*—June 1, 1869.

Claim.—1. A meat-chopper, so constructed and arranged that the dish and the blades may both be rotated upon a common center, substantially in manner as and for the purposes specified.

2. The combination and arrangement of platform A, with spindle *a* inserted therein, the tube *i* sliding upon rod *a*, and having secured to A the handle J and the cutting-blades and the chopping-dish, all arranged to operate substantially in manner as and for the purposes specified.

90,738.—JAMES FOSTER, Jr., Camden, N. J., assignor to himself and NOAH HAND, same place.—*Boat-Detaching Apparatus.*—June 1, 1869.

Claim.—In a boat-detaching hook, the combination and arrangement of the levers C, D, and E, as herein described and for the purpose set forth.

90,739.—EDWARD P. FURLONG, Portland, Me.—*Machine for Forming Shirt-Bosoms from Paper and Cloth Combined.*—June 1, 1869.

Claim.—1. The shafts *a* *b*, with their peculiarly constructed fixed and rotary trucks, as herein described.

2. The combination of the said trucks with the paste roll and shaft *d*, as described.

3. The combination of the trucks on the said shafts *a b* with the guide-racks, guide-rolls, paste-roll, and shaft *d*, as described.

4. The smoothing-roll *m*, arranged as described, and for the purpose set forth.

5. The adjustable table A, with its guides *k*, combined and arranged as herein described.

90,740.—CARL GÜNTHER, Berlin, Prussia, assignor to FREDERICK VOLKMAN, Hoboken, N. J.—*Mode of Coating Threads with Metals.*—June 1, 1869.

Claim.—As new articles of manufacture, flexible threads, covered with metal foil, in imitation of gold and silver threads, as herein described, for the purpose specified.

90,741.—JOHN W. GOODALE, Amherst, Mass.—*Fire-Arm.*—June 1, 1869.

Claim.—The arrangement, as shown and described, of the firing-pin, nipple, and frame, pivoted to the side of the barrel of a fire-arm, so that they can be swung off from the track of the hammer when it is desirable to fire the rear charge.

90,742.—REUBEN C. GROVER and CHARLES W. RANDALL, Newton, Mass.—*Attaching Picks to their Handles.*—June 1, 1869.

Claim.—An eyeless pick, with recesses *d d*, secured to a slotted handle, C, by means of a strap, B. wedge E passing through the handle C and socket D, with its projections *e e*, the whole constructed and operated substantially as set forth.

90,743.—THOMAS S. HALL, Stamford, assignor to HALL'S ELECTRIC RAILWAY-SWITCH AND DRAWBRIDGE SIGNAL COMPANY, New Haven, Conn.—*Connection for Drawbridge-Signals.*—June 1, 1869.

Claim.—1. Applying the key or wedge of a drawbridge to operate automatically an electric or mechanical signal, as set forth.

2. The apparatus for closing circuits, to operate signals in the vicinity of drawbridges, consisting of the key C and of the box D, having the lugs *f*.*g*, slide-pin B, the shoulder *h*, and spring *i*, or their respective equivalents, all arranged and operating substantially as herein shown and described.

90,744.—THOMAS S. HALL, Stamford, assignor to HALL'S ELECTRIC RAILWAY-SWITCH AND DRAWBRIDGE SIGNAL COMPANY, New Haven, Conn.—*Switch-Alarm Connection.*—June 1, 1869.

Claim.—1. Conducting the lever I from the switch into a movable box, in which the device for establishing an electric current is contained, substantially as herein shown and described.

2. Attaching the cylinders C, that contain the wire-connecting devices and their appendages, to a movable sliding-plate, B, which is arranged in a box, C, substantially as herein shown and described.

3. The combination of the cylinder C with the insulated block D, metal plates E E′, oscillating plug G, lug *a*, levers H and I, all arranged and operating substantially as herein shown and described.

90,745.—CHARLES A. HARRIS, Owego, N. Y.—*Railway-Chair.*—June 1, 1869.

Claim.—Supporting the ends of rails, to prevent their being crushed, by means of the base-casting A, false side B, and drop-block C, in combination with the projections *e e*, for preventing the rails from being driven out, substantially in the manner herein set forth and described.

90,746.—CHARLES J. HARTMANN, London, England.—*Looking-Glass Attachment.*—June 1, 1869.

Claim.—1. The bracket C′, provided with the stud D, limited in movement upon its lateral axis by means of the stud E and projection F, and adapted to support the extension-tubes C, by the jointed connection, which is capable of oscillation or adjustment horizontally and vertically, as herein shown and described, for the purpose specified.

2. The reflector A, supported upon the extension-tubes C, by means of the oscillating adjustable stud L. the stud M, and oscillating stud N, all constructed and arranged as described, for the purpose specified.

90,747.—C. HARTZELL, St. Joseph, Mo.—*Plow.*—June 1, 1869.

Claim.—1. The triangular, elongated, horizontal cutting-blade or share *a*, attached to the landside of a plow, for the purpose described.

2. The clevis, with a horizontal jaw, *c*, vertically operating shanks *f*, horizontal draught-pin or bolt *i*, and the set or regulating-screw *l*, in combination with one another, substantially as and for the purpose specified.

90,748.—T. W. HAWKINS, New Haven, Conn.—*Fan.*—June 1, 1869.

Claim.—In a fan in which the two outer parts, on the opening of the fan, form the handle, constructing the said outer parts from sheet-metal, struck into concavo-convex form, substantially as set forth.

90,749.—E. H. HAWLEY, Kalamazoo, Mich.—*Air Gun and Pistol.*—June 1, 1869.

Claim.—1. The manner of covering the disk *f* of the puppet-valve with a skin of elastic rubber, for the purposes above described and set forth.

2. So arranging the puppet-valve *f* of an air-gun, in relation to the stock and barrel thereof, that the same may be operated by means of a spring, cock, or hammer, outside of and unenclosed by the stock, substantially as and for the purpose specified.

90,750.—E. C. HICKMAN, Washington, D. C.—*Flour-Sifter.*—June 1, 1869.

Claim.—The device above described, consisting essentially of the box B, the drawer D, the reciprocating-box C, having a sieve-bottom, E, the guides *w w*, the detachable pitman P, the crank *g*, the shaft G, the wheels *m* M, and crank K, the hinged cover B′, the hopper H, and the slide I, all constructed, arranged, and combined to operate in connection with each other, as and for the purposes specified.

90,751.—CORNELIUS R. HIGHT, Geneva, Ill.—*Portable Fence.*—June 1, 1869.

Claim.—The combination and arrangement of the whole as specified and set forth in the accompanying specifications and drawings.

90,752.—S. R. HOCKMAN, Urbana, Ohio.—*Hulling-Machine.*—June 1, 1869.

Claim.—The combination of the sharpened radial pins D with spirally fluted shaft C, and longitudinally grooved cylinder A, said pins being arranged in spiral lines, as shown, for the purpose specified.

90,753.—JOHN HONECKER, Columbus, Ohio.—*Boot and Shoe Top.*—June 1, 1869.

Claim.—As a new article of manufacture, top-pieces for boots and shoes, perforated by suitable dies and machinery, to represent any desired figure, and ornamented in the manner shown, by placing under said perforations pieces of leather of the same or different colors, and lining and stitching the whole together, as described, and for the purpose set forth.

90,754.—M. L. IVERS, Oneco, and GEORGE L. COOLEY, Plainfield, Conn.—*Compound for Cleaning Stone, &c.*—June 1, 1869.

Claim.—The composition herein set forth for cleaning stone.

90,755.—W. A. IVES, New Haven, Conn.—*Auger-Bit.*—June 1, 1869.

Claim.—In double-twist auger-bits, forming a floor-lip, *a*, upon one twist, and the other twist terminating in the spur-cutter *d*, and so as to form a recess between the said spur and the center screw, substantially as specified.

90,756.—WILLIAM J. KEEP, Troy, N. Y.—*Cooking-Stove.*—June 1, 1869.

Claim.—1. The separating of the direct sheet-flue from the return sheet-flue, by means of the arched dividing flue-plate E, or any equivalent therefor, constructed, arranged, and combined with said sheet-flues, in the manner and for the purpose substantially as herein shown and described.

2. The dividing of the space between the bottom oven and stove-plates, by means of the inclined and arched dividing flue-plate E, or any equivalent there-

for, in the manner and for the purpose substantially as herein shown and described.

3. The sheet-flue division-plate E, having a recess, K, at each front corner thereof, and a projection, H, between such recesses, and with an arched or raised center, extending from the rear end to within a short distance of the front end thereof, substantially as and for the purpose herein set forth.

4. The employment of the raised or arched sheet-flue division-plate E, or any equivalent therefor, in combination with the oven and oven-bottom flues, in the manner and for the purpose substantially as herein described and set forth.

5. The triangular opening G, or its equivalent, in and through the sheet-flue division-plate E, at or near to the rear end of the return sheet-flue, substantially as shown, and for the purpose specified.

90,757.—A. J. LANGWORTHY, Milwaukee, Wis.—*Shaft-Coupling.*—June 1, 1869.

Claim.—The coupling A B C, constructed substantially as described.

90,758.—SURVETUS LEACH, Wilbraham, Mass.—*Churn.*—June 1, 1869.

Claim.—The construction and arrangement of the frame A, cross-pieces K and K, hinged pieces L and L′, and forming bearings for the shaft I, when used in combination with the arrangement of shafts G and I and dashers H and J, herein described and shown.

90,759.—H. C. LEWIS, Essex, Conn.—*Auger-Bit.*—June 1, 1869.

Claim.—A single-twist auger-bit, having the spur forged solidly thereon, and in the relative position to the cutter shown and described, and in the manner and for the purpose specified.

90,760.—FRANCIS LUDLOW, Lake View, Ill.—*Horticultural Building.*—June 1, 1869.

Claim.—1. The double-walled horticultural building, having such construction of ventilators that the interior may be ventilated without permitting the escape of heat from between the walls, substantially as herein shown and described.

2. In combination with a double-walled horticultural building, a door, H H, the walls of which inclose a heating-chamber, and a slide, G, for admitting air into said chamber when the door is shut, and preventing air from escaping when the door is open, as herein specified and shown.

90,761.—EDWARD THOMAS MAINWARING, Tipton, England.—*Cotton-Bale Tie.*—June 1, 1869,

Claim.—The bale-tie, consisting of the rectangular slotted plate C, having one or more extended sides, E, and applied to the deflected portion of the hoop A, in the manner described, and secured thereto by the clip or clips D, as herein set forth, for the purpose specified.

90,762.—LOUIS JOSEPH FRÉDÉRIC MARGUERITTE, Paris, France.—*Extracting, Refining, and Crystalizing Sugar.*—June 1, 1869.

Claim.—1. The working up of the molasses, together with 85° alcohol, acidulated with any energetic acid, or variable proportions of alcohol at various degrees or temperatures, and the filtering of this mixture, substantially as specified.

2. Successive additions to the saccharine dissolution of various volumes of alcohol, at 95°, or more concentrated, if possible, substantially as specified.

3. The setting in contact of the saccharine liquor with sugar crystals, or hemp skeins, fabrics, or any supports previously covered with sugar crystals, for the purpose of determining the crystalization of the liquor, which otherwise would remain inert, substantially as specified.

4. The crystalization of sugar amidst the alcoholic liquor, and obtaining the same in the pure state, in the presence of the eliminated acids, by sulphuric acid, and all impurities contained in the molasses, substantially as specified.

5. Purifying the white or raw sugars of trade by means of alcohol more or less concentrated, substantially as specified.

6. Agglomerating this so pulverized, purified sugar by a saccharine alcoholic dissolution of variable concentration, using, for these two operations, spirit of wood, substantially as specified.

7. Using an aqueous saccharine decoloring material for agglomerating and lumping the sugar crystals, washed by alcohol, substantially as specified.

8. Agglomerating the crystals, either with or without compression, in close apparatus, substantially as specified.

9. Preparing sugar-candy by the continuous increase of the sugar crystals amidst the solution of sugar into alcohol.

90,763.—JOSEPH MARSHALL, New York, N. Y.—*Bath-Brush.*—June 1, 1869.

Claim.—The use of sponge, in combination with bristles or hair, or the equivalents of bristles or hair, in the construction of brushes, substantially as and for the purposes herein shown and described.

90,764.—JOHN MCCASKEY, Jr., Orville, Ohio.—*Revolving Clothes-Drier.*—June 1, 1869.

Claim.—A revolving clothes-frame, consisting of the stem or standard *b*, base *a*, cap *c*, formed with slots *d d*, ring *e*, arms *f f f*, and sliding-button *g*, all combined, arranged, and operating substantially in the manner and for the purpose described.

90,765.—JOHN A. MCCLELLAND, Louisville, Ky.—*Dental Plate.*—June 1, 1869.

Claim.—1. A palate or base-plate, A, having an upturned margin, *a*, and produced substantially as described, as a new and improved article of manufacture.

2. Making the gums and attaching them to the prepared palate or base-plate at one and the same operation of pressing, substantially as described.

90,766.—JOHN A. MCCLELLAND, Louisville, Ky.—*Machine for Treating Collodion and its Compounds.*—June 1, 1869.

Claim.—1. The preparation of collodion and its compounds in a vacuum, substantially as and for the purposes described.

2. The combination of mixing-vessels, having pistons working air-tight therein with reticulated or finely perforated passages, through which the substances, while being treated, are compelled to pass, substantially as and for the purposes described.

90,767.—JOHN ALEXANDER MCKAY, Auburn, Ind.—*Bridge.*—June 1, 1869.

Claim.—The combination of the chords B B′, the single and double braces A A^1 A^2, each bolted to the chords independently of all the others, and the triangular blocks D, intervening between the adjacent ends of the brakes, when said parts are constructed and arranged substantially in the manner and for the purpose herein set forth.

90,768.—CHARLES S. MEEKER, New Haven, Conn., assignor to himself and T. B. CARPENTER, same place.—*Adjustable Clamp.*—June 1, 1869.

Claim.—The combination of the socket A and nut B, each constructed with a loop, *a*, and provided with the screw C, and combined with the band D, attached to the said loops, the whole constructed substantially as herein set forth.

90,769.—H. B. MIDDAUGH, Mansfield, Pa.—*Spring-Hinge.*—June 1, 1869.

Claim.—The coiled spring D, secured at one end to the axle C, which carries the ratchet-wheel E, and has its bearings in the brackets B B, formed upon the leaf A of the hinge, and provided with the pawl F, the free end of said spring being adapted to catch over the edge of the leaf of the hinge, secured to the door in such a manner as to be released when the door is swung open to its fullest extent, or nearly so, as herein shown and described, for the purpose specified.

90,770.—OLIVER F. MOMANY, Dowagiac, Mich.—*Roller Grain-Drill.*—June 1, 1869.

Claim.—1. The construction and arrangement of the frame A and hopper C, in combination with the wheels B, sliding-frames *d*, and lever W, as and for the purposes specified.

2. In combination with frame A, wheels B, hop-

per C, and the frames *d*, the construction and arrangement of slides *f* and O, the bars *i* and 3, levers N, and handle *r*, and the arrangement of the coverers S, in combination with the pedestals T T, driver's seat X, all as and for the purpose specified.

90,771.—DANIEL MOORE, Davenport, Iowa.—*Bake-Oven.*—June 1, 1869.

Claim.—The inner oven B, having a bottom paved with brick, and provided with doors D D, and ventilating-openings, with dampers *d d*, in combination with an outer oven, A, chimneys C C, dampers *e e*, flues with dampers *c c*, and furnaces E E, having flues *b b* and openings S S, substantially in the manner and for the purpose as described.

90,772.—DAVID MORGAN, Hammondsville, Ohio.—*Machine for Desulphurizing Bituminous Coal.*—June 1, 1869.

Claim.—1. Desulphurizing bituminous coal by washing with water, substantially in the manner described.

2. The inclined troughs B, one or more, with the cross-bars or cleats *c*, substantially as and for the purposes herein shown and described.

3. In combination with the troughs B B, or either of them, the spiral conveyer E, substantially as and for the purposes set forth.

90,773.—EDGAR G. NICHOLS, Beaufort, S. C.—*Fence-Post.*—June 1, 1869.

Claim.—The fence-post herein described, constructed of one or two bars, as shown in Figs. 1 and 2, provided with braces which serve to support the rails or wires, said post being formed wedge-shaped at its lower extremity, substantially as and for the purposes set forth.

90,774.—ALFRED NIELSEN, Williamsburgh, N. Y.—*Velocipede.*—June 1, 1869.

Claim.—The double or slotted saddle-bar C, pivoted to the reach or connecting-bar A A′, at the angle of the same, provided at its front end with the pivoted operating-stirrups H, and connected at its rear end to the cranks F, by means of the connecting-rods E, all arranged as described, for the purpose specified.

90,775.—CHARLES G. NYE, Onondaga, N. Y.—*Tire-Heating Oven.*—June 1, 1869.

Claim.—1. In combination with the furnace or fire-box C, the annular heating-chamber, composed of the wings and annular flanged plate B B A *a* and the chimney *f*, substantially as and for the purpose herein set forth.

2. The combination of the furnace C, annular flue H, dampers I *i j k*, heating-chamber and chimney, substantially as and for the purpose described.

3. The combination of the adjusting-hinges *b* with the wings B B and annular flanged plate A *a*, substantially as described.

90,776.—THOMAS O'KEEFE, Appleton, Wis.—*Bedstead-Fastening.*—June 1, 1869.

Claim.—The improved bedstead-fastening plates A, provided with hooks B C, and otherwise arranged and applied, as specified.

90,777.—ALMARIN B. PAUL, San Francisco, Cal.—*Electro-Magnetic Amalgamator for Gold and Silver.*—June 1, 1869.

Claim.—1. The construction of the horizontal rotating hollow-axled glass or earthen cylinder A, for the purpose of amalgamating and separating metals, whether precious or base.

2. The introduction of electricity, through hollow axles or trunnions, into glass or earthen barrels, for the purpose of preparing ores for amalgamation, and for separating metals.

3. The introduction of magnets into glass or earthen barrels, for the purpose of acting magnetically upon ores during separation and amalgamation.

4. The amalgamation of pulverized ore, in a dry or wet condition, with mercury, in glass or earthen barrels or cylinders.

90,778.—I. C. PENNINGTON, Paterson, N. J.—*Steam-Generator Furnace.*—June 1, 1869.

Claim.—The arrangement of the air-pipes F, supported by the plates H C, with reference to the enlarged flue D, chimney-flue H, boiler C, and fire box and grate A B, as herein set forth and shown.

90,779.—W. H. H. PETERS, Tuskegee, Ala.—*Medical Compound.*—June 1, 1869.

Claim.—A medical compound, composed of the ingredients herein set forth.

90,780.—CALVIN D. PURDY, La Porte, Ind.—*Bedstead-Fastening.*—June 1, 1869.

Claim.—The socket for bedstead-fastening, constructed with the parallel perpendicular sides *b b*, containing the inclined planes *c c c c*, in combination with the round-beveled end *d*, and the hollow beveled key-seat, respectively, constructed and arranged substantially as set forth.

90,781.—SALMON W. PUTNAM, Jr., Fitchburgh, Mass.—*Bearing for Spindles and Shafts.*—June 1, 1869.

Claim.—1. The shaft, having the bearing so inclining or curved that a longitudinal pressure exerted in either direction will tend to retain it firmly in place within its box in a true central line, substantially in the manner and for the purpose described.

2. The box C, as constructed, and operating substantially in manner shown, box C being provided with the central groove or oil-chamber *i*, substantially as described.

90,782.—GEORGE P. REED, Boston, Mass.—*Velocipede.*—June 1, 1869.

Claim.—A velocipede containing the characteristics, arranged as before described, that is to say, the combination and arrangement of the swiveled axle *c*, provided with its independent wheels *d d*, and steering-rod *e*, the perch *a*, with its dasher or foot-rest *g*, driver's seat *b*, and brake *i*, and the driving-wheel, provided with the ratchet-wheels *j j*, and their cranks and pawls, or equivalents, and connected with the hand-levers *m m′*, and foot-treadles *s s′*, the whole being substantially as before described.

90,783.—CHARLES H. RIGGS, Windsor Locks, Conn.—*Auxiliary Jaw for Planer-Chuck.*—June 1, 1869.

Claim.—The construction and arrangement of the plates A and B, with semi-cylindrical jaws D, held in place between projections E by tongues and grooves, and operated by means of the worms H, the parts being all combined together, substantially as and for the purpose described.

90,784.—WILLIAM ROBERTS, Blue Hill, Me.—*Saw-File.*—June 1, 1869.

Claim.—The improved saw-file, made as described, and combining the features herein set forth, for the purposes specified.

90,785.—OBED RUGGLES, Franklin, Mass.—*Stove-Pipe Shelf.*—June 1, 1869.

Claim.—A portable warming-shelf for stoves, composed of the furcated bracket B, provided with the set-screws D D′, and formed with the double bearing surfaces F and J, and the ears G G, in combination with the shelf H, the whole being so made and combined as to be adapted to perpendicular or horizontal pipes, in manner and for the purpose as before explained.

90,786.—L. M. RUMSEY and W. P. SMITH, St. Louis, Mo.—*Pipe-Driver.*—June 1, 1869.

Claim.—The stirrup K, in combination with the follower J and adjustable drive-head E, provided with an internal screw-thread, to receive the end of the pipe F, as herein described, for the purpose specified.

90,787.—L. M. RUMSEY and W. P. SMITH, St. Louis, Mo.—*Drill for Rock and Earth with Attached Tube.*—June 1, 1869.

Claim.—1. The drill formed in one piece, with three or more cutting-chisel edges, radiating from a common center, and arranged in such a manner that wedge-shaped grooves *e* are formed between each

wedge-shaped chisel, terminating at the point *f*, as herein described, for the purpose specified.

2. The tube B, grooved spirally, and perforated, substantially as and for the purposes described.

3. Fastening a screen on to a well-tube, by a wire, which forces the screen into a spiral groove of the tube, so that the wire is depressed below the surface of the screen, substantially as shown and described.

4. The combination of the tube B with the drill A, or with any drill equivalent thereto, substantially as and for the purposes specified.

90,788.—F. SCHULTZ, Hoboken, N. J., and C. RENNE, New York, N. Y.—*Machine for Cutting Files.*—June 1, 1869.

Claim.—1. The combination of the belts or chains C, shaft D, and toothed wheel E, with the disk *d*, shaft F, ratchet-wheel H, pawl *f*, and springs G, all arranged and operating to impart the requisite feed-motion to the sliding-bed B, substantially as herein shown and described.

2. The cutter-holder L, when provided with a cross-slot and with two set-screws *l*, or their equivalent, for the purpose of holding the cutter K in either position, substantially as herein shown and described.

3. An improved file-cutting machine, consisting of the frame A, movable bed B, belts or chains C, intermittently rotating shaft D, shaft F, springs G, ratchet-wheel L H, pawl *f*, cam *o*, hammer N, spring cutter-holder L, cutter K, and rocking-support J, all combined and operating substantially as herein shown and described.

90,789.—JAMES M. SEYMOUR and DANIEL WHITLOCK, Newark, N. J.—*Machine for Wiring Blind-Slats.*—June 1, 1869.

Claim.—In a machine for wiring blind-slats, the independent cut-off A, provided with the spring *b*, or its equivalent, when constructed and operated substantially in the manner and for the purpose specified and shown.

90,790.—SAMUEL SIMPSON, Wallingford, Conn., assignor to SIMPSON, HALL, MILLER & CO., same place.—*Tea and Coffee Pot.*—June 1, 1869.

Claim.—In a pot, divided by the perforated division F, the arrangement of the cover G, so as to close either of the two divisions, in the manner substantially as herein set forth.

90,791.—GARNER A. SMITH, Bleecker, N. Y.—*Saw-Guide and Jointer.*—June 1, 1869.

Claim.—The saw-guide and jointer herein described, when all the parts are constructed, arranged, and operated as shown.

90,792.—WILLIAM SYDNEY SMOOT, Washington, D. C., assignor to THOMAS POULTNEY, Baltimore, Md.—*Breech-Loading Fire-Arm.*—June 1, 1869.

Claim.—The plunger *a*, in combination with the stud *o* and notch *n*, when arranged and operating substantially as and for the purpose set forth.

90,793.—FREDERICK SUTER, Williamsburgh, N. Y.—*Musical Instrument.*—June 1, 1869.

Claim.—The sonorous metallic disks B, hung in inclined positions upon the arms *a*, and adapted to be struck from below by any suitable mechanism, as herein described, for the purpose specified.

90,794.—HENRY TAYLOR and JOSEPH M. COALE, Baltimore, Md.—*Steam-Generator Safety-Valve.*—June 1, 1869.

Claim.—1. The intermediate or reciprocating valve F, in combination with the steam-passage G and perforations *f*, for the escape of steam, substantially as set forth.

2. The valve H, as constructed, with the steam-passage G running through its center, and the perforations *f* through its top, substantially as described.

3. The combination of the valves E F H with each other and with the steam-passages, substantially as described.

90,795.—H. THIELSEN, Burlington, Iowa.—*Railway-Car Truck.*—June 1, 1869.

Claim.—1. The cross-beams H, composed of plates arranged on edge, stiffened by means of angles along their upper and lower edges, and united at their ends to head-pieces K, substantially as described.

2. The construction of head-pieces K for the cross-beams, with flanges k k^1 k^3, and interior strengthening-wall k^2, substantially as and for the purposes described.

3. A tubular swing-beam, C, for a railroad-car truck, constructed substantially as described.

4. The construction upon a tubular swing-beam, C, of a socket-bearing, B, and side-stays *b*, substantially as described.

5. The construction of one piece of metal of a transom, A, with flanges a^1, rib *a*, and bearings a^2, substantially as described.

90,796.—SAMUEL THOMAS and JOHN THOMAS, Hokendaugau, Pa.—*Hot-Blast Oven for Iron-Furnaces.*—June 1, 1869.

Claim.—In an oven, or apparatus for heating an air-blast by the heated gases discharged from a furnace, introducing such heated gases at the top of the oven or heating-apparatus, substantially as shown and described, and for the purposes set forth.

90,797.—HENRY THOMPSON, Mobile, Ala.—*Velocipede.*—June 1, 1869.

Claim.—1. The combination, with the lever D and crotched connection with the front wheel, of the cross-head and rods H, connecting with the cranks, substantially as specified.

2. The arrangement of the rest M, fulcrum E, and lever D, with relation to each other and the frame or reach, as herein described, for the purpose specified.

90,798.—JOHN H. TOMLINSON, Chicago, Ill.—*Bucket.*—June 1, 1869.

Claim.—In combination with a bailed vessel, the handles C, arranged substantially as and for the purposes herein shown and described.

90,799.—S. B. WILKINS, Milton, Pa.—*Steam-Plow.*—June 1, 1869.

Claim.—1. In combination with the cylinder E, the frame N, plows W, and gauge-wheels S S, arranged substantially as described, for the purposes set forth.

2. The employment, in a steam-plow, of one or more plows, arranged in line, with rows of teeth upon a rotative cylinder, substantially as and for the purpose specified,

3. The combination of the plows W with the gauge-wheels S, stands T, and screw-rods U, provided with the hand-wheels V, substantially as herein described, for the purpose set forth.

90,800.—JOHN B. WILLETT, West Meriden, Conn.—*Vise.*—June 1, 1869.

Claim.—The dovetail projection *a*, upon the base and arm, and the corresponding recess *b*, in the jaws, with the block *d*, the set-screws *f*, for forming a bearing upon which the jaws will turn, substantially as set forth.

90,801.—DANIEL WILLIS, Jersey City, N. J.—*Toy.*—June 1, 1869.

Claim.—1. A toy-vehicle, provided with pivoted representations of animals, which are set in motion when the vehicle is drawn ahead, substantially as herein shown and described.

2. Connecting the pivoted representations, D, of animals, by means of the rods F, with the revolving wheels or axles of toy-vehicles, so that they will be oscillated when said axles or wheels are revolving, substantially as herein shown and described.

90,802.—C. L. WUESTENBERG, Pittsburgh, Pa.—*Impression Dental Cup.*—June 1, 1869.

Claim.—An impression-cup, made of the material herein set forth, said cup having a highly polished exterior, while the inside is left rough or unpolished, for the purposes stated.

90,803.—William L. Yantis, Brownsville. Mo. —*Self-Adjusting Switch for Street-Cars.*—June 1, 1869.

Claim.—The pivoted switch-block D, constructed substantially as herein shown and described, and provided with a coiled or equivalent spring, in combination with the rails of the main and switch tracks, as and for the purpose set forth.

90,804.—Herrmann Ahrend, Brooklyn, N. Y. —*Trunk-Lock.*—June 1, 1869.

Claim.—The slide-latch *d e*, fitted into guide-ways *g*, on the lock-plate, in combination with the spring-platform *b*, hasp A, and with an ordinary locking-mechanism, all as shown and described.

90,805.—Herrmann Ahrend, Brooklyn, N. Y. —*Lock for Piano, &c.*—June 1, 1869.

Claim.—The bolts B B′, swinging on separate pivots *b b′*, and connected by a pin, *c*, and slot *d*, in combination with the tumbler C and stud *f*, all constructed and operating substantially in the manner shown and described.

90,806.—Alexander Allen, Rochester, N.Y.— *Automatic Fire-Alarm Apparatus.*—June 1, 1869.

Claim.—1. The system of signals for fire-alarm telegraphs herein shown, composed of a series of rapid alarm-signals, and a series of box-signals, when the same are so used as that an alarm-signal is interposed between any two successive box-signals, substantially as and for the purpose herein specified.

2. So arranging a series of pins or notches on any circuit-wheel, used in connection with a circuit-breaker, for the purpose of breaking the circuit in a magnetic fire-alarm telegraph, substantially as herein shown, as that two or more revolutions of said circuit-wheel shall cause two or more alarm-signals, and two or more box-signals, an alarm-signal being interposed between any two successive box-signals substantially in the manner and for the purpose herein specified.

3. So constructing an automatic fire-alarm, and the circuit-wheel connected thereto, as that said alarm shall first sound a fire-signal, then a box-signal, then repeat fire-signal, then repeat box-signal, and so on, substantially in the manner and for the purpose herein specified.

4. The peculiar arrangement and combination of the segmental drive-wheel 13, stops 25 25, pinion 12, shaft 37, and circuit-wheel 17, the several parts being arranged substantially as and for the purpose herein specified.

5. The peculiar arrangement and combination of the crank 28, shaft 38, spring 27, segmental drive-wheel 13, pinion 12, shaft 37, and circuit-wheel 17, the several parts being arranged substantially as and for the purpose herein specified.

6. The peculiar arrangement and combination of the spring 27, shaft 38, segmental drive-wheel 13, pinion 12, shaft 37, with circuit-wheel 17, and ratchet-wheel 14 thereon, gear-wheel 11, with pall 15 and spring 16, gear-train 10, 9, 8, 7, 6, and shaft 35, with regulator 33 thereon, the several parts being arranged substantially and for the purpose specified.

7. The circuit-breaker 4, having the sliding-rod 21 arranged therein, when used in combination with the circuit-wheel 17, having pins 18, 19, 20, or their equivalents, arranged thereon, the several parts being arranged substantially as and for the purpose herein specified.

8. The peculiar arrangement and combination of the standard 1, having one end of the main circuit attached thereto, the circuit-breaker 4 having the other end of main circuit attached thereto, and the sliding-rod 21 arranged therein, the circuit-wheel 17 with pins 18, 19, 20, or their equivalents, arranged thereon, the shaft 37, pinion 12, segmental drive-wheel 13, shaft 38, and spring 27, the several parts being arranged substantially as and for the purpose herein specified.

90,807.—John F. Appleby, Mazo Manie, Wis., assignor to himself and William Thompson, same place.—*Grain-Binder.*—June 1, 1869.

Claim.—1. The combination and arrangement of arms D *g* F, operating substantially as and for the purposes set forth.

2. The arm D, when provided with a forked part, E, one prong of which is again forked, to receive a pulley, *f*, and pin *x*, as and for the purpose set forth.

3. The arm F, when pivoted on the arm *g*, and provided with hooked lower end, and projections *h i*, substantially as and for the purposes described.

4. The rope *n*, when arranged as described, and operated by a spring, I, in combination with the arms D F, substantially as and for the purpose set forth.

5. In combination with the rope *n*, spring I, and arms D F, the brace K L, arranged to operate substantially as and for the purposes set forth.

6. In combination with the arm D, the guard *l*, when arranged and operating substantially as and for the purposes set forth.

7. The shuttle, when constructed with the hinged lid P, and grooved standard O, substantially as and for the purposes set forth.

8. The spring-stop *u*, when arranged to operate in the grooved standard O and hollow stem *r*, against the grooves *y*, in wheel N of the shuttle, substantially as shown and described.

9. The spiral end R of the shuttle, in combination with the bar C′, substantially as and for the purposes set forth.

10. The toothed wheel N, of the shuttle, the flanges of its disks being even with the ends of its teeth, and provided with two grooves *y* diagonally opposite each other, in combination with the openings *s′* in the shuttle, which openings are of smaller diameter than the wheel N, for the purpose of seizing and holding the two parts of the wire, and producing a short twist, substantially as herein described.

11. The cutter *j k′ k*, moving freely in projection *i* of arm F, and operated by spring G and plate B′, substantially as and for the purposes set forth.

12. The cutter *j k′ k*, when arranged to operate in such a manner as to cut off the long part of the wire only, as and for the purposes described.

13. The combination of pin *x*, in the forked part E of arm D, with the tongue J on arm F, for the purpose of keeping the two parts of the wire under the center of the shuttle during the operation of twisting, substantially as and for the purposes set forth.

90,808.—Elkanah S. Atwood, Boston Highlands, Mass., assignor to "Pratt & Wentworth," same place.—*Hinging Tea-Kettle Covers.*—June 1, 1869.

Claim.—A kettle, having a hinged lid, the hinge being formed substantially as described, to prevent the water of condensation from escaping to or dropping upon the outer surface of the kettle.

90,809.—Henry Bergstein, San Francisco Cal.—*Burglar-Alarm.*—June 1, 1869.

Claim.—1. The lever A, spring *b′*, and wire D, when arranged as described, in relation to a window-sash, and combined with the alarm-device I H′ h^1 h^3, in the manner described, and for the purpose set forth.

2. The hand-slide M, signal-board L, wire *k*, and lever K, when combined and arranged with each other, and with the alarm-device I H′ h^1 h^3, as described, for the purpose set forth.

90,810.—Eugène Henri Bernier, Paris France.—*Hoisting-Apparatus.*—June 1, 1869.

Claim.—1. An apparatus for raising and lowering weights, consisting of a frame, C, having mounted thereon the hoisting-gear, constructed as described; a self-acting safety-device, consisting of the stop-catches A′ A″ A‴ A⁗, and the parts connected therewith for operating the same, constructed as described; a guide-stretcher for the hoisting-chain *a*, composed of the grooved pulley V and a suspended weight, X, and the safety-chain G′, provided with a counter-weight, K′, all constructed, arranged, and operating substantially as herein shown and described.

2. The self-acting safety-apparatus, consisting of the stop-catches A′ A″ A‴ A⁗, and the parts connected therewith for operating the same, all constructed, arranged, and operating substantially as herein shown, as set forth.

3. The stretching-guide for the hoisting-chain *a*, consisting of the grooved pulley V and the suspended weight X, constructed and operating substantially as described.

90,811.—ABNER G. BEVIN, East Hampton, Conn.—*Bell.*—June 1, 1869.

Claim.—The spiral spring *x*, or its equivalent, placed upon the tongue B, between its pivot *s* and the perforated stud *c*, for the purpose of giving a sudden "trip" to the tongue at both ends of its vibration or play, all arranged, constructed, and operated as described.

90,812.—ALONZO T. BOON and LUCIEN MILLS, Galesburgh, Ill.—*Halter-Hitch.*—June 1, 1869.

Claim.—The slot or opening F, of a box or other device, provided with a bolt or catch, E, in combination with the loop of a halter, substantially as and for the purpose set forth.

90,813.—M. T. BOYD, Buffalo, N. Y.—*Composition for Dressing Harness and other Articles Made of Leather.*—June 1, 1869.

Claim.—The herein-described composition, compounded of the ingredients specified, substantially in the manner set forth.

90,814.—L. W. BROADWELL, New Orleans, La.—*Gun-Carriage.*—June 1, 1869.

Claim.—1. The combination of the wing-piece or plate F, and elevating-screw G, with the trunnion-piece D and revolving supporting-piece E, essentially as shown and described.

2. The combination of the end-piece I, the traveling nut or box J, with its operating-screw K, and the revolving supporting-piece E, substantially as specified.

90,815.—EDWARD BROWN, Philadelphia, Pa.—*Pyrometer.*—June 1, 1869.

Claim.—The detachable hand-pyrometer, constructed with the tube A, open at each end for the free passage of the hot blast, in combination with the usual expansion-strip D, arranged therein, for giving motion to the pointer of a dial, secured upon the non-expanding bar E, substantially as described.

90,816.—HAYDN BROWN and SOMERBY N. NOYES, West Newbury, Mass., assignors to S. C. NOYES & CO., same place.—*Comb.*—June 1, 1869.

Claim.—1. The new manufacture of comb-back, made as described, viz, with the fastening-flange or tenon, and the tooth-guard, arranged together as set forth.

2. The improved manufacture or comb, in the back of the body of which a brace of metal, for strengthening the same, is fitted and fastened, and so lapped down on one side of the body as to form, between the brace and the body, a recess or space for the reception of the teeth or points of the teeth, of another comb-body, when pivoted to and closed with the first body, in manner as hereinbefore mentioned.

3. When a metallic brace is applied to an ivory, horn, shell, or hard-rubber comb-body, as described, the formation of all the rivet-holes but one of such brace, as slots, arranged so as to allow of the expansion and contraction of the body, lengthwise thereof, without hinderance from the rivets going through such slots, the same being to prevent breakage or warping of the body.

90,817.—FRANK BUCKELEW, San Rafael, Cal.—*Washing-Machine.*—June 1, 1869.

Claim.—Constructing the tub with the supporting-cleat D, and with inclined sides A B, against which the fabric strikes as the wheel is turned, with the radial arms G, provided with openings G′, to which the fabric to be washed is attached, as set forth and shown, for the purpose specified.

90,818.—HIRAM P. BURDICK, Buffalo, N. Y.—*Hay Raker and Loader.*—June 1, 1869.

Claim.—1. The hinged endless carrier G, in combination with the hay-platform C′, permanently supported by both the front and rear wheels of the wagon, by means of the forward extension of the side-rails C, the whole arranged and operating as herein set forth and described.

2. The arrangement for elevating the carrier E, consisting of the drum M, hand-wheel M′, dog *p*, chains *n n*, and pulleys *o o′*, substantially as set forth.

3. The combination and arrangement of the rod *s*, spring *t*, chains *q n*, and endless carrier E, for automatically elevating the latter, as set forth.

4. The rope *u u′*, for unloading, when applied and operating in the manner specified.

90,819.—WILLIAM J. COCHRAN, Baltimore, Md.—*Construction of Retorts for the Manufacture of Coal-Gas.*—June 1, 1869.

Claim.—A retort for the production of coal-gas, or for other purposes, composed of iron and fire-brick, or fire-clay, in combination with each other, in the manner and by the means substantially as herein described.

90,820.—JOHN L. COOPER and ELIAS A. MONROE, Elmira, N. Y.—*Spring Bed-Bottom.*—June 1, 1869.

Claim.—A spring bed-bottom, consisting of frame A, parallel wires *a a*, longitudinal wires *b b*, diagonal braces D D, E E, and spiral springs B B, the whole being constructed, combined, and arranged substantially as and for the purpose specified.

90,821.—ROBERT P. CRANE, Beloit, Wis., and ELLERY B. CRANE, Worcester, Mass.—*Automatic Railway-Gate.*—June 1, 1869.

Claim.—1. The combination of the lever G, the hanger or lifter *g*, provided with the stud *r*, the lever-catch H, the lever E, and its operating mechanism, as described, the said lever E being applied to the gate, and the said lever G being applied to the tripper, by means substantially as specified.

2. In combination therewith, the auxiliary or guard catch I, arranged and combined with the main catch H, in manner and for the purpose as explained.

90,822.—J. THOMPSON CREE, Worcester, Mass. *Stone-Dressing Machine.*—June 1, 1869.

Claim.—1. The frame C, supported upon friction-balls, substantially as and for the purpose set forth.

2. The combination with the columns or standards B, and frame C, of the friction-balls *b*, substantially as and for the purposes set forth.

3. The combination, with the frame C, supported upon friction-balls, of the operating-cranks *d d*, substantially as described.

4. The combination, with a lower stone-frame, having a rotary reciprocating motion, of an upper stone-frame, having a reciprocating motion, substantially as described.

5. The combination, with frames G and H, of the friction-balls 1, substantially as and for the purposes set forth.

6. The arrangement with the upper reciprocating-frame H of two blocks of stone, to be ground and polished, substantially as shown and described, whereby a central longitudinal opening, *s*, is left between them, for the reception and more rapid and even distribution of the grinding and polishing material, substantially as described.

7. The combination, with the blocks of stone to be ground and polished, arranged in reciprocating-frames, the upper one of which is capable of rising, for the purpose stated, of small pieces of buhrstone, chilled iron, and steel, substantially as and for the purposes set forth.

90,823.—LEWIS CUTTING, San Francisco, Cal.—*Hoisting-Apparatus.*—June 1, 1869.

Claim.—1. The brake-bar I, provided with the angular shoulders K, in combination with the brake D, horizontal brake M, and connecting-rod F, the whole constructed and arranged to operate substantially as described.

2. The slotted link L, for connecting the brake-bar and horizontal brake, as described, and the pin P, for arresting the downward movement of the brake-bar, substantially as set forth.

90,824.—JOHN DICKENSON, Bay Ridge, N. Y.—*Preparation of Mineral Carbon for use in the Arts.*—June 1, 1869.

Claim.—1. The within-described process for forming mineral carbons in any shape desired, substantially as and for the purposes herein set forth.

2. As a new article of manufacture, mineral carbon, when formed in shape for making drills, cutters,

or dressers, for drilling, cutting, or dressing stone, metal, or other hard substances, substantially as herein set forth.

90,825.—Julius Edmund Dotch and Edward Duempelmann, Washington, D. C.—*Composition for Paving, Roofing, and for other Purposes.*—June 1, 1869.

Claim.—1. The employment of the metallic oxide, such as litharge, or finely divided metals, &c., to combine with the superfluous sulphur, in the treatment of hydrocarbons, for the purpose herein described.

2. The employment of chloride of sulphur, or the combinations of sulphur, in the various bases, for the treatment of hydrocarbons, as and for the purposes described.

3. The use of tungstate of baryta, in combination with drying oils, for coating the composition, as herein described.

4. A concrete pavement, having its surface roughened or indented, as herein described.

5. The corrugated roller, for indenting the surface of pavements, herein described.

90,826.—Robert Dunbar, Buffalo, N. Y.—*Turbine Water-Wheel.*—June 1, 1869.

Claim.—The combination of the guides *f* with the gates D, rods *g*, and ring E, arranged and operating as described.

90,827.—Nathan Eisendrath, Chicago, Ill.—*Treatment of Grain-Mashes, Worts, and Beer, after Fermentation.*—June 1, 1869.

Claim.—The treatment of grain-mashes, worts, or beer, (produced by the patented process mentioned,) after fermentation, and before distillation, with lime-water, or equivalent carbonate solutions, in the manner substantially as herein described, and for the purpose set forth.

90,828.—J. Austin Eldridge, Milford, Mass.—*Boot-Crimping Machine.*—June 1, 1869.

Claim.—1. The arrangement of the clamping-jaws of a boot-crimping machine, whereby the vertical parallelism of such jaws is maintained under all conditions of movement, substantially as herein described.

2. Operating the movable jaws of a boot-crimping machine, by means of a right and left hand screw cut upon the shaft, which passes through them, whereby great simplicity and cheapness of construction and effective operation are obtained, substantially as before explained.

3. In order to maintain vertical parallelism of the clamping-plates, the combination, with such plates, and their actuating-device, of the toggle-arms *e e* and springs *h h*, or their equivalents, the whole being arranged and operating as explained.

4. Applying the clamping-jaws to a boot-crimping machine, substantially in the manner described, so as to secure horizontal adjustment of such jaws for the purpose explained.

5. The combination, with the movable jaws, of a boot-crimping machine and their actuating-screws, of the swiveling-nuts *d d*, the same being applied and operating in manner as before set forth.

90,829.—William R. English and Stephen Rogers, English Centre, Pa.—*Wagon-Brake.*—June 1, 1869.

Claim.—1. The arrangement of the perch-pole D, levers F F, rods I I, brake-bar H, and bar J, in combination with the box C, pin *m*, and lever *n*, with the spring O, all constructed and operating substantially as herein specified.

2. The arrangement of the perch-pole D, plates or bars *a b d*, pin *e*, arms *f f*, tongue L, and slotted bounds O O, all substantially as and for the purposes herein set forth.

90,830.—Benjamin D. Evans, Columbus, Ohio.—*Combined Vapor-Burner and Lamp-Post.*—June 1, 1869.

Claim.—1. The arrangement of the generator E, with its chimney inside the generating-box B, with the jet at Fig. 6, all constructed as hereinbefore set forth, as and for the purposes described.

2. The attachment of the pipe R with the chimney, passing up through the outer pipe C, to the burner K, whereby the gas is conveyed to the burner, substantially as shown and described.

3. The combination of the burner K, the pipe R, the generator E, pipe D, reservoir A, the outer pipe C, and generator-box B, by which a lamp and lamp-post are constructed and formed, all constructed and arranged as set forth in the foregoing specification, and in Figs. I, II, III of the drawings hereto attached.

90,831.—Corydon A. Fargo, Soquel, Cal., assignor to himself and Barber Darling.—*Gang-Plow.*—June 1, 1869.

Claim.—1. The bent plates D D, attached to the outer frame, as described, the vertical set-screws D′ D′, which bear upon the said plates, for raising or lowering the plow-beams, substantially as set forth.

2. The vertical ways E E, friction-rollers E′ E′, operating in the said ways, and the transverse bar F, to which the rollers are connected, substantially as and for the purpose set forth.

3. Connecting the two crank-axles H H by the rod K′, so that both of the said axles may be operated by the upright levers L L′, substantially as and for the purpose specified.

4. The set-screws J J, operating in the beams of the plow-frame, and linked to the arms I I of the axles, in combination with the said axles, as and for the purpose set forth.

5. In combination with the levers L L′, operating in the double-rack M, the pawls R R, for unshipping or releasing the levers alternately from the notches P′, substantially as and for the purpose specified.

6. The front-end cross-beam of the outer frame, for attachment of the neap, or pole, axle, and crank-axle of the driving-wheels, in combination with the crank-axle S′ and semicircular rack U, the whole constructed and arranged to operate substantially as specified.

90,832.—George F. Fessenden, Arlington, Mass.—*Castanet.*—June 1, 1869.

Claim.—Castanets or clappers composed of main piece A and one or more auxiliary pieces attached to main piece, substantially as shown and described.

90,833.—Chester D. Flynt, Philadelphia, Pa.—*Life-Boat.*—June 1, 1869.

Claim.—As a new article of manufacture, a boat, the body of which is formed of interwoven strips or bands of steel, and a covering of canvas, oiled and painted, or otherwise made impervious to water, the canvas and steel strips being fastened to the gunwales and keel of the boat, all substantially as set forth.

90,834.—M. R. Fory, New York, N. Y.—*Apparatus for Felling Trees.*—June 1, 1869.

Claim.—1. The combination and arrangement of the frame A, guides D D, and carriage F, holding a series of augers, all as and for the purpose specified.

2. The arrangement of the adjustable arms I I, having hooked ends, and hung to the guides D D, as and for the purpose specified.

90,835.—Theodore F. Frank, Buffalo, N. Y.—*Tea and Coffee Pot.*—June 1, 1869.

Claim.—An oscillating coffee pot, of the general construction herein shown, having the chambers D D′, pipe I, and passage *e*, arranged as described, and for the purpose shown.

90,836.—Washington L. Gilroy, Philadelphia, Pa.—*Green-Corn Fork.*—June 1, 1869.

Claim.—The application of cutting-edges to a table-fork or spoon-fork, substantially in the manner and for the purpose described.

90,837.—Joseph Guild, Buffalo, N. Y.—*Velocipede.*—June 1, 1869.

Claim.—1. The slotted pedals K K, cranks *b*, bent lever N, and pitman *p*, all arranged and combined as herein described.

2. Hinging the bifurcated lever E to the frame C, by the eye-bolt *f*, in combination with the rest *g*, turning-rod *h*, and bearing *i*, so that a lateral move-

ment of the lever will cause it to turn on its axis and tip the steering-wheel D, as and for the purpose set forth.

90,838.—EDMUND J. HALL, Cambridge, Mass., assignor to ORVILLE PECKHAM, trustee, and said trustee assigns to EDMUND J. HALL and EDWIN A. HALL.—*Loom-Picker Shoe.*—June 1, 1869.

Claim.—The loom-shoe G *a*, having the friction-roller *c* placed in a lubricating-reservoir, all constructed and operating substantially as herein described, for the purposes specified.

90,839.—THOMAS F. HALL, Circleville, Ohio.—*Farm-Gate.*—June 1, 1869.

Claim.—1. The posts A, in combination with the arch C and pulleys D and E, as specified.

2. The combination of the gate F with the posts A, arch C, and pulleys D E, as specified.

3. The combination of the catch G, gate F, and springs H, as set forth.

4. In combination with the elements of these preceding clauses, the ropes K and L, and weight I, as specified.

5. The arrangement of the springs H H, for the purpose specified.

90,840.—WILLIAM HAWORTH, Canton, Ohio.—*Spring Bed-Bottom.*—June 1, 1869.

Claim.—1. The combination of the elastic wire rim E, conical springs B B, A A, spring-slats J J, and cords *p r*, the several parts being constructed, combined, and arranged substantially as and for the purpose herein specified.

2. The improved spring-bed, herein described, composed of the side-frame pieces G G, with notches *h h*, upper-end frame-piece N, with heads of slats J J secured thereto, cross-bar I, spring-slats J J, with slots *l* therein, lower-end frame-piece H with pins *k k* therein, edge springs B B, center springs A A, elastic wire rim E E E, cording *p p*, *r r*, *t t*, elevating hinge-blocks *a a*, *b b*, hinges *c c*, head-frame K L M K, with springs C C, D D, elastic rim F F, cording *u v*, and frame-pawl O P O, with axial hinges *d d*, the several parts being constructed, combined, and arranged in the manner and for the purposes herein specified.

90,841.—M. HIPP, Neufchatel, Switzerland.—*Electric Clock.*—June 1, 1869.

Claim.—1. The circuit closing and reversing mechanism, adapted and employed to operate one or more detached "dials," under the control of a central regulator, substantially as described.

2. The series of circuit-closers v^1 v^2 v^3 v^4, arranged to actuate the "dials" or sections of "dials" in succession, substantially as described.

3. The pallet F, operating in combination with the notched plate I and key K, substantially as and for the purposes described.

4. The combination of the spring *k'* with the key K, notched plate I, and pallet F, substantially as set forth.

90,842.—ALBERT E. HERRINGTON and JOHN D. RICHARDS, Schooleraft, Mich.—*Portable Scaffold.*—June 1, 1869.

Claim.—The arrangement of the posts D, levers L, ladders F, sills A and B, wheel C, catches N, dogs I, and chains M, when all are combined, in the manner and for the purposes described.

90,843.—FRANCIS HOVEY and GEORGE F. HOVEY, New York, N. Y.—*Cider Mill and Press.*—June 1, 1869.

Claim.—1. The stationary sleeve , attached to the bottom of the hopper, projecting within the shaft B, and surrounding the screw A, substantially as and for the purpose herein set forth.

2. The cutting-blades *d*, having one or more ribs or corrugations upon their flat surfaces or sides, whereby the apples are mashed after they are cut, substantially as specified.

90,844.—ANDREW HUNTER, San Francisco, Cal.—*Grain-Separator.*—June 1, 1869.

Claim.—1. The formation of the chute B and C, with screen W W, and perforated plates Y Y Y Y, and inclining as shown in Fig. 1, substantially as described, and for the uses and purposes as hereinbefore set forth.

2. The combination, with the grain-separating chutes, of the mechanism substantially such as herein described, for imparting a horizontal vibratory, or both horizontal and vertical vibratory movement to the same, in the manner and for the purposes set forth.

3. The combination of the cross bars N N with chutes B and C, set-screws O and M, and pulleys X X, substantially as described, and for the uses and purposes hereinbefore set forth.

4. The combination of hopper E, feed-board I, feed-roller F, eccentric-roller H, substantially as described, and for the uses and purposes hereinbefore set forth, said combination of hopper, feed-board, and rollers to be attached to any machine for similar uses.

90,845.—DANIEL N. HURLBUT, Chicago, Ill.—*Adjustable Window-Screen.*—June 1, 1869.

Claim.—1. The combination of the cross-piece K with the frames A and B, when arranged and operating in a window-screen, substantially as and for the purposes described.

2. The combination of the pins O and set-screws P and cross-piece I, when arranged in a window-screen, substantially as and for the purposes set forth.

90,846.—FRANÇOIS ALPHONSE JACQUET, Paris, France.—*Gas Heating and Cooking Apparatus.*—June 1, 1869.

Claim.—A portable apparatus for cooking or heating, or both cooking and heating by gas, in which the air-deflector and the reflector are arranged, with relation to the gas-jet, so as to produce a double current of air, substantially as shown and described.

90,847.—GEORGE H. JOHNSON and GEORGE MILSOM, Buffalo, N. Y.—*Grain-Drier.*—June 1, 1869.

Claim.—An apparatus for drying and renovating grain, constructed of a chamber or bin, C, permeated by a system of porous flues, F, communicating with a furnace, B, below, and a chimney or escape-vent, L, above, all substantially in the manner and for the purpose herein set forth.

90,848.—THOMAS W. JOHNSON, New York, N. Y., assignor to himself and HENRY C. JOHNSON, Jr.—*Apparatus for Making Extracts from Tan-Bark.*—June 1, 1869; antedated May 25, 1869.

Claim.—The within-described process of making extract from tan-bark, by exposing the same, in succession, to the disintegrating action of a grinding-mill, and then to the disintegrating action of crushing-rollers, substantially in the manner herein set forth.

90,849.—WILLIAM V. KAY, Chicago, Ill., assignor to S. S. SARGEANT, Newark, N. J.—*Buckle.*—June 1, 1869.

Claim.—The lateral projections J K, arranged upon the inner extremity of the wedge G, and so proportioned to the loop F Z, that while they are free to pass therethrough before the trace is inserted, they prevent its possible loss, after the trace is connected with the tug, substantially as set forth.

90,850.—W. J. KEEP, Troy, N. Y.—*Cooking-Stove.*—June 1, 1869.

Claim.—1. The employment and arrangement of the flues M M, in combination with the heating space or chamber K and shield-plate O, for the purpose of supplying a continual current of highly heated air to the oven, substantially as herein shown and described.

2. The employment and arrangement of the shield-plate O beneath and in rear of the fuel-chamber A, and ash-tube C, for the purpose of protecting the oven from the intense heat radiated from said fuel-chamber and ash-tube, and also in combination with the hot-air chamber K and flues M M, to furnish means whereby the air admitted to the oven through said flues shall be compelled to pass over the front and end plates of the fuel-chamber and the entire

outer surface of the ash-tube, and become highly heated by contact with the surfaces of said fuel-chamber and ash-tube before entering the oven, substantially as herein specified.

3. The employment and arrangement of the additional top-oven plate P, near the top of the oven B, for the purpose of protecting said oven from the heat radiated from the combustion-flue N, and to prevent ashes from falling into said oven through the air jets or passages n', substantially as herein shown and described.

4. The employment and arrangement of the additional back-oven plate R within the back center-flue S, for the purpose of preventing radiation of heat from the oven B into said flue, and also, in combination with the double-top oven-plates n and P, and openings t and t', through the back-oven plate b' and openings n', through the plate n, to furnish a flue for the escape of air from said oven into the combustion-flue N, substantially as and for the purpose herein specified.

5. The employment and arrangement of the solid raised hearth G, which, in combination with the solid front plates of the ash-tube c and fuel-chamber a', prevents the entrance of air to said fuel-chamber above said hearth, substantially as herein shown and described.

6. The employment and arrangement of an opening for the admission of air to the fuel-chamber beneath and in combination with the solid hearth G, in the manner and for the purpose substantially as herein set forth.

7. The employment and construction of a damper or slide for the admission of air to the fuel-chamber, in which the openings are so arranged as that their front or rear edges shall be at an angle with, instead of parallel to, the front or rear edges of the corresponding openings in the plate beneath said damper, substantially as and for the purpose shown.

8. Dropping or offsetting the bottom-plate E at or near the front of the stove, for the purpose of giving increased depth to the ash-pit, which is situated entirely or principally forward of the front plate of said stove, substantially as herein shown and described.

9. The combination and arrangement of the extended and dropped or offset bottom-plate E, extended side-plates F F, solid raised hearth G, and front-plate or door V, for the purpose of producing an ash-pit, substantially as shown and specified.

10. The employment and arrangement of suitable doors, communicating with the hot-air space K, in front of the fuel-chamber A, in combination with the high solid hearth G, substantially as herein shown and for the purpose set forth.

90,851.—John S. Kendall, Northfield, Minn., assignor to himself, Ralph Emerson, and William A. Talcott, Rockford, Ill.—*Railway Stock-Car.*—June 1, 1869.

Claim.—1. The pipe R, arranged outside of the car, so as to conduct the water from the reservoir to the troughs, substantially as and for the purposes herein specified.

2. Hinging said trough to the side or end of the car, so that it can be turned down, out of the way, when not in use, substantially as herein described.

3. The combination of the feed-board V with the car and troughs, arranged substantially as and for the purposes specified.

4. In a railway stock-car, an elongated staple, T, with chain U, when constructed and arranged in such a manner as to prevent the cattle either from lying down or from rearing, substantially as set forth.

90,852.—Nathaniel Keyser, Newton, Iowa.—*Coal-Stove.*—June 1, 1869.

Claim.—The arrangement of the inclined tapering-pipe D, tubes E E, grate C, and ash-box B, within the stove A, substantially as set forth.

90,853.—Hiram Kimball, Randolph, Vt.—*Low-Water Indicator for Boilers.*—June 1, 1869.

Claim.—The combined arrangement of the elevated chamber B, buoyant cylinder F, valve G, and connecting-pipe P, substantially as herein set forth.

90,854.—William Copp and William Wrampelmeier, Louisville, Ky.—*Mode of Treating Wood to Resemble Carved Work.*—June 1, 1869.

Claim.—1. The glue composition, when consisting of the ingredients mentioned, and applied in the manner and for the purpose specified.

2. The filling composition, when consisting of the ingredients mentioned, and applied in the manner and for the purpose set forth.

3. The combination, in the method of pressing wood into shapes to resemble carvings, &c., of the glue and filling compositions, when applied as and for the purpose described.

90,855.—Alphons Krizek, Philadelphia, Pa., assignor to himself, Thomas Richardson, and John Neath, same place.—*Toothpick.*—June 1, 1869.

Claim.—A toothpick having a pointed hook, b, and spoon-shaped projection, c, for the purpose specified.

90,856.—Hugh Lee, Beloit, Wis.—*Railway Stock-Car.*—June 1, 1869.

Claim.—1. The movable transverse portions, subdividing the car-box into compartments, with their attached spouts and feed or water troughs, substantially as herein set forth and described, for the purpose specified.

2. The movable hinged head, neck, and hip partitions, subdividing the car or compartments into stalls, according to the size of the animals or gauge of the railroad, and connected to the transverse partitions, and to the ends or sides of the cars, substantially as herein set forth and described.

90,857.—Josiah Letchworth, Buffalo, N. Y.—*Bridle-Bit.*—June 1, 1869.

Claim.—The combination, with a wrought-iron mouth-piece of a bridle-bit, of the sleeves or mouth-protectors C cast thereon, substantially as set forth.

90,858.—John Cameron Macdonald, Waddon, and Joseph Calverley, Albany Road, Camberwell, England.—*Printing-Press.*—June 1, 1869; patented in England December 6, 1866.

Claim.—1. The combination of the dampening-rollers, their box, and steam-pipe, with the printing mechanism, substantially as described.

2. The combination of the driving-cam, swing-frame, tapes, and vibrating fingers, substantially as described.

90,859.—William Maclean and James H. Harris, Vermont, Ill.—*Buckle.*—June 1, 1869.

Claim.—The loops c' d', formed at the rear end of the buckle a, by means of the bar d, placed centrally between the bars c and e, substantially as described.

90,860.—Henry C. March, Limerick Station, Pa.—*Base-Burning Stove.*—June 1, 1869.

Claim.—1. The grate, consisting of the annular grated portion G, arranged to turn beneath the fire-pot, and a circular grated portion, G', hung to the portion G, and turning with the latter, substantially as described.

2. The combination of the hinged portion G of the grate with the curved rod H, and its stops c.

3. The arrangement of the ring D, and its mica-covered openings, in respect to the annular portion G' of the grate.

4. The said ring D, in combination with the ring I, when both are controlled by the agitating-rod of the grate G, substantially as specified.

5. The doors k, hinged at the top to the casing L of the stove, substantially as and for the purpose specified.

6. The making of the feeder or reservoir R in two halves, adapted to each other, and connected together, substantially as described.

7. The scoop-like fuel-receiver V, and the lid V' of the same, when the two are connected together, and both are applied to the casing and feeder of the stove, for operating substantially in the manner described.

90,861.—Edmond P. McCarthy, San Francisco, Cal., assignor to himself and John Grant.—*Wagon-Spring.*—June 1, 1869.

Claim.—The bolt E, constructed with the head H',

as described, so as to form a countersink above and below it in the cushion or spring, substantially as specified.

90,862.—Frank H. Merrill, Cape Elizabeth, Me.—*Attaching Collars for Stove-Pipes.*—June 1, 1869.

Claim.—The combination of the inner and outer flanged rings, clamped together, without the employment of rivets, or equivalent fastening devices, substantially as described.

90,863.—Rufus S. Merrill and William Carleton, Boston, Mass.—*Lamp-Burner.*—June 1, 1869.

Claim.—In a lamp-burner, such as described, the combination, with the cone and chimney-holder, of a sleeve fitting the wick-tube, and provided with apertures or air-passages, as herein shown and set forth, so as to admit air to the flame when the said sleeve, together with its cone and chimney-holder, is being applied to or removed from the wick-tube, substantially in the manner shown and specified.

90,864.—John F. Milligan, St. Louis, Mo.—*Door-Lock.*—June 1, 1869.

Claim.—1. The detent K, arranged to be moved out of engagement with the tumbler H, substantially as set forth.

2. The tumbler H, pivoted at d', and arranged with the end h^2 operating to unlatch the tumbler G, when combined with the bolt D, detent K, and spring I, substantially as and for the purposes set forth.

90,865.—Augustus Moore and John Aylwerd, Mission of San José, Cal.—*Device for Holding Horses attached to Carriages.*—June 1, 1869.

Claim.—The ring C, to which is attached the strap H, when used in connection with bent arm G, and combined with connecting-rod E and T-shaped bar E′, as described, for the purpose set forth.

90,866.—D. Wellington Onderdonk, Albion, N. Y., assignor to himself, Philo A. Castle, and Andrew S. Onderdonk, same place.—*Thill-Coupling.*—June 1, 1869.

Claim.—The hinged cap C, with its catch E, bolt or rivet J, key-bolt F, with its spring H and rubber *a*, all combined and arranged as herein shown and described.

90,867.—George Palmer, Littlestown, Pa.—*Nut-Lock.*—June 1, 1869.

Claim.—1. Locking a nut upon the bed or washer, by forming a groove or cavity in the bed or washer, and mashing the corners of the nut into the grooves or cavities thus formed, substantially as herein set forth.

2. Locking nuts when extending over the edge of the surface, by mashing down the lower rim, or cutting small projections upon the edge, so as to catch upon the side, substantially as set forth and described.

90,868.—Ebenezer Pierce, Hallowell, Me.—*Bomb-Lance.*—June 1, 1869.

Claim.—1. The independent fire-chamber D, having no means of communication with the magazine, except through the nipple and stationary fuse-tube, substantially as herein shown and described, for the purposes specified.

2. The tail-piece C, consisting of the divided cylindrical shaft, connected with the bomb, and expanded, substantially in the manner and for the purposes herein specified.

3. The bomb-lance herein described, consisting of a lance-head and magazine, with or without the tail-piece, provided with independent fire-chambers and independent hammers, the whole constructed, arranged, and operating substantially as herein described, for the purposes specified.

90,869.—J. F. Piper, Boston, Mass.—*Velocipede.*—June 1, 1869.

Claim.—In a velocipede propelled by the rocking of the rider's chair or seat, and having its guide wheel or wheels in the rear of the seat, the arrangement of the seat-perch *f*, rock-lever *k*, and links *g* and *j*, relatively to each other and to the wheels, substantially as shown and described.

90,870.—Wesley S. Poulson, Cadiz, Ohio.—*Book-Holder.*—June 1, 1869.

Claim.—The book-holder, herein described and shown, when constructed with board A, door B, cross-bar *a*, pins *c*, coiled wire C, ratchet *d*, and pawl *s*, arranged and operating substantially as specified.

90,871.—Timothy J. Power, New York, N. Y., assignor to J. P. Fitch and J. R. Van Vechten.—*Priming Metallic Cartridges.*—June 1, 1869.

Claim.—Charging cartridge-cases with detonate, by means of the centrifugal force generated by revolving the case on its own axis, substantially as described.

90,872.—John Robertson, Brooklyn, N. Y.—*Machine for Making Tin-Lined Lead Pipe.*—June 1, 1869.

Claim.—1. The improved laterally swinging die-holding ram E, having a countersink or cavity, *m*, as and for the purpose specified.

2. The arrangement of the swinging lead ram E, knives *k l*, and stationary frame H, in the manner shown and described.

90,873.—James M. Robnett, Centralia, Ill.—*Bee-Hive.*—June 1, 1869.

Claim.—1. The arrangement of the inclined bottom D, inclined board E, and triangular bar F, forming a chamber outside of the entrance to the main hive, substantially as shown and described.

2. The frame G, constructed as described, with inclined beveled guide *g*, and inclined bar *h*, substantially as shown and described.

3. In combination with the main hive A and frames G G, the frame H, containing the honey-boxes I I, and glass frames J J, substantially as shown and described.

90,874.—Thomas Rowe, New York, N. Y.—*Safety-Valve.*—June 1, 1869.

Claim.—The combination of the piston A, lever F, spring-balance J, lever K, and safety-valve K′, all constructed substantially as shown and described.

90,875.—Martin R. Ruble, Nineveh, Ind.—*Smut-Machine.*—June 1, 1869.

Claim.—1. The trough J, operated in the manner described, and having the transverse ridges *m n*, opening *l*, cockle and sand-screen *o*, and spouts *k k*, all constructed and arranged substantially as herein described.

2. The arrangement of the trough J, suction-spouts O P R S, vertical spout V, discharge-spout W, cylinder E, inner slotted cylinder I, beater H *f f′*, fan G, and the intermediate conductors *k k s* X, all constructed, arranged, and operating substantially as herein described.

90,876.—Theodore Rüdiger, Oberle's Corners, Minn.—*Belt-Coupling.*—June 1, 1869.

Claim.—1. The hinge-plates B, provided with the tapering bevel-edged slots *a*, when used in combination with the dovetail-headed pins *b*, substantially as herein shown and described, to operate as set forth.

2. The pin C, for connecting the two ends of a belt, when provided with one or more bent portions, *c*, substantially as and for the purpose herein shown and described.

90,877.—Salom Henry Salom, London, and Thomas Field, Westminster, Great Britain; said Thomas Field assigns his right to said Salom.—*Apparatus for Clipping the Hair from Horses, &c.*—June 1, 1869.

Claim.—Oscillating knife or cutter-blade *f*, in combination with a curved comb, and with a handle pivoted to the comb-plate, to operate the said cutter, substantially as herein described, for the purpose of clipping and shearing the hair of horses and other animals.

90,878.—Abraham V. Sargeant, Syracuse, N. Y.—*Buckle.*—June 1, 1869.

Claim.—The buckle A, having its tongue *f* carried upon and combined with an eccentric, B, hinged or pivoted upon the center-bar, in such manner that the draught upon the tongue shall cause the eccentric to bite upon the strap, substantially as herein shown and described.

90,879.—John N. Scranton, Bennington, Vt., and Henry H. Parsons, Hoosick Falls, N. Y.—*Dental Plugging-Instrument.*—June 1, 1869.

Claim.—1. The arrangement of the hollow case, with the tool-holder and tool sliding therein, and a lever or system of levers, and a tripping-mechanism connected therewith, by which the hammer is raised and let fall, as herein described and represented.

2. The combination of the spring-catch J, inclined plane, hammer, tool-holder, levers, and spring, when the same are inclosed within the case.

3. The combination of the perforated disk M, and ring B, with a spring-catch *c*, substantially as set forth.

4. The combination of the hammer and spring N, with the bearings X X, resting upon the rubber stops P P.

90,880.—Albert P. Seymour, Jr., Hecla Works, N. Y.—*Hinge.*—June 1, 1869.

Claim.—1. The arrangement and combination of the spurs *c'* on the portion C, and the circumferential ribs or flanches *e'*, upon the portion D of the lower hinge, substantially as shown and described.

2. In combination with the lower hinge, constructed as described, the stud *b''* on the upper hinge, arranged substantially as and for the purpose set forth.

90,881.—Louis Theodor Simon, New York, N. Y.—*Clothes-Pin.*—June 1, 1869.

Claim.—The coiled spring, having its two ends projecting in opposite directions, and the jaws B C, having recesses for said ends at corresponding points, when the two parts are combined together to operate as described.

90,882.—James Simpson, Libertyville, Ill.—*Churn.*—June 1, 1869.

Claim.—1. The combination of the frame A B C, platform W, suspended with adjustable straps E, spring D D, rods I, ears P, and adjustable bearings F, as set forth.

2. The combination of the braces B, bearings R, fan S, spring D D, churn G, and rod I, as set forth.

90,883.—Orren M. Smith, Philadelphia, Pa.—*Umbrella-Runner.*—June 1, 1869.

Claim.—An umbrella notch or runner in which the grooved or slotted flange is made of three sheet-metal rings, formed and adapted to each other, substantially as and for the purpose herein set forth.

90,884.—William G. Snook, Corning, N. Y., assignor to himself, A. H. Gorton, and O. C. Patchell, same place.—*Steam-Engine Piston.*—June 1, 1869.

Claim.—1. The construction of the hollow-stemmed valves I, substantially as shown and described.

2. The combination and arrangement of the hollow-stemmed double-vented valves I, sections A A' of the spider, and the spring K, substantially as shown and described.

3. The combination of the eccentric D, the ratchet-wheel F, and movable section of piston C, substantially as shown and described.

4. The arrangement of the springs K, with reference to the valves I, substantially as shown and described.

5. The arrangement of the apertures in the stems of valves I, with reference to the passages in the sections of the spider, leading to the recesses *a* beneath the packing-rings, substantially as shown and described.

90,885.—Gaylord S. Stanard, Buffalo, N. Y.—*Base-Burning Stove.*—June 1, 1869.

Claim.—1. The lateral openings *c c*, near the base of the magazine, in combination with the air-supply flue E, so as to give the draught an inward and downward direction through the fire, as described.

2. The gas-escapes *s s*, communicating directly with the flue E, so as to cause the return of the gases to the fire, as described.

3. Suspending the magazine by the flange *a*, at the top, in connection with the guide-ring *i* at the bottom, so that it may be vibrated, substantially as described.

90,886.—Ernst Gottlieb Starck, Chicago, Ill.—*Still for Alcohol.*—June 1, 1869.

Claim.—An improvement in apparatus for distilling alcohol, consisting of two or more pans, A and B, with cold-water connecting-tubes *n*, each having upper and lower concave bottoms, *b* and *d*, with an intervening plate, *e*, provided with central tube *e*, also with cups *f* and pipe *g*, the whole constructed and arranged in connection with the pipes D, E, C, and *h*, substantially as herein shown and described, for the purpose set forth.

90,887.—John D. Stewart, La Porte, Ind.—*Steam-Balanced Slide-Valve.*—June 1, 1869.

Claim.—1. The construction of the adjustable upper valve-seat, with its projections and apertures, arranged substantially as shown and described.

2. The combination of the adjustable valve-seat D, section of steam or valve chest A, and valve C', substantially as shown and described.

3. The arrangement of the glands E E', packing *a a*, and adjustable seat D, substantially as shown and described.

4. The arrangement of the stops or projections F F upon the plate of section A of the steam-chest, and at the ends of the adjustable valve-seat D, substantially as shown and described.

90,888.—Albert Stockwell, Providence, R. I.—*Loom.*—June 1, 1869.

Claim.—The buffer *m*, or its equivalent, secured above the lathe-beam, to receive the stroke of the picker *h* at or near the upper end of said picker, substantially as described, for the purpose specified.

90,889.—George W. Swett, Troy, N. Y.—*Cooking-Stove.*—June 1, 1869.

Claim.—1. The ribs *b b*, arranged in the case E, that contains the water-reservoir, for the purpose of guiding the heating-gases so that they cannot escape without having entirely surrounded the water-reservoir, said ribs *b* being arranged in combination with the rib *p*, or with the ribs *q q*, or with both, substantially as described.

2. The apertures *e* and *f*, in the back of the stove, when arranged in combination with the aperture *i* or *l*, and with the ribs *b*, substantially as described, all operating as set forth.

90,890.—William Trump, Louisville, Ohio.—*Attachment for Wagon-Pole.*—June 1, 1869.

Claim.—1. The draught-bars E F, when used in combination with the pole A, with slotted hole P, bolt G, draught-pin H, and double-tree L, substantially as and for the purpose specified.

2. The combination of the draught-bars E F, bolt G, pole A, with slotted hole P, draught-pin H, clevis K, spring M, and double-tree L, the several parts being constructed, combined, and arranged substantially as and for the purpose specified.

90,891.—Hiram Tucker, Newton, Mass.—*Coating Articles of Iron-Ware.*—June 1, 1869.

Claim.—Outer-coating with oil-varnish articles of iron bronzed or colored by the process, substantially as described.

90,892.—Hiram Tucker, Newton, Mass.—*Surfacing Articles of Cast Metal.*—June 1, 1869.

Claim.—As a new manufacture, articles formed with raised and sunken surfaces, by casting, coated substantially as described.

90,893.—Hiram Tucker, Newton, Mass.—*Electro-Gilding Iron.*—June 1, 1869.

Claim.—1. The improvement in electro-gilding

iron surfaces by outer coating the gold-deposition, substantially as described.

2. Articles of iron-ware so gilded by electro-deposition, and outer-coated, substantially as described.

90,894.—HIRAM TUCKER, Newton, Mass.—*Electro Plating and Gilding Cast Iron.*—June 1, 1869.

Claim.—1. The improvement in surfacing cast-iron articles, by show coating them with a thin electro-deposit, and varnishing the same, substantially as described.

2. Cast-iron articles, having a thin show-coat of deposited metal protected by varnish, substantially as described.

90,895.—WILLIAM HARLOW TYLER, Conneautville, Pa.—*Plow.*—June 1, 1869.

Claim.—1. In combination with a beam and land-side, the separate and independent plow-points, shares, and mold boards, arranged to vibrate on horizontal axis or axes, substantially as described.

2. The sliding-bolt, arranged in or over the land-side, in combination with the braces which connect the vibrating points, shares, and mold-boards to the land-side, substantially as described.

3. In combination with the vibrating mold-boards and their appurtenances, the pronged lever Q, for vibrating and locking the mold-boards, substantially as described.

4. Making the revolving cutter or coulter jagged or toothed, substantially as described.

5. The removable sub-coulter W, described.

90,896.—FREDERICK VALENTINE, Buffalo, N.Y., assignor to "PRATT & LETCHWORTH," same place.—*Snap-Hook.*—June 1, 1869.

Claim.—1. The construction and arrangement of the recess and mortise *a a'*, bearings *m*, *n*, and *e*, flat spring *f*, and lock-trigger *b b'*, as herein described, and for the purpose set forth.

90,897.—SAMUEL VANSTONE, Providence, R. I., assignor to himself and JOHN W. HOARD, same place.—*Nut-Bar.*—June 1, 1869.

Claim.—The compound nut-bar herein described, to be afterward divided into nuts, substantially in the manner described.

90,898.—CHARLES B. VAN VALKENBURGH, Valatie, N. Y.—*Machine for Making Paper.*—June 1, 1869.

Claim.—1. Making pulp-paper of any kind, by conveying it from the vat A to the first drier without first or second press-felts or row-cloth, substantially in the manner herein set forth.

2. The combination and arrangement of forming-cylinder B, coucher C, and press-rolls E E', substantially in the manner and for the purpose herein described.

3. Sloping or inclining the press-rolls E E' in relation to the pulp-vat A, and to each other, substantially in the manner and for the purpose herein set forth.

4. The construction and arrangement of frame F F F, &c., for the support of the rolls E E' and coucher C, in the manner or substantially in the manner set forth.

90,899.—JOHN VIALL, Somerville, Mass.—*Locomotive Spark and Smoke Conductor.*—June 1, 1869.

Claim.—1. A smoke and spark conductor, having a downward draught, as described, and provided with deflecting-tubes, arranged to convey air from the exterior down within the conductor, substantially as specified.

2. The arrangement of the inlet *a*, the crown or head *b*, and the side or leg flues *d d*, with their deflecting tubes and bonnets, operating to establish a downward draught, essentially as herein set forth.

3. The combination, with a smoke and spark-conductor, provided with air-deflecting tubes, to create a downward draught through it, as described, of a lower screen or screens, arranged to swing or open and close, substantially as and for the purpose herein specified.

90,900.—WILLIAM A. WEBSTER, Westford, Mass.—*Wooden Shoe.*—June 1, 1869.

Claim.—1. A shoe formed of a hollow toe-piece made of one piece of wood, and hinged to a shank-piece, of which the sole and upper are formed of one piece of wood.

2. A toe-piece, of which the upper and sole are one piece of wood, when made for application to, or to form part of a hinged or jointed shoe, substantially as described.

3. The shank-piece, having its upper and sole one piece of wood, to be hinged to the toe-piece, substantially as shown and described, and whether such shank-piece is made integral with the heel or quarter or as a separate piece fastened thereto.

4. A quarter and heel made of one piece of wood, (whether forming an integral part of the shank or not,) when made for application to, or to form part of, a hinged or jointed shoe, substantially as described.

90,901.—NORMAN WESTCOTT, Morrisville, N.Y.—*Whiffletree.*—June 1, 1869.

Claim.—A whiffletree, having apertures *a*, screws with hooked heads thereto, as described, and staples *s*, constructed and operating substantially as and for the purposes specified.

90,902.—H. F. WHIDDEN, South Abington, Mass.—*Shoe-Nail.*—June 1, 1869.

Claim.—1. An improved cut shoe-nail, having a round frusto-conical head, a tapering shank, and serrated corners or edges, substantially as shown and described.

90,903.—A. M. WHITE, Thompsonville, assignor to AMERICAN BRUSH COMPANY, New Haven, Conn.—*Machine for Making Brushes.*—June 1, 1869.

Claim.—1. The table C, arranged upon a universal joint on the spindle B, so as to be adjusted to present the brush-back to the bit or tufting-apparatus, substantially in the manner and for the purpose set forth.

2. The holder E, perforated or indented corresponding to the design of the brush to be produced, so as to be adjusted upon the point *a*, on the table, substantially as and for the purpose set forth.

90,904.—A. S. WHITTEMORE, Willimantie, Conn.—*Thrashing-Machine.*—June 1, 1869.

Claim.—1. The arrangement of the shaft and flails, with relation to the floor of the machine, and to the support E, as that the thrashed straw, falling from the latter, shall lie beyond the reach of said flails, as and for the purpose herein set forth.

2. The pivot-rods *a*, carrying the flails, arranged relatively to each other, to the flails, and to the main shaft, and in combination with the disks C, substantially as herein described, to prevent the falling back of the flails upon the shaft, and to protect the shaft from the straw.

90,905.—L. H. WILKINSON, Michigan City, Ind.—*Cultivator.*—June 1, 1869.

Claim.—1. The rod G, in combination with the lever V, sheave-block and pulleys H, beams B B, shovels L, standard N, and catch R, the whole being constructed and arranged substantially as and for the purpose set forth.

2 The combination of the loop-bolts C, beams B, B, shovels L, and cross-pieces D E, the latter having a series of holes through them, for adjusting the beams, substantially as herein described.

3. The combination of the frame A A, cross-pieces D E, loop-bolts C, beams B B, shovels L, and axle-tree arms F, said arms being adjustable on the frame, and constructed as and for the purpose described.

90,906.—JOHN HARVEY WILLIAMS, New York, N. Y.—*Rod for the Construction of Bird-Cages.*—June 1, 1869.

Claim.—The non-corrosive rod for bird-cages, consisting of a glass tube having an internal flexible metallic core, combined together as described, as a new article of manufacture.

90,907.—SETH WILMARTH, Malden, Mass.—*Planing-Machine.*—June 1, 1869.

Claim.—1. In combination with the cross-bar E, the cross-heads L and O, standing at right angles to

each other, and the tool-holders W and N, substantially as described.

2. The shaft K, with its beveled gearing *l*, and the vertical shaft I, with its gearing *h k*, in combination with the screw H, for working either or both of the cross-heads L and O, standing at right angles to each other, substantially as set forth.

90,908.—Solomon J. Woland, Lincoln, Ill.—*Corn-Marker.*—June 1, 1869.

Claim.—A corn-marker having wheels B and H, bolster C, sectional and pivoted axle E, pins *g*, and curved reach D, constructed, arranged, and operating substantially as specified.

90,909.—George W. N. Yost, Corry, Pa.—*Harvester.*—June 1, 1869.

Claim.—1. The combination of the bands *r* with the cylinder R S of the cases of the body A and A′, as described, for grass and grain cutters.

2. The combination of the loops *r′*, attached to the floating-bar S, with the cylinders R of the cases of the body A and A′, as described, for grass and grain cutting machines.

90,910.—David Stuart and Lewis Bridge, Philadelphia, Pa.—*Fire-Place Stove.*—June 1, 1869.

Claim.—1. A fire-place stove, having at the base a flange or hearth-plate, B, arranged substantially as described.

2. The hearth-plate B, forming a continuation of the bottom-plate of the stove, and having in front a perforated flange, *b*, to which air is admitted beneath the said hearth-plate and bottom-plate, all substantially as described, for the purpose specified.

3. The hearth-plate B, arranged to rest with its flange *b* on the floor, and so connected to the stove as to be detachable therefrom, for the purpose specified.

4. A water-reservoir, *q*, placed within the hot air chamber of a base-burning stove; which contains the feeder, so as to communicate both with the lower and with the upper chamber, for the purpose specified.

90,911.—Moses Adams, Chilmark, Mass.—*Seed-Planter.*—June 8, 1869.

Claim.—1. The ground-wheel, provided with a number of changeable pins, to regulate said distances, in combination with elbow-lever F, spring G, driving-rod T, slide B, operating substantially as set forth.

2. The adjustable seed-driver C, constructed and operating as and for the purpose described.

3. The crank-agitator A, and driving-rod T, constructed and operating substantially as set forth.

4. The combination of vertical slides E and D, and screws L L, slide B, seed-driver C, crank-agitator A, driving-rod T, elbow-lever F, spring G, with the pins in the ground-wheel, constructed and operating as and for the purpose set forth.

90,912.—Thomas K. Anderson, Hornellsville, N. Y.—*Stove-Pipe Damper.*—June 8, 1869.

Claim.—The combination of the oval damper B, connecting-rod F, slide E, or its equivalent, with the compensating-strap D, as described, when arranged to operate in the manner substantially as herein set forth.

90,913.—Hobart G. Arnold, Rochester, N. Y.—*Sash-Lock.*—June 8, 1869.

Claim.—Slot B, in combination with pin *n*, point O, and flange R, or their equivalent, substantially as an improvement to my patent reissued December 31, 1867.

90,914.—Joseph H. Baird, Oakville, Conn.—*Conveyer, to Transfer Blanks from a Punching-Press.*—June 8, 1869.

Claim.—The improved conveyer, of the form described, constructed, arranged, and operating substantially in the manner and for the purposes set forth.

90,915.—Frank E. Barr, Albion, assignor to himself and Julius J. Barr, Elba, N. Y.—*Three-Horse Equalizer.*—June 8, 1869.

Claim.—A three-horse equalizer, composed of the grooved pulleys A and D, with their bands *a* and guards *c*, the chain H, and clevises *d*, *e*, *g*, and *h*, together with the double-trees C, C, and C′, combined and arranged in the manner shown, and for the purposes herein set forth and described.

90,916.—William Barry, Carthage, N. Y.—*Measuring-Can for Liquids.*—June 8, 1869.

Claim.—1. The arrangement of the measuring-chamber, opening directly into the base or bottom, and forming part of the can or other vessel with which it is employed, substantially as and for the purposes shown and set forth.

2. The combination, with the liquid-containing vessel and measuring-chamber, arranged as specified in preceding clause, of the plunger and valve located beneath said plunger, together with the rods for actuating the same, having their common bearing in the cover of said vessel, and arranged to operate as herein shown and described.

90,917.—Robert Briggs, Philadelphia, Pa.—*Mode of Forming the Connections of Gas-Burners.*—June 8, 1869.

Claim.—The forming of inlet and outlet connections to gas-purifiers, with central and annular openings, or in one casting, with passages, substantially as and for the purpose described.

90,918.—Robert Briggs and Peter Muntzinger, Philadelphia, Pa.—*Center-Valve of Gas-Works.*—June 8, 1869.

Claim.—The combination of the conical plug and its seat with the valve-body and its appliances, substantially as and for the purpose described.

90,919.—Elisha Broad, St. Anthony, Minn.—*Attaching Augers to Handles.*—June 8, 1869; antedated June 3, 1869.

Claim.—The plate A, when constructed as shown, with the socket E, as herein described.

90,920.—J. W. Brooks, Boston, Mass.—*Corset Skirt-Supporter.*—June 8, 1869.

Claim.—1. The combination of the supporter H I J K with a corset, A, when said supporter is constructed and arranged to operate as herein described and represented.

2. The combination of the contracting and expanding springs H I and J K with the flexible but non-elastic portion I J, between said springs, for forming a removable and replaceable skirt-supporter, substantially as and for the purpose described.

90,921.—John Bryan, Lebanon, Ill.—*Machine for Plowing and Breaking Up Ground.*—June 8, 1869.

Claim.—1. The pivoted frame or hounds A A, in combination with the plow-beams and main-frame J J, as constructed and arranged.

2. The lever and link *i i′*, in combination with the hounds A A, and main-frame J, as shown.

90,922.—Albert Carter, New York, N. Y., assignor to himself and George K. Ryan, same place.—*Cord-Tightener for Curtain-Fixtures.*—June 8, 1869.

Claim.—Clamping-buckle, formed by the cross-piece *d* and frame *c*, in combination with the grooved segment or wheel *a*, and the adjusting-strap, as and for the purposes set forth.

90,923.—Benjamin Carter, Middletown, Conn.—*Bosom-Pad.*—June 1, 1869.

Claim.—An adjustable spring-supporting frame for bosom-pads, consisting of the springs *a*, eyes *e*, and elastic cord D, combined substantially as described and for the purpose set forth.

90,924.—Thomas J. Chubb, Williamsburgh, N. Y.—*Furnace for the Manufacture of Iron and Steel.*—June 8, 1869.

Claim.—1. Constructing furnaces with a series of flues, to admit separate, continuous, and simultaneous currents of gases and air, to pass onward, unmingled, to a place of combustion, in which said separate, continuous, and simultaneous currents of mingled gases and air are heated at one and the

same time, by the product of their joint combustion, escaping through another series of flues, divided from the incoming gases and air by thin walls or partitions, through the medium of which the heat of the outgoing gases is transmitted or imparted to the incoming gases or air, on their way to the combustion-chamber, when applied to this peculiar mechanical construction and arrangement of furnace.

2. Placing the flues or tubes in the heating and intensifying chamber in sets or clusters, each set so arranged with relation to the other as that the product of combustion will pass through them alternately, and in reverse direction.

3. Conducting the heated gases and air from the heating and intensifying chambers through a series of separate alternating flues, L M, arranged so as to admit the gases and air to enter at one and the same side of the furnace, by which the flame will be deflected upon the metal during the operation of melting and refining.

4. Setting the arch of the melting and refining chamber at such an angle, with respect to the supply and exit flues, as that the current of flame will be directed downward, and caused to impinge against the metal during the operation of melting and refining.

5. Dividing the melting-chamber into two or more parts, by building up from the bed of the furnace one or more low partitions, so as to form a number of small melting-chambers within the body of one furnace.

6. Arranging a number of small melting-chambers within the body of one furnace, so that the metal melted in one of these chambers will flow or can be otherwise transferred directly to one of the other chambers, as the process of melting and refining may require.

7. Constructing the melting and refining chambers of different depths, and the bottom of each at a slight incline, so that the lowest part of the bottom of the upper chamber will be on a level, or nearly so, with the highest part of the bottom of the one next it, and providing each chamber with a gate or outlet at the lowest part of its bottom, communicating with the contiguous chamber, to facilitate the transfer of metals from one to the other.

8. Placing at each end of the small melting and refining chambers a door, leading from the outside of the furnace thereinto, by which the interior of each may be reached, and through which the manipulation of metals may be carried on.

9. Making the top of the combustion-chamber or the melting and refining chamber removable, by securing the brick composing it within the gripe of a strong iron clasp.

10. The valves or dampers *g g'*, arranged for the purposes set forth.

11. The construction, combination, and arrangement of the several parts of this furnace and its appendages, substantially in the manner herein shown and set forth.

90,925.—Thomas J. Chubb, Williamsburgh, N. Y.—*Mode of Making Cast-Steel Castings.*—June 8, 1869.

Claim.—1. Producing cast-steel castings by means of or aid of highly heated gas or gases and heated air, as herein described.

2. The process of converting or making cast steel herein described, with the process of making cast-steel castings.

3. The application and combination of a gas-producer and an air-heating and gas-heating apparatus or furnace, and a stationary melting and refining vessel or chamber for melting and refining metal for making cast-steel castings.

90,926.—Thomas J. Chubb, Williamsburgh, N. Y.—*Process of Making Cast Steel.*—June 1, 1869.

Claim.—1. Reducing crude cast or other carbureted iron into cast steel, by means substantially as described.

2. Submerging natured, malleable, or wrought iron into a bath of cast iron, or into a mass of molten carburet of iron, and converting and refining the same into cast steel, substantially as described.

3. Submerging natured iron ore, or partly natured iron ore, into a bath of cast iron or other molten carburet of iron, and reducing, refining, and converting the mass into cast steel, by means substantially as described.

4. Heating air and heating gas, or reheating gas, previously to ignition or combustion, and employing them in the process of making steel, substantially as described.

90,927.—Thomas J. Chubb, Williamsburgh, N. Y.—*Process of Melting and Refining Iron for Malleable Iron Castings.*—June 8, 1869.

Claim.—1. The application of superheated gas and highly heated air, for the purpose described.

2. The application and combination of a gas generator, a gas and air heating furnace or apparatus, and a melting and refining chamber, for the purpose set forth.

3. The process described of refining crude iron with the process of making malleable iron castings.

90,928.—Thomas J. Chubb, Williamsburgh, N. Y.—*Making Blooms of Steel and Wrought Iron.*—June 8, 1869.

Claim.—1. Making blooms of low steel, similar to puddled steel, by the means herein described.

2. Making blooms of wrought iron, similar to puddled iron, by the means herein described.

90,929.—S. H. Clapp, Malden, Mass.—*Brick and Tile Kiln.*—June 8, 1869.

Claim.—The kiln as shown, provided with end fire-chambers D Di, chimney-stacks E Ei Eii, &c., with fire-places at their base-burning chambers C Ci Cii Ciii, and flues O Oi Oii Oiii, all constructed and arranged as and for the purposes herein set forth.

90,930.—Hugh Coll, Millville Borough, Pa.—*Steam-Operated Water-Ejector.*—June 8, 1869.

Claim.—The combination of the pear-shaped heads *a* and *e* with the injection-pipe *c*, arranged substantially as and for the purposes hereinbefore set forth.

90,931.—Edwin Cowles, Cleveland, Ohio.—*Machinery for Cutting Cards.*—June 8, 1869.

Claim.—1. An open-bottom chute, composed of a fixed plate, G, and an adjustable plate, G^1, flanged on their bottom edges, substantially as and for the purposes described.

2. The arrangement of the adjustable chute G^1, so as to serve also as a gauge-plate for regulating the widths of cards to be cut, substantially as described.

3. Stiffening-plates F F', in combination with a card-cutter, operating substantially as described.

4. The lip or offset *n*, formed on the yielding-plate F, in combination with the movable shear-blade C^3, and arranged to be acted upon by this blade, substantially as described.

5. The set-screw *p*, and spring *o*, applied to plates F F', substantially as and for the purposes described.

6. The fixed guide *e* and yielding pressure-guides *f f*, arranged and operating in combination with card-cutting mechanism, substantially as described.

7. Spring *t*, arranged and operating substantially as and for the purpose described.

8. The frictional feed-belt D', or its equivalent, in combination with card cutting and guiding machinery, constructed and operated substantially as described.

90,932.—James J. Crowley, San Francisco, Cal.—*Grain Separator and Mixer.*—June 8, 1869.

Claim.—1. The device for regulating the feed, consisting of the hinged bottom *a*, the lug *b*, and plate *c*, operated by the screw *d*, substantially as herein described.

2. The oscillating-frame K, with the screens D, F, G, and I, and the discharge-trough E and J, for separating and conveying the different classes, substantially as herein described.

3. The mixing-cylinder H, with its stirrer P and the overflow-trough *h*, substantially as and for the purpose described.

4. In combination with the mixing-cylinder, the tank R, with its adjustable gate S, for supplying the solution, substantially as described.

5. The vertically shaking screen W, with its operating-cam Y, for partially drying the grain and discharging it, substantially as herein described.

90,933.—Edward M. Davis, Pittsburgh, Pa., assignor to George R. Duncan, same place.—*Rolling-Apparatus.*—June 8, 1869.

Claim.—The groove *e*, extending spirally around one or both of a pair of cylindrical metallic rolls, arranged as herein described, in combination with a "cut-away," or depression at the termination of the groove, for the purpose of delivering the metal from the machine.

90,934.—Royal E. Deane, Brooklyn, N. Y.—*Draught-Regulator for Heating-Apparatus.*—June 8, 1869.

Claim.—1. The combination of a steam-chamber, float, and door, connected to the float in any convenient manner, when the same shall be constructed and operate substantially as and for the purposes set forth.

2. Combining, with the float, the lever operating the valve of the water-supply pipe, substantially as and for the purpose set forth.

3. The combination with the inner case C, of the pipe S, connecting directly with a furnace, as and for the purpose specified.

90,935.—I. A. Dewar, D. S. Smith, and R. A. Brasher, Franklin, Pa.—*Coupling for Pump-Rods.*—June 8, 1869.

Claim.—The rod A, socket B B, corrugations 1, 2, 3, 4, 5, and the wedge E, when constructed as described, for the purposes set forth.

90,936.—Edwin P. Dickey, Racine, Wis.—*Fanning-Mill.*—June 8, 1869.

Claim.—1. Adjustable rod *f*, in combination with metal pieces W, when those metal pieces project out over the shoe, and the openings for the rod *f* are made open like hooks, substantially as and for the purpose described.

2. Tail-board V, in combination with metal grooves *h* and knobs *g*, when made and arranged substantially as described.

3. Cover Z, in combination with sieve, attached to spout N, substantially as and for the purpose described.

4. Cover Y, substantially as and for the purpose described.

5. Adjustable grader and spout N, substantially as and for the purpose described.

6. Adjustable grader *i*, which, when hauled forward, lets the grain run out the back side of the mill, substantially as described.

7. Hanging spout *b* on to the shoe, substantially as described.

8. A hurdle, when made as shown by Fig. 6, with meshes in squares, three and one-half in number to the inch, each way, in combination with the stiles at the head of the hurdle, of different widths, the upper stile the narrowest, and the next a little wider, and so on, for the purpose of cleaning oats from barley, substantially as described.

90,937.—James Duff, Peoria, Ill., assignor to himself and E. B. Pierce, same place.—*Hanger for Shafting.*—June 8, 1869.

Claim.—The oil-box B, when cast with the bracket A, and having therein center-bearings *i i*, in combination with the journal-box E, provided with the rib *k*, projections *m m* and *q q*, and wick-openings *n n* on the side thereof, the whole constructed substantially as herein described and shown.

90,938.—John Eck, Medora, Ind.—*Tug-Hook.*—June 8, 1869.

Claim.—The improved safety trace-hook herein described, consisting of the parts A and B, constructed and operating substantially as set forth.

90,939.—Joseph Foltz, Valley Mills, Ind.—*Harrow.*—June 8, 1869.

Claim.—The teeth D, constructed as shown, and attached to the supplementary adjustable frame E F, all arranged to operate substantially as and for the purpose set forth.

90,940.—Isaac N. Forrester, Bridgeport, Conn.—*Pump.*—June 8, 1869.

Claim.—The combination of the piston, consisting of the tubes *f f*, disk *i i*, and main tubes B and C, with the main cylinder A A, when they are arranged substantially as herein described and set forth.

90,941.—Clinton T. Frost, Medfield, Mass.—*Bedstead, Seat, &c.*—June 8, 1869.

Claim.—A device for constituting bed-bottoms, spring-seats, &c., composed of the cross-bars *a a'*, and *a a'*, pivoted together, and provided with springs, and supporting upon their upper and free extremities the slatted frame *d*, such frame being fixed to one extremity of each arm, and resting upon anti-friction rollers applied to opposite ends thereof, the whole being substantially in manner as before explained.

90,942.—George M. Granger, Memphis, Mich.—*Wash-Boiler.*—June 8, 1869.

Claim.—The channels or tubes G, with openings F and H, in combination with the cradle B and hook I, and any suitable cover and boiler, when constructed, arranged, and operating substantially as aforesaid.

90,943.—Francis L. Hagadorn, Baltimore, Md.—*Pinking-Machine.*—June 8, 1869.

Claim.—The corrugated circular knife A, or its equivalent, secured and adjusted substantially in the manner hereinbefore described, and for the purposes herein set forth.

90,944.—Charles Havard and Manuel X. Harmony, London, England.—*Process of Preserving Meat, Fowl, Fish, &c.*—June 8, 1869.

Claim.—To preserve meat, fowls, fish, fruit, &c., by extracting therefrom the air, and when so, impregnate it with the gelatine, as above described, using for that purpose the aforesaid process and substances, or any others substantially the same, and which will produce the intended effect.

90,945.—James E. Hills, Orange, Mass.—*Key-Fastener.*—June 8, 1869.

Claim.—1. The combination of the screw B, the duplex-clawed nut A, and the screw-supporter C, the whole to be employed with a key in manner and for the purpose as set forth.

2. The screw-supporter, as made with the hook and the concavo-convex projection, as specified.

90,946.—Moses Jerome, Dixon, Ill.—*Machine for Scutching and Thrashing Flax.*—June 8, 1869.

Claim.—1. The combination of feed-rollers for holding the material while being treated, and slowly feeding it to its work, with yielding wings, or beating blades, substantially as described.

2. A grating or separator, G, or its equivalent, with yielding wings or beaters, substantially as described.

90,947.—Edgar A. Jones, Sturgis, Mich.—*Velocipede.*—June 8, 1869.

Claim.—1. The tiller G, curved for the purpose of bringing its handle over and in front of the rider, in connection with the guiding-wheel F, substantially as and for the purpose aforesaid.

2. In combination with the weighted stirrups I, the heel-straps *i*, when constructed and operating as above described.

3. In combination with the above-named tiller G, guiding-wheel F, weighted stirrups I, and heel-straps *i*, the arrangement of the wheels A, cranked axle B, rotating in the bearings *c* of the bifurcated reach C, hollow standard D, pawls *n*, ratchets *o*, and seat H, when constructed and operating as and for the purpose above set forth.

90,948.—James G. Kenyon, Providence, R. I.—*Stud.*—June 8, 1869.

Claim.—The improved shirt-stud herein described, consisting of the front A, with its slotted shank, the hollow back C, provided with a spring, and the back-shank B, the whole arranged and operating substantially as described, for the purposes specified.

90,949.—THEODORE T. KINSEY, deceased, Philadelphia, Pa., (MATILDA H. KINSEY and JAMES GILKYSON, administrators.)—*Lightning-Rod.*—June 8, 1869.

Claim.—A lightning-conductor, the body of which consists of two strips of sheet-metal folded longitudinally, riveted together through their angles, and twisted into a spiral form, substantially as set forth.

90,950.—HENRY E. MARCHAND, Louisville, Ky., assignor to ROBERT E. CROSS, same place.—*Corset.*—June 8, 1869.

Claim.—A corset provided with the elastic belt A, covered plate B, buckle C, and diagonal elastic bands I J, all constructed, arranged, and operated in the manner and for the purpose set forth.

90,951.—JOSIAH V. MEIGS, Washington, D. C.—*Metallic Cartridge.*—June 8, 1869.

Claim.—The combination, as set forth, of the bar-anvil, with the square-edged depression on the bottom of the cartridge-case, constructed, arranged, and operating as and for the purpose set forth.

90,952.—JOHN E. MURRAY, Provincetown, assignor to himself, Z. D. RICH, Somerville, and JOSEPH HALL, Cambridge, Mass.—*Shifting-Cleats or Ring-Bolts, &c.*—June 8, 1869.

Claim.—A shifting-cleat, ring-bolt, or hook, composed of socket A, screw-plug B, burr or nut C, cleat D, or ring-bolt E, all constructed, arranged, and operated in the manner as and for the purposes set forth.

90,953.—JOHN J. NAYLOR, Brighton, Mich.—*Seeder and Fertilizer.*—June 8, 1869.

Claim.—The construction of an apparatus combining the wheels A, axles B, frame C, hopper D, cylinder E, spurs F, shaft H, pulleys I and J, belts K, gate M, conductor N, distributing-box O, cylinder P, conveyer R, geared wheels T and V, pinion U, shaft W, bearings X, belt Y, pulley Z, slide A″, and lever B″, when arranged and operating substantially as and for the purposes herein set forth and shown.

90,954.—JAMES NEALE and PETER BECK, Bridgeport, Conn.—*Sewing-Machine.*—June 8, 1869.

Claim.—The combination of the loose stud *a* and the straight needle *b* with the parallel or rectilinear guide *d*, and needle-bar A, when they are constructed, arranged, and fitted for use, substantially as herein described and set forth.

90,955.—AUGUST F. W. PARTZ, Oakland, Cal.—*Process of Collecting Gold and Silver from Ores.*—June 8, 1869.

Claim.—1. Placing the positive electrode at the bottom of the vessel containing the ore-pulp, and imparting to the said vessel and electrode a swinging or shaking motion, which will cause the heavier particles of the ore to settle, and thus be brought and kept in contact with the said electrode, substantially in the manner and for the purpose herein specified.

2. The use of metallic tubes as negative electrodes, substantially as described.

90,956.—HORATIO L. PEIRCE, Taunton, Mass. *Ring for Spinning-Machine.*—June 8, 1869.

Claim.—A spinning-ring, having a steel lining, constructed and applied substantially as herein described.

90,957.—DAVID S. QUIMBY, Jr., Brooklyn, N. Y., assignor to DAVID S. QUIMBY, same place.—*Fire-Place Heater.*—June 8, 1869.

Claim.—1. The double dome *e h*, forming the top of the cylinder *d*, and also a flue, that regulates the escape of the products of combustion, substantially as set forth.

2. The evaporating-pan, introduced into the air-space at the side of the ash-pan, and below the base *b*, as and for the purposes specified.

3. The hood *s*, extending from the front of the frame, and provided with the register *n*, in combination with the heater-cylinder *d* and register *l*, as and for the purposes specified.

90,958.—GEORGE RICHARDSON, Lowell, Mass.—*Step and Bearing for Vertical Shafts.*—June 8, 1869.

Claim.—1. The cavity E, in the step B, and upper bearing A, for a vertical shaft; that is, having the upper portion of the sides of the cavity E contracted or brought in toward the shaft, to form a top or cover for the cavity; also, having an elevated edge or lip, G, raised from the bottom of the cavity, and surrounding the shaft, all arranged substantially as described, and for the purposes set forth.

2. The ring or circle F, of felt, or other similar porous material, placed within the cavity E, in combination with the shaft and steps A and B, substantially as and for the purpose set forth.

90,959.—WARREN RICHARDSON, Colfax, Cal.—*Device for Turning Saw-Logs.*—June 8, 1869.

Claim.—The blocks B B, sliding vertically in mortises, and having beveled tops, in combination with the eccentries I I and shaft C, the whole being constructed and arranged substantially as and for the purpose set forth.

90,960.—EZEKIEL ROOT, Parma, Mich.—*Miter-Box.*—June 8, 1869.

Claim.—1. The arrangement of the hollow saw-guides M, connecting-brace L, laterally adjusting screw R, and eccentric rings S, secured in place by the jam-nut T, flanged sleeve P, and rod N, connected with it, spring O, and vertically adjusting screw-nut Q, upon the lower threaded portion of said guide M, when constructed and operating as and for the purpose aforesaid.

2. In combination with the above-described guides, and their several parts before mentioned, the cradles J, adjusting-screw K, circular beds I, disk B, bed-plate A, dogs E E, stop F, rest G, and movable gauge H, constructed, arranged, and operating as and for the purpose before set forth.

90,961.—ROGER SANDIFORD, Joliet, Ill.—*Combined Land-Roller, Marker, and Harrow.*—June 8, 1869.

Claim.—1. The rocking coupling-box *c*, frame-joint boxes *e*, and tongue-seat *u*, and brace-box *x*, in combination with the round shaft *b*, arranged, operating, and constructed as set forth.

2. The metal seat *u* for the tongue, as set forth, in combination with the round shaft *b*, for the purpose described.

3. The metal harrow-disk *h*, with projections or flanges, as set forth, for the purpose described.

4. The crooked center-arm *i*, in combination with the main frame and chains, as set forth.

5. The lever and crooked bar *r*, with roller *o*, for the purpose described.

6. The outer wheels *n n*, in combination with the center wheel *o* and harrow-frame *d*, when arranged, operating, and constructed as set forth.

90,962.—OSCAR SCIDMORE, Albany, N. Y.—*Medical Compound.*—June 8, 1869.

Claim.—The composition above described, compounded of the several medicinal substances named, and in the proportions specified, substantially in the manner set forth, for the purpose specified.

90,963.—WILLIAM SEYBOLD, McKeesport, Pa., assignor to himself and SAMUEL H. HOFFMAN, same place.—*Miners' Lamp.*—June 8, 1869.

Claim.—1. Extending the wick-tube upward, within the lamp-chamber, nearly to the top of the lamp, in the manner and for the purpose described.

2. In combination with the interior upward extension of the wick-tube, extending the exterior portion of the wick-tube above the top of the lamp.

3. The short burning-wick *h*, inserted into the end of the wick-tube, in combination with the feeding-wick *g*, and fibrous filling *f*, substantially as and for the purposes hereinbefore described.

90,964.—WILLIAM W. SLY, South Haven, Mich.—*Snap-Hook.*—June 8, 1869.

Claim.—The arrangement of the vibrating fork B, provided with the prongs *b* and *b′* and the curved slot *d*, and operated by spring D, in combination with the recessed hook A, substantially as and for the purpose above named.

90,965.—Obediah Smith, Bloomington, Ill., assignor to himself, Michael Y. Givler, and William H. Roser, same place.—*Buggy-Top Bow-Setter.*—June 8, 1869.

Claim.—The loop *c*, in combination with the cross-bar *b'* and the vertical rest *d*, as and for the purpose set forth.

90,966.—Henry Soggs, Columbus, Pa.—*Ironing-Table.*—June 8, 1869.

Claim.—The table *a*, with its groove *c* around its edge, and notches *h*, on the under side, in combination with the cross-legs *d*, bar *g*, and spring *f*, as and for the purposes herein described.

90,967.—John S. Sommerville, Snow Shoe, Pa.—*Miners' Lamp.*—June 8, 1869.

Claim.—1. In combination with an exterior jacket or shell, and tube or spout, an interior cylinder, E, and interior wick-tube, F, substantially as and for the purpose described.

2. In combination with the exterior shell and tube, and the interior shell and tube, the inverted and removable cylinder G, for containing the supply of fluid, as herein described and represented.

90,968.—Thomas Spurrier, Sharon, Pa.—*Carriage-Axle.*—June 8, 1869.

Claim.—The combination of the hard-metal washers B B^1 B^2, provided with side-flanges *b*, with the axle A, having tapering or conical ends, when secured thereon by set-screws C, or similar devices, substantially as described, so as to be removed, when worn, without injury to themselves or the axle, as set forth.

90,969.—Thomas H. Stevens, Dover, N. Y.—*Stone-Sawing Machine.*—June 8, 1869.

Claim.—The combination of the reciprocating frame D, saws D' D', with the four guide-rollers C C C C, all constructed and arranged to operate in the manner and for the purpose set forth.

90,970.—Enoch Thomas, Craigsville, Va.—*Hay and Cotton Press.*—June 8, 1869.

Claim.—The ratchet-bars D, in combination with the double-acting toggle-levers E E', when operated by the coupling-bars G, connecting-rods J, eccentrics H, and driving-shaft I, all constructed and arranged in the manner herein set forth.

90,971.—Charles W. Todd, Spring Arbor, Mich.—*Farm-Gate.*—June 8, 1869.

Claim.—The crane G, provided with supports I and K, and rollers J and L, in connection with eye E and step F, when employed for operating gates, substantially as herein set forth.

90,972.—William Tucker, Philadelphia, assignor to himself and Prince A. Snell, Pittsburgh, Pa.—*Saw-Filing Machine.*—June 8, 1869.

Claim.—1. The arrangement of the rotary file M, the clamp-jaws B B', either with or without the anti-friction rollers *m n*, and the right and left hand screws *a a*, for operating said jaws B B', substantially as shown and described.

2. The stationary screw-shaft C, forming a part of the frame of the machine, and a support for the file-carriage, as represented and described.

3. The traveling index-nut D, in combination with the stationary screw-shaft C and file-carriage E, constructed and operating substantially in the manner described, for the purpose specified.

4. The double countersunk circular file or cutter M, held between the conical or beveled shoulder *e**, of the arbor *e*, and the conical or beveled clamping-nut N, substantially as and for the purposes described.

5. In combination with the rotary file or cutter M, the sliding-frame H, provided with the gauge-screw *i*, and constructed and operated substantially in the manner and for the purposes specified.

6. The arrangement of the sliding-frame H, file or cutter M, gearing *f g*, shaft *e'*, and crank *h*, all constructed and operating substantially in the manner described.

7. The arrangement of the shouldered arbor I, clamping-nut *j*, ratchet-wheel K, lever J, catch *k*, and studs L *l*, all constructed to operate substantially in the manner described, for the purpose specified.

90,973.—C. G. Udell, Chicago, Ill.—*Step-Ladder.*—June 8, 1869.

Claim.—The stiles U, formed of single pieces of material, slotted out at their central parts, and so sprung outward as to form segments T T, as set forth.

90,974.—George W. Walker, Lowell, Mass.—*Shoulder-Brace.*—June 8, 1869.

Claim.—The combination with the shoulder-strap B, and the back-strap C, of the gusset A, as shown and described, when arranged and applied in the manner and for the purpose specified.

90,975.—Carl Weidling, New York, N. Y.—*Fire-Escape Ladder.*—June 8, 1869.

Claim.—The combination, with the said ladder and turn-table, of adjusting-screws, by means of which the elevating-frame, to which the ladder is attached, may be leveled, and firmly supported, substantially as hereinbefore set forth.

90,976.—Henry White, Chicago, Ill., assignor to himself and William F. Whitehouse, same place.—*Ventilator.*—June 8, 1869.

Claim.—The combination of the air-chamber A and the exhaust-flue H, and the application thereto of a deodorizer or disinfectant, Fig. 8, in manner and form substantially as shown and for the purposes as set forth.

90,977.—O. D. Woodruff, Southington, Conn.—*Railway-Car Coupling.*—June 8, 1869.

Claim.—1. The pin C, provided with its beveled end *a*, and projection *c*, in combination with the slot D and slotted spring E, substantially as described, and for the purposes set forth.

2. The combination and arrangement of the rod *k*, lever *e*, slotted spring E, and pin C, substantially as and for the purpose described.

90,978.—Henry Albright, Cranesville, W. Va.—*Grinding-Mill.*—June 8, 1869.

Claim.—1. The combination of the damsel *a*, feeding-cup *b*, and tubes *b' b'*, all constructed in the manner and to operate substantially as described.

2. The conducting-tube *d*, when constructed upon and arranged to operate with the hopper D, in the manner and for the purpose substantially as set forth.

90,979.—James Alcorn, Charlestown, Mass., assignor to James N. Melvin for one-third, and Thomas Quinn for one-third, same place.—*Clothes-Rack.*—June 8, 1869.

Claim.—The combination of the yoke A, supporting the arms B, with the bracket L, when pivoted thereto, and arranged for adjustment substantially as specified.

90,980.—A. W. Ball, Delaware Grove, Pa.—*Harrow.*—June 8, 1869.

Claim.—The metallic harrow, constructed as described, of two parts, A A, each composed of bars *a c*, strengthened by the brace *b*, and hinged to the central bar B, in such a manner as to operate independently of each other, the bars *a b* being provided with the metallic sockets *e*, for the teeth *g*, all arranged as described, for the purpose specified.

90,981.—Stephen Ballard, Sr., Sullivan, Ind.—*Grain-Separator.*—June 8, 1869.

Claim.—A grain-separator, consisting of the box C, sieve D, rockers A A, uprights *d d*, and lever E, all constructed, arranged, and operating substantially in the manner and for the purpose set forth.

90,982.—Darius Banks, Jr., New York, N. Y.—*Friction Clutch and Brake.*—June 8, 1869.

Claim.—The sliding loose pulleys A, provided with the conical hubs B and annular grooves, the friction-arms C, hubs D, fixed tubular brake F, having annular flanges H, and operating-levers, when combined and arranged substantially as specified.

90,983.—Otis B. Bartlett, Lewiston, Me.—*Stove-Cover.*—June 8, 1869.

Claim.—1. A stove-cover, when provided with mica, substantially as described.

2. The cover A, of the form shown, when constructed substantially as described, for the purpose set forth.

90,984.—J. H. Bassler, Pine Grove, Pa.—*Bee-Hive.*—June 8, 1869.

Claim.—1. A side for a bee-hive, formed of straw-matting, as described, covered with cement, and so constructed that a dead-air space, F, is formed within it, substantially as herein set forth, for the purpose specified.

2. The composition for cement herein described.

90,985.—William Berg and Mathias Stephan, Canton, Ohio.—*Baby-Jumper.*—June 8, 1869.

Claim.—The combination of the base, bearer, notched plate, lever, link, and spring, arranged and operating together, substantially in the manner and for the purpose herein described and represented.

90,986.—William M. Bleakley, Verplanck, N. Y.—*Stall-Floor.*—June 8, 1869.

Claim.—1. The combination of the slats D D, that can be raised or lowered, as specified, with the ditch C under the floor, said ditch being provided with a gutter, *b*, as specified.

2. The combination of the pivoted slats D D, composing the stall-floor, with the hook E, pulley *e*, cross-bar F, and rope G, all made and operating substantially as herein shown and described.

3. A stall-floor, consisting of a series of slats, pivoted at their front ends, so that they can be swung up separately or together, substantially as described, for the purpose specified.

90,987.—John G. Borden and Walter Power, Brewster Station, N. Y.—*Soldering-Furnace.*—June 8, 1869.

Claim.—1. The top-plate C of a stove or furnace, provided with chambers B, D, H, and I, constructed and arranged substantially as herein shown and described. and for the purpose set forth.

2. The combination of the heads or centers J K, and shafts L P, with the top-plate C, provided with the chambers B, D, H, and I, substantially as herein shown and described, and for the purpose set forth.

3. The soldering-tools E, in combination with the chambers D of the top-plate C, and with the heads or centers J K, substantially as herein shown and described, and for the purpose set forth.

4. Adjustably securing the soldering-tools E, by means of the rest F and set-screws G, substantially as herein shown and described, and for the purpose set forth.

5. The combination of the levers Q and S and spring T, or their equivalent, with the shaft O of the center or head K, and with the standard P, substantially as herein shown and described, and for the purpose set forth.

90,988.—Charles Bourgeois, Buffalo, N. Y.—*Combined Steam and Vacuum Gauge.*—June 8, 1869.

Claim.—The combination of the mechanism of a steam-gauge and the mechanism of a vacuum-gauge within a cylindrical inclosing-case, so arranged as to actuate concentric index-hands over the same dial-plate, substantially as herein described.

90,989.—David J. Brady, Greenwich Township, Ohio.—*Coupling for Whiffletrees.*—June 8, 1869.

Claim.—A compound clevis, when used for uniting double and single trees, constructed substantially as has been shown and described.

90,990.—John R. Bragg, Williamsburgh, Mo.—*Spring Saddle-Tree.*—June 8, 1869.

Claim.—The combination of the coiled springs B and F, and sheet-metal plates C, with the tree A and leather D, substantially as herein shown and described, and for the purpose set forth.

90,991.—George E. Burt and Edwin A. Hildreth, Harvard, Mass.—*Fork for Hay-Spreaders.*—June 8, 1869.

Claim.—1. In combination with a hay-tedder, a spring-fork constructed of two separate pieces of wire, when arranged to rock on the support J, and connected firmly together by the bolt or pivot *k*, in such a manner as to hold the pivot *k* in its proper position without any other connection than the shanks of the fork, between the pivot or bolt *k* and the bearing upon which the coils of the fork are supported, substantially as described.

2. The bolt *k* and nut L, when provided with seats for the shanks C and D, in combination with a hay-tedder fork, substantially as described.

3. The nut L, when constructed with a boss, *n*, provided with a seat, *o'*, substantially as described, in combination with a hay tedder fork.

4. The combination of the operating-arm R, turning upon the bolt *k*, the tedder-forks A and B, constructed of separate pieces of wire, and the bolt *k*, with shoulders on each side of the operating-arm, to keep it in position, substantially as described.

90,992.—C. W. Cardot, Jamestown, N. Y.—*Friction-Clutch.*—June 8, 1869.

Claim.—The combination of the hub B, having concave eccentric faces *f*, the concave grooved sleeve C, and balls E E, as herein set forth and described.

90,993.—Charles F. Carman, Hamburgh, Iowa.—*Carriage-Wheel.*—June 8, 1869.

Claim.—Connecting the spokes to the hubs in pairs in each mortise, when the tenons and the mortises are arranged substantially as specified.

90,994.—Paul Clareton, New York, N. Y.—*Meat-Chopper.*—June 8, 1869.

Claim.—In combination with the carriage A, cam-shaft C, cutters E, and springs *i*, the rollers *d*, and plates F, substantially as herein shown and described, and for the purpose specified.

90,995.—Lucas C. Clark, Plantsville, Conn.—*Teapot-Handle.*—June 8, 1869.

Claim.—As a new article of manufacture, a skeleton or perforated teapot-handle, cast in a single piece, substantially as described, and for the purpose set forth.

90,996.—William R. Clark, North Adams, Mass.—*Let-off Mechanism for Looms.*—June 8, 1869.

Claim.—The combination, with the levers D and friction-straps, of the bell-cranks, having adjustable slides, and operated substantially as specified.

90,997.—Susan C. Currie, New York, N. Y.—*Pocket-Book.*—June 8, 1869.

Claim.—1. The adjustable elastic band-fastening and the safety-pin, whether used in combination or separately, when applied to a portmonnaie, wallet, pocket-book, or other article of a similar nature, substantially as and for the purpose described.

2. In combination with a portmonnaie, the safety-chain K, arranged substantially as and for the purpose set forth.

90,998.—R. d'Heureuse, New York, N. Y.—*Cord-Holder for Picture-Frames, &c.*—June 8, 1869.

Claim.—1. An improved cord attachment or holder, formed by bending a rod upon itself, so as to form an acute angle or angles to receive and hold the cord or cords after passing around said rod, substantially as herein shown and described, and for the purposes set forth.

2. An improved cord attachment or holder, formed by bending a rod upon itself, so as to form an acute angle or angles, the sides forming the angles being corrugated or roughened to receive and hold the cord or cords after passing around said rod, substantially as herein described and shown.

90,999.—Samuel Dunlap, Rome, Ga.—*Bed-Bottom.*—June 8, 1869.

Claim.—The combination, with a bedstead, of the India-rubber straps *a*, rollers, ratchets, and pawls, and either the bearing-plates or not, all substantially as specified.

91,000.—P. S. DEVLAN, Jersey City, N. J., assignor to himself and W. H. JEWELL, New York City.—*Lubricating-Cushion for Railway-Car Journals.*—June 8, 1869.

Claim.—A lubricating-cushion for car-journals, formed by inclosing patent elastic sponge, either alone or in alternate layers, with some suitable fibrous material, in a suitable textile covering, substantially as herein shown and described.

91,001.—WILLIAM H. ELLIOT, New York, assignor of one-half to M. D. MYERS, Frankfort, N. Y.—*Hay-Spreader.*—June 8, 1869.

Claim.—The tedder-fork head *b*, tines *c*, and set-screw *f*, all being constructed and operating substantially as herein described and shown.

91,002.—FRIEDRICK E. A. ENGELMAN, Cheektowaga, N. Y.—*Seed-Planter.*—June 8, 1869.

Claim.—The general combination, with each other, of the revolving droppers I I, having the adjustable cups *a*, of the laterally adjustable hopper-frame K, and drop-box L, and of the up-and-down adjustable hollow shovel-standard, all arranged and operating substantially as herein shown and described.

91,003.—F. FANNING, Atchison, Kans.—*Corn-Sheller.*—June 8, 1869.

Claim.—1. The combination of the interior toothed cylinder E, exterior drum K, cross-bars L, fingers M, hinged plates O, springs P, stop-bars Q, and arms R, with each other, and with the gratings or racks B D, case A, and cams or inclines S, whether said cams or inclines are movable or stationary, substantially as herein shown and described, and for the purpose set forth.

2. The movable adjustable cams or inclines S, riding upon the journals of the cylinder E, and connected with the case A by the arms T, cross-bar U, and bar V, in combination with the arms R of the hinged holding-plates O, substantially as herein shown and described, and for the purpose set forth.

91,004.—E. A. FISHER, Morganville, N. Y.—*Bag-Holder.*—June 8, 1869.

Claim.—The frame I J, adjustable bar K, and hinged board L, in combination with the hopper A and jointed standard E, substantially as herein shown and described, and for the purpose set forth.

91,005.—AMANDER FORD, Toledo, Ohio.—*Corn-Harvester.*—June 8, 1869.

Claim.—1. The adjusting or expanding guides C C, arranged to operate substantially as and for the purpose set forth.

2. The knives I I, in combination with the expanding-guide C C, substantially as and for the purpose described.

3. The combination of stationary guides F F, with expanding-guides C C, as and for the purpose specified.

4. A corn-stalk cutter, consisting of toothed wheels K K′, circular knives R R, guides C C and F F, bar W, rods X X, semicircular guide *a*, and stationary knives I I, all combined substantially as and for the purpose set forth.

91,006.—E. P. FORD, Shipman, Ill.—*Weather-Strip.*—June 8, 1869.

Claim.—In combination with a door, the strip H, and the guide and stop-plate *g*, constructed, combined, arranged, and operating substantially as and for the purpose herein shown and described.

91,007.—WALTER B. FOWLER, Lawrence, Mass.—*Packing in Cylinders for Drying Paper.*—June 8, 1869.

Claim.—The combination of the packing-box A, having the flange *a* and shoulder *b*, with the pipe B, having the flanges *c d*, and with the packing C and nut D, all arranged and operating substantially as herein shown and described.

91,008.—SAMUEL FULTON, Conshohoeken, Pa.—*Manufacture of Cores.*—June 8, 1869.

Claim.—In combination with the central bar of a core for casting metal pipes, the forming tube B substantially as and for the purposes described.

91,009.—D. A. T. GALE, Poughkeepsie, N. Y.—*Nut and Coffee Roaster.*—June 8, 1869.

Claim.—1. The combination of the spiral springs I with the strings *j*, cones *k*, and shaft H, all arranged to automatically revolve the roasting-cylinder, as specified.

2. In combination with the roasting-cylinder, the burner D, constructed as described, of the boxes *c d*, pipes *e*, and screen *f*, all arranged as set forth, for the purpose specified.

91,010.—JOHN GATES, Portland, Oreg.—*Steam-Engine Piston-Packing.*—June 8, 1869.

Claim.—1. The combination, with the piston-head A, made in one piece, of the segmental packing-ring, having the interior arcs *d*, and the spring *g*, substantially as specified.

2. The combination, with the spring *q* and segmental packing-ring, divided into two parts, *a* and *b*, of the equalizing-rollers *e*, substantially as specified.

3. The combination with the segmental packing-ring, divided in two parts, *a* and *b*, of the springs *i*, substantially as specified.

4. The piston-head A, provided with the segmental webs *c*, and combined with the spring *g*, and segmental packing ring, substantially as specified.

91,011.—SAMUEL R. GOODSELL and JOHN QUINCY ADAMS, Brooklyn, N. Y.—*Knife-Scourer.*—June 8, 1869.

Claim.—1. The block B, provided with one or more sand-cavities, *a*, apertures *b*, brushes or rubbing-blocks *c*, and end-blocks *d*, all arranged and operating substantially as herein shown and described.

2. The combination of the box A with the reciprocating block B, which is provided with the cavities *a*, rubbers *c*, and buffers *d*, all arranged and operating substantially as herein shown and described.

91,012.—HENRY HAVEKORST, Leavenworth City, Kans.—*Toilet and Nursery Table.*—June 8, 1869.

Claim.—The combination of the base D, having the fixed post B, with the box-shaped or otherwise constructed table-top A, which is provided with the rack E, or its equivalent, and the hinged post C, all arranged and operating substantially as herein shown and described.

91,013.—JOSEPH HAWSE, Wolcott, Vt.—*Feed Box.*—June 8, 1869.

Claim.—The box A, provided with receptacles *t t*, and pivoted feed-box B, arranged to operate substantially in the manner and for the purpose described.

91,014.—R. D. HAY and J. M. HILL, Crooked Creek, N. C.—*Gun-Lock.*—June 8, 1869.

Claim.—1. The combination, with the lock of a fire-arm, of a nipple-guard, arranged and operating substantially as specified.

2. The combination of the lever F, bell-crank G, and link H, and guard A, all substantially as specified.

91,015.—BENJAMIN W. HEALEY, Providence, R. I.—*Center-Bearing for Locomotives.*—June 8, 1869.

Claim.—The ball and socket center-bearing for locomotives, consisting of the concave part A, convex part C, and the center-pin D, the center apertures of the parts A B being of conical form, as herein described, for the purpose specified.

91,016.—EATON HITCHCOCK, Sturbridge, Mass.—*Churn.*—June 8, 1869.

Claim.—The arrangement of the butter-sink E and table D, with reference to the churn-body A, as and for the purpose specified.

91,017.—J. B. HOLMES, Lawrence, Kans.—*Water-Wheel.*—June 8, 1869.

Claim.—1. The buckets B, supported on the chains D, and connected by the rods F, arranged as and for the purpose specified.

2. The shafts C of the buckets, provided with the

roller G, and connected to the chains D, the ways H, and the guide-wheels E, when all arranged as and for the purpose specified.

91,018.—WILLIAM F. HOLSKE and B. T BABBITT, New York, N. Y.—*Velocipede.*—June 8, 1869.

Claim.—1. The application of reversible friction-clutches, working against the edges of disks or wheels, as described, to propel a velocipede, or other vehicle, as specified.

2. The pivoted plates G, carrying the friction-rollers *c c'*, in eccentric slots, as described, and so arranged as to be adjustable on the driving-axle, to reverse the motion, as specified.

3. The levers H H, when arranged to adjust the plates G on the axle A, substantially as herein shown and described, for the purpose of reversing the motion of the vehicle, as specified.

91,019.—BENJAMIN W. HOPPER, Astoria, N. Y.—*Bell-Lever Box.*—June 8, 1869.

Claim.—1. The close bell-lever box A, constructed with sockets, to receive the spout B and pipe C, either or both, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the plate F and block or back G with the box A and with the socket or seat D, substantially as herein shown and described, and for the purpose set forth.

91,020.—JOHN HORTON, New York, N. Y.—*Shade for Gas and Lamp Burners.*—June 8, 1869.

Claim.—A transparent or semi-transparent shade, A, for gas or lamp burners, constructed with a bottom, B, the shade and bottom being made entire, substantially as and for the purposes herein set forth.

91,021.—DAVID HOWARTH, Portland, Me.—*Refrigerator.*—June 8, 1869.

Claim.—A refrigerator, composed of the described arrangement of the cylinder *a*, the ice-receptacle A, with its shelf *h*, the hooks *d*, and perforated cover *j*, the said cylinder to be placed in an ordinary barrel, and there held by the lip or flange on said cylinder, for the purposes specified.

91,022.—CHARLES N. HOYT, Providence, R. I.—*Apparatus for Parlor Games.*—June 8, 1869.

Claim.—The apparatus, as described, composed of one or more wheels, and a brake or stop, constructed for operating as and for the uses and purposes specified.

91,023.—DAVID JONES, Machen, Newport, Wales:—*Water-Elevator.*—June 8, 1869.

Claim.—1 In a device for raising water by a vacuum formed by the condensation of steam, the expansible bag C, in combination with the air and water tight chamber B, substantially as described, for the purpose specified.

2. The steam-measuring vessel H, in combination with an arrangement of devices for raising water by a vacuum formed by the condensation of steam, or by the discharge of steam, substantially as described, for the purpose specified.

91,024.—SAMUEL G. JONES, Niantic, Ill.—*Harrow.*—June 8, 1869.

Claim.—The forward link C, adjustable link E, and the central bar B, formed in two parts, hinged together, in combination with the pivoted toothed arms A D, hinged together at their outer ends, all arranged as described, for the purpose specified.

91,025.—JOHN M. D. KEATING and THOMAS V. WAYMOUTH, New York, N. Y.—*Machine for Making Paper Boxes.*—June 8, 1869.

Claim.—1. The combination, with the plunger I, of the double die T, constructed with grooves and inclines at both sides, as shown, so as to double-lap and unite the previously cut and gummed blanks as they are forced through the die by the plunger, substantially as described and specified.

2. The employment and use of the receiving-boxes upon the endless belt, so constructed as to receive, hold, and convey the paper boxes for the successive operations of gumming and sanding the ends of the same, substantially as described and specified.

3. The combination, with the receiving-boxes and endless belt, the gum-fountain, and sand-box, of the lifter for forcing the sand into contact with the end of each box, substantially as described and specified.

4 Constructing the sand-box of flexible material, substantially as described and specified.

5. The combination, with the receiving-boxes and endless belt, of the plunger, for automatically discharging the paper boxes from the receiving-boxes, substantially as described and specified.

91,026.—DANIEL KIDDER, Franklin, N. H.—*Shutter-Worker.*—June 8, 1869.

Claim.—The combination and arrangement of the shaft J, arm L, and pivoted bar M, with the blind C, substantially as herein shown and described, and for the purpose set forth.

91,027.—JOHN CHR. KLEIN, Birmingham, Pa.—*Rake.*—June 8, 1869.

Claim.—1. A divided socket, in combination with a rake, for securing the latter to its handle, when the socket is formed in two divisions, each consisting of a strap-plate, *b*, carrying a curved or semi-cylindrical socket-piece, *a*, when the former is so widened as to partially embrace the latter, and is provided with a curved or corrugated rim or bead, *i*, along its upper edges on either side of the socket, to brace and strengthen the same, all substantially as herein set forth.

2. Rivets *e e*, securing a rake-bar, A, to the metallic socket receiving and securing its handle, when said rivets are so extended as to constitute appropriate central teeth in the rake, substantially as herein set forth.

91,028.—CHARLES LAYTON, Matawan, N. J.—*Car-Coupling.*—June 8, 1869.

Claim.—1. The combination of the lever D, rigid arm F, block G, connecting-bar K, and bent lever L, with each other, and with the coupling-pin C, and bumper-head A, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the pivoted arm H, friction-wheel I, and coiled or equivalent spring J, with the arm F, substantially as herein shown and described, and for the purpose set forth.

91,029.—JACOB LENHARD, New York, N. Y.—*Violin.*—June 8, 1869.

Claim.—1. The cross-bar D, arranged within the box of a bow instrument, to serve as a guide for the sound-post, which partly supports the bridge, substantially as herein shown and described.

2. The bridge A and post B, in combination with the cross-bar D, substantially as described, for the purpose specified.

91,030.—B. M. LEROY and ALBERT STRASSER, Montgomery, Ala.—*Mosquito-Net Support.*—June 8, 1869.

Claim.—1. The combination of the folding-net ring N *n'*, straps O, pivoted button M, and supporting-arm A *a'*, arranged as herein described, for the purpose specified.

2. In combination with the above, the socket-staff D, hook-link F, key H, slotted adjustable arm J, socket I, and adjustable clasp L, arranged as described, for the purpose specified.

91,031.—ALFRED JOHN LEWIS, Pittsburgh, Pa.—*Cultivator-Plow.*—June 8, 1869.

Claim.—1. The slides D, in combination with the shovels D^1 and D^2, substantially as described.

2. The slides D, with the rods E and F, pins G and H, in combination with the stilts B and B^1, substantially as set forth.

3. The knife B^3, rod B^4, in combination with the beam A, substantially as described.

4. The shovel C, when attached to the beam A, by means of clamps C^2 and C^3, substantially as set forth.

5. The combination of the above-named devices in the construction of a shovel-plow, whereby the shovels can be set at any position, by means of the slides and rods, substantially as described and set forth.

91,032.—JOB G. LUSCOMB, Taunton, Mass.—*Fly-Frame.*—June 8, 1869.

Claim.—1. The combination of the horizontal shaft G and gear-wheels *d*, *e*, *h*, *i*, and *k*, for connecting the shafts F and H, the wheel K being removable, to change the motion, as specified.

2. The combination of the weighted lever L, the clutch-gear I, and the retaining-bar N, when connected together, substantially as herein shown and described, and operating as specified.

3. The rack-bar B, provided with a pin, *r*, for the purpose of automatically raising the bar N and clutch I, as set forth.

91,033.—Andrew Matson, Elizabeth, N. J.—*Ironing-Board.*—June 8, 1869.

Claim.—An improved ironing-board, formed by the combination of the board A, pivoted supporting-frame C, pivoted brace-bar or arm D, and pivoted table or platform E, provided with the pivoted legs F, with each other; said parts being constructed and arranged substantially as herein shown and described, and for the purpose set forth.

91,034.—Green B. McDonald, Louisville, Ky.—*Cotton-Bale Tie.*—June 8, 1869.

Claim.—The link H, for cotton-bale ties, when its parallel side-bars G are enlarged to form convex inner bearing surfaces for the hoop, and their outer edges hollowed out parallel to each other at F F, to form projecting angles, over which the hoop is bent by the expansion of the bale, as herein shown and described.

91,035.—James W. McMillan, Greenville, Ala.—*Velocipede.*—June 8, 1869.

Claim.—The combination, with the two axles of a velocipede, carrying the ratchet-wheels F, of the herein-described spring-clicks, arms *a a'*, rods *b b*, levers H, and handles I, all arranged and operating substantially as herein shown and described.

91,036.—F. A. Morley, Syracuse, N. Y.—*Potato-Digger.*—June 8, 1869.

Claim.—1. The side-boards B B and cross-bars *b*, as shown in Fig. 1, in connection with plow A, as herein shown and described, and for the purpose set forth.

2. In connection with a screen, B *b*, and plow A, the standing platforms *f f*, substantially as and for the purpose set forth.

3. Attaching the screen B *b* to the plow A, by means of pin *d* and slot *e*, as shown and described, for the purpose set forth.

91,037.—Frederick E. Nearing, Brookfield, assignor to himself and William H. Hubbell, Danbury, Conn.—*Combined Horse-Rake and Hay-Spreader.*—June 8, 1869.

Claim.—1. The rake-head E, consisting of several pieces, that are so connected that the teeth G will be in line for a rake, or at suitable angles for a tedder, as specified.

2. The combination of the rake-head E, which is made to revolve on the tedder, with the rod *e*, lever F, and slotted bar *g*, all arranged and operating substantially as herein shown and described.

3. The pivoted supporting-arms H, adjustable in the arms *b b*, by means of the curved racks *o* and pins *n*, to prevent the revolving teeth from being injured by contact with the ground, as herein shown and described.

91,038.—Philip O'Reilly, Hartford, Conn.—*Black Pigment from Mineral Carbon.*—June 8, 1869.

Claim.—A compound, formed of anthracite and bituminous coals, treated with mineral acid, substantially as and for the purposes herein described.

91,039.—William G. Philips, Newport, Del.—*Step-Ladder.*—June 8, 1869.

Claim.—1. The step *c*, bolt D, and sliding-sleeves *d*, when combined with each other and with the sections of a ladder, substantially as described, for the purpose specified.

2. The splice-bars F, having the steps *i*, when combined with the sliding-sleeve *j* and with the sections of a ladder, substantially as described, for the purpose specified.

91,040.—A. P. Plant, Plantsville, Conn.—*Tool for Trimming Bolt-Heads.*—June 8, 1869.

Claim.—The combination of the set-screws *k k*, or their equivalents, guides B B, with their rebates *l l*, knives *m m*, set-screws *n n*, and punch A, with its parts *c* and *d*, the whole combined and arranged substantially as described, and for the purposes set forth.

91,041.—S. D. Rader, Williamsport, Pa.—*Brick and Sand Drier.*—June 8, 1869.

Claim.—The drier A, provided with chambers B B B, furnace F F, ventilating-holes d^2 d^2, double tracks *b b*, and chimneys E E, when used in combination with molds D D, and sand-boards C C, all constructed and arranged in the manner and for the purpose herein described.

91,042.—P. H. Raiford, Houston, Texas.—*Anchor for Animals.*—June 8, 1869.

Claim.—1. The combination of the swiveled loop C and pivoted loop B with each other, and with the pin A, or its equivalent, substantially as herein shown and described, and for the purpose set forth.

2. An improved anchor for animals, formed by the combination of the pin A a^1 a^2 a^3, pivoted loop B, and swiveled loop C, with each other, substantially as herein shown and described, and for the purpose set forth.

91,043.—Thomas Reese and William L. Reese, St. Louis, Mo.—*Fastening for Fire-Proof Shutters.*—June 8, 1869.

Claim.—1. The combination of the pivoted bars D, spring-catch E, and plate e^2, with each other, and with the shutters A, substantially as herein shown and described, and for the purpose set forth.

2. Connecting the bars B, when more than one is used, with a bar or link, C, so that the said bars may all move together, substantially as herein shown and described.

91,044.—Nicholas Repp, Waterloo, Iowa.—*Nail-Clincher for Horseshoes.*—June 8, 1869.

Claim.—The improved implement, consisting of the handles A B, provided with the side-cutters *d d*, notched eccentric clincher *c*, formed in continuation of the handle B, the file C, and either with or without the hook *b f*, all arranged as described, for the purposes specified.

91,045.—Almon Roff, Southport, Conn.—*Operating Ships' Pumps.*—June 8, 1869.

Claim.—1. An automatic pump-attachment to vessels, consisting of the removable paddle-wheel, or its equivalent, arranged on the side of the vessel, to operate the pump or pumps, substantially as herein shown and described.

2. The sliding-shaft B, when arranged in a vessel, so that it can receive a paddle-wheel, E, or its equivalent, for the purpose of automatically operating the pump or pumps, as specified.

3. The grooved ∪-shaped plate D, when arranged at the side of a vessel, opposite an aperture through the same, substantially as herein shown and described, for the purpose of supporting the hollow shaft of the removable wheel E, or its equivalent, substantially as herein shown and described.

4. The spring-plug *h*, to be placed into the grooves of the ∪-shaped plate D, for the purpose of closing the aperture through the side of the ship, substantially as herein shown and described.

5. The vertical shaft F, having the crank *j* and cross-head *k*, when arranged in combination with the sliding-shaft B, countersunk box G, and cover I, all arranged and operating substantially as herein shown and described.

6. The sliding-shaft B, carrying the wheel E, or its equivalent, and fitted through the box *d*, when arranged to operate the pump shaft or shafts A, substantially as herein shown and described.

91,046.—Jacob Schermerhorn, Daysville, N. Y.—*Vegetable-Gatherer.*—June 8, 1869.

Claim.—The vegetable-gatherer, consisting of the arms C D, supported upon the axle and wheels, and provided with the curved rake A, the riddle, and the box, having a discharge-opening in its bottom,

all arranged and operating as described, for the purpose specified.

91,047.—JAMES A. SEVEY. Boston, Mass.—*Tool for Splitting Whalebone.*—June 8, 1869.

Claim.—1. The arrangement and combination of the springs B D, and the screw E, with the stock F and the knife A.

2. The combination of the rotary bearings C C, and their sockets *a a*, with the knife and its clamp-screws, applied to the stock F, and to operate with the springs B D, the whole being as set forth.

91,048.—HENRY SHUTTS. Oregon, Mo.—*Mechanical Movement.*—June 8, 1869.

Claim.—The combination of the cam-wheel B, cams C D and E F, slide G, when all combined and arranged substantially as specified.

91,049.—WILLIAM SMITH, Pine Hill, Wis.—*Stump-Extractor.*—June 8. 1869.

Claim.—The arrangement upon the stump-extractor frame, attached to the wagon-wheels, of the winding-shaft *a*, wheel J, pinion *l*, ratchet-wheel *g*, and pawl *h*, the lever and the hook-pawl *f e*, as herein set forth and shown, for the purpose specified.

91,050.—JOHN J. SWITZER, Chelsea, assignor to himself and EDWIN H. FITTS, Northborough, Mass.—*Mechanism for Stopping the Loom when a Warp Breaks.*—June 8, 1869.

Claim.—1. The batten C, when connected by means of the crank G with the slide H, and by the crank M with the slotted frame N, so as to impart reciprocating motion to the same, as specified.

2. The slotted frame N, when connected with the spring *i* and with the batten C, substantially as herein shown and described, and for the purpose specified.

3. The frame O, arm *j*, lever *k*, and rod *l*, combined with a rock-shaft *m*, which has the arm *n*, substantially as described, so that by the motion of the frame O the arm *n* will be moved toward and against the hook *o*, substantially as herein shown and described.

91,051.—ALOIS THOMA, New York, N. Y., assignor to the AMERICAN ZINC COMPANY, same place.—*Furnace for Extracting Zinc from its Ores.*—June 8, 1869.

Claim.—1. Producing zinc from ores that are spread within a gas-burning furnace, substantially as herein shown and described.

2. The furnace B, when constructed as described, for the purpose of producing zinc from ore by means of the burning gases that are the products of combustion of suitable fuel, as set forth.

3. Providing the openings *q q* in the sides of the furnace B, for the purpose of allowing the zinc ore to be turned over to facilitate the process, as specified.

4. Arranging the blast-heating apparatus E as one well of the furnace B, substantially as described, so that the air is heated by the ascending gases, as set forth.

5. The application, to the air-heating apparatus, of the slides *m* and *n*, for the purpose of at once regulating the quantity and the pressure of the air conducted to the gases, substantially as herein shown and described.

6. The dust detaining chamber *h*, when arranged between the grate *a* and the furnace B, substantially as and for the purpose herein shown and described.

7. The condenser C, when provided with a series of shelves, *t t*, which are perforated and provided with inclined upper surfaces, substantially as herein shown and described, for the purpose of allowing free passage for the gases, and of conducting the zinc to a certain receptable, as specified.

8. The perforated plates I I, when inserted within the condenser, for the purpose of facilitating the process of condensation, as set forth.

9. So constructing the zinc-receptacle *u* that lead may be collected at its bottom and separately removed, as set forth.

10. A zinc furnace, consisting of the grate-chamber A, for burning the fuel; of the furnace B, for evaporating the zinc; and of the condenser C, for separating the zinc from the gases, all arranged and operating substantially as herein shown and described.

91,052.—ALOIS THOMA, New York, N. Y., assignor to the AMERICAN ZINC COMPANY, same place.—*Zinc-Furnace.*—June 8, 1869.

Claim.—1. The combination, with the zinc gas-furnace B, of an isolated gas-generator, for the production of zinc in muffles, substantially as herein shown and described.

2. The arrangement of the plates *f''*, *g''*, *n''*, and box *l'*, to serve for putting the fuel into the gas-generator, substantially as herein shown and described.

3. The openings *n*, for conducting the gases into the muffle-furnace, when such openings are combined with the channels for admitting the blast, substantially in the manner herein shown and described, to operate as set forth.

4. The muffles *t*, when constructed as herein set forth, with perforated horizontal partition, substantially as specified, for the purpose described.

5. The arrangement of the channels *k' l'*, for so conducting the gases away from the chamber S that they will serve to heat the side-chambers *w'*, substantially as herein shown and described.

6. The chambers X', under the muffles, when arranged to receive the burnt matter from the same, without injury to the attendants, substantially as herein shown and described.

7. The herein-described means of and mechanism for evenly heating and independently regulating the draught in each part or half of the furnace, to obtain even action of all parts, substantially as herein specified.

8. Utilizing the escaping flame of the zinc-furnace for the production of steam, to operate the blast mechanism and other appendages of the furnace, substantially as herein shown and described.

91,053.—P. W. THOMAS, Waterbury, Vt.—*Sad-Iron Heater.*—June 8, 1869.

Claim.—1. The notched sides *b b*, in combination with the top B, provided at its edges with notches *a a a' a'*, substantially in the manner and for the purpose set forth.

2. In combination with the above, the sliding-doors C C, substantially as described.

91,054.—FRIEND THRALL, Oshkosh, Wis., assignor to himself and A. B. Thrall, same place.—*Dough-Kneader.*—June 8, 1869.

Claim.—1. A reversible sliding mold-board and table-top, B, as described, arranged relatively to either kneading or reducing rollers, the latter having bearings in the supports A' A', and provided with adjusting-screws *q q*, traverse-bearings *k k*, and hinged box-caps *i i*, substantially as described, for the purposes set forth.

2. The roller C, Fig. 6, provided with a crank, C', and constructed substantially as described, when arranged, relatively to the supports A' A' and sliding mold-board B, as and for the purposes set forth.

3. The dredge-box D, arranged relatively to roller C and mold-board B, as and for the purposes set forth.

4. Box D, provided with button *d'* and arm *f*, arranged relatively to a roller beneath, substantially as and for the purposes set forth.

91,055.—ARCHIBALD TROLAN, Norwich, Conn.—*Machine for Double-Seaming Sheet-Metal.*—June 8, 1869.

Claim.—1. The clamping-plate F, when used in combination with the folder C and frame A, substantially as and for the purpose specified.

2. The projecting guide-part H, of frame A, when used as a guide for folder C and clamping-plate F, substantially as described.

3. The removable plate I, when used in combination with frame A, folder C, and clamp-plate F, for the purpose specified.

91,056.—JAMES W. TRUMAN, Macon, Ga.—*Pen.*—June 8, 1869.

Claim.—A writing-pen, consisting of the split

or unsplit plate A, and of the adjustable wire or rod C, substantially as described, to operate as specified.

91,057.—Stephen W. Adwen, Rochester, N. Y.—*Baling Short-Cut Hay and Straw.*—June 8, 1869.

Claim.—As a new article of manufacture, a bale of short-cut feed inclosed in paper B, and retained in a compressed state by means of slats C and binders D, substantially as described.

91,058.—Frank H. Aiken, Franklin, N. H.—*Cartridge-Case Cleaner.*—June 8, 1869.

Claim.—1. The plunger, as made with the discharging-point and the circumscribing chamber, arranged with respect to the adjacent end of the plunger, in manner substantially as specified.

2. In combination with the plunger so made, the guide and cleansing-tube, applied to it in manner and so as to operate with it, substantially as described.

91,059.—Thomas C. Aldridge, St. Louis, Mo.—*Fire-Place.*—June 8, 1869.

Claim.—1. The grate A, back B, perforations *b* passages B^1, perforations b^1 and b^2, and chimney E, all arranged and acting substantially as set forth.

2. The back B^1 B^2, flue-mouth C, and flue C′, when arranged in the grate-frame D, and combined with the chimney E, substantially as set forth.

3. The flue C C′, frame D, and back-plate D′, combined with the back B^1 B^2, substantially as set forth.

91,060.—Arthur M. Allen, New York, N. Y.—*Valve-Gear.*—June 8, 1869.

Claim.—The carriage *e*, guide *h*, and slide-bar *i*, in combination with the pin *d*, sliding in the link A, and transmitting its motion to the valve, substantially as herein shown and described.

91,061.—Arthur M. Allen, New York, N. Y.—*Velocipede.*—June 8, 1869.

Claim.—The shaft *a*, provided with the cranks *b b*, wheel A, and bracket C, in combination with the toggles F G, and sloping foot-rests E E, all constructed, arranged, and operated in the manner and for the purpose set forth.

91,062.—George B. Ambler, Bridgeport, Conn.—*Velocipede-Saddle.*—June 8, 1869.

Claim.—As a new article of manufacture, a velocipede-seat, or saddle-tree, substantially as herein described, consisting of the seat A and means of attachment, all as shown and specified.

91,063.—Israel Amies, Philadelphia, Pa.—*Hatchway for Buildings.*—June 8, 1869.

Claim.—In combination with the hatch E, provided with the slot *e′* and guide ways *e″ e‴*, as described, the traversing-slide F, provided with the hinged blocks *f″ f‴* and the grooved friction-rollers *f′ f′*, as described, the said parts being arranged to operate together in the manner and for the purpose described.

91,064.—Edgar John Amor, New York, N. Y., assignor to himself and H. E. Donor, same place.—*Tool-Handle.*—June 8, 1869.

Claim.—The arrangement of the stop *b* and collar *a*, on the interior of the hollow metal handle, for retaining the plug B, in the manner substantially as shown and described.

91,065.—Alban G. Andrén, Gottenburg, Sweden.—*Vise.*—June 8, 1869.

Claim.—The arrangement, with the deeply recessed stationary jaw A and screw-shaft C, of the flange protecting and sliding support D, substantially as shown and described.

91,066.—Avery Babbett and W. W. Binney, Auburn, N. Y.—*Gas-Works for Making Coal-Gas.*—June 8, 1869.

Claim.—1. The charger and charging-rod, in combination with the retort, as set forth.

2. The gas-tight coal-magazine, when constructed with valves, and operated substantially in the manner and for the purpose described, in combination with the retort.

3. The air-tight coke-magazine, when used as above set forth, in combination with the retort.

4. So arranging the fire-brick case, inclosing the retort, that a portion of the same may be opened in such manner that the retort may be repaired or removed without relaying the fire-brick inclosing the fire-chamber, substantially as above described.

5. Depositing the spent coal or coke into an air-tight chamber, directly from the retort, said chamber being so connected with the stand-pipe as to allow the gas evolving therefrom to pass off through that channel, for the purpose specified.

6. The receiver, when connected with the retort, coke-magazine, and stand-pipe, substantially in the manner and when used for the purpose set forth.

7. The condenser, when constructed as above described, that is to say, with open pipes, so arranged that the gas, in its passage through it, shall move in a thin current, impinging upon the surfaces of said open pipes, substantially in the manner and for the purpose set forth.

8. The charging-rod L, slide M, non-conducting chambers Q and P, when all are arranged and used for the purpose above set forth.

91,067.—C. F. Babcock, Chicago, Ill.—*Grain-Separator.*—June 8, 1869.

Claim.—1. The triangular screen H, placed in front of the blast and under the upper screens, substantially as and for the purpose set forth.

2. The arrangement, on the screen J, of the round-headed screw *n*, placed on the under side, at the front end, in a countersink, and resting on the thumb-screw *o*, which passes through a curved slot in the frame A, substantially as and for the purposes herein set forth.

3. The perforated lever *d*, in combination with the shaft *e*, arm *f*, rod *g*, cross-bar *h*, and shoe F, when arranged in the manner and operating for the purpose set forth.

4. In combination with the triangular screen H, the under screen J, rods *h* and *k*, corrugated bars *i*, and arm *m*, when arranged and operated in the manner and for the purpose set forth.

91,068.—Quimby S. Backus, Winchendon, Mass.—*Vise.*—June 8, 1869.

Claim.—1. The combination of the hollow screw-shaft K, with a disk, B, upon its top, screw-rod M, flanged head N, clamping-screw L, and screw O, with the grooved cylinder D, all substantially as and for the purposes specified.

2. The jaws E and C, screw-shaft F, tubes H and I, dog G, screw-rods K and M, disk B, nuts L, and thumb-screw O, when all are combined to form a vise, substantially in the manner and for the purpose specified.

3. In combination with the stationary jaw C, the cylinder D, with a rounded upper surface, and with an oblong slot in the bottom, leading into a semi-circular recess, within which slides the head N, which is prevented from being disengaged by the shoulder formed near the outer end of said cylinder, substantially as set forth.

91,069.—L. F. Bancroft, Worcester, Mass.—*Combined Steam-Generator and Stove.*—June 8, 1869.

Claim.—1. The combination, with the rear part of the upper plate of the cooking-stove, of a steam-generator, D, and draught-flues G F, substantially as set forth.

2. The combination, with the stove A and boiler D, of water-chamber I, pipes H J, drum E, and smoke or draught flues G and F, provided with dampers *a b*, said parts being arranged, in relation to each other, substantially as set forth.

91,070.—J. W. Bates, St. Paul, Minn.—*Polishing and Cleansing Powder.*—June 8, 1869.

Claim.—1. The above-described process for obtaining a cleaning-powder from peat, substantially as herein set forth.

2. Preparing peat in such a manner as to produce a powder suitable for cleaning teeth, or any article

needing a fine polish, substantially as herein set forth.

3. A cleaning-powder made from peat, substantially as herein set forth.

91,071.—A. Ely Beach, Stratford, Conn.—*Shield for Tunneling.*—June 8, 1869.

Claim.—1. The shield A, made and operating substantially as herein shown and described.

2. The arrangement of the pushing-devices to withdraw into the shield, as herein shown and described.

3. Arming the front of the shield with a cutting-shoe, substantially as herein shown and described.

4. The combination of the ring, shoe, and staves, substantially as shown and described.

5. The hood C, employed substantially as shown and described.

6. Providing the shield with sliding-staves, substantially as and for the purposes herein shown and described.

7. The arrangement of the pushing-devices, so that they will be carried by and supported upon the shield, substantially as and for the purposes herein described.

91,072.—A. B. Bean, New Haven, Conn.—*Ratchet-Feed.*—June 8, 1869.

Claim.—The arrangement of the fixed cam I within the double pawl E and F, and combined with the head N, so as to operate substantially in the manner set forth.

91,073.—Henry E. Blemker, Evansville, Ind.—*Stove-Drum.*—June 8, 1869.

Claim.—As a new article of manufacture, the removable attachment to heating-stoves, above described, consisting essentially of the drums A B, pipes C C D, opening *a*, flange a^1, and cover a^2, all constructed, arranged, and adapted for use in connection with the stove, substantially as herein set forth, and for the purposes specified.

91,074.—Albert Booth, Springfield, Ill.—*Machine for Turning Wagon-Axles.*—June 8, 1869.

Claim.—1. The hollow mandrel for turning the ends of axle-trees, when provided with the cutters *a a* and *b*, adjustable gauge *d*, and screws *c c c*, substantially as and for the purpose herein shown and described.

2. The carriage B, provided with the adjustable clamps G G, claw-wedge I, and vertically adjustable screws *k k*, substantially as described, and for the purpose set forth.

91,075.—Fred. C. Borst and Philander Wonsey, Spencerport, N. Y.—*Mail-Bag.*—June 8, 1869.

Claim.—The arrangement of the elliptic springs *a a c*, hinged together as described, when combined with the mouth of bag A, in the manner and for the purpose specified.

91,076.—George S. Bosworth, Troy, N. Y.—*Cooking-Stove.*—June 8, 1869.

Claim.—1. The diving-flue E of the air-heating chamber, having its receiving-opening I in front, and its discharge-opening E′ beneath the rear side of the grate, and communicating with the ash-pit, substantially as described.

2. The air-heating chamber E, having perforations *a* above the chamber B of combustion, and a discharge-opening, E′, of greater discharging area, beneath the grate, substantially as described.

3. The air-heating chamber E, communicating with the chambers above and beneath the grate, and with the hot-air flue C, above the oven, in the manner herein described.

4. The air-heating chamber E, having a front receiving-opening, I, above the grate, and a rear discharge-opening, E′, beneath the grate, in combination with the single damper J, for regulating the admission of air above and beneath the grate, as described.

91,077.—Thomas W. Bracher, New York, N. Y.—*Cutting Hat-Tips.*—June 8, 1869; antedated May 28, 1869.

Claim.—1. The mode of preparing fabric, adapting it for being cut into tips for hats and caps, by folding said fabric in continuous layers, with the interposed perforated plates *c*, then removing said plates, excepting the upper one, and through the perforations thereof uniting the entire series of folds, and thereby form a completed pile, to be subjected to the knives, as herein described.

2. For the purpose of the above mode of preparing fabric as stated, the open-end box A, and the elevated slotted arm C, combined and operating as represented and described.

91,078.—Joseph Bradley, Racine, Wis.—*Horse Hay-Fork.*—June 8, 1869.

Claim.—The arrangement of the slotted and extended spear-bar A, hooked bars B B, arm C, extended lever D, and cord E, passing over the pulley, all constructed and operating as shown and specified.

91,079.—Henry L. Brevoort, Brooklyn, N. Y.—*Device for Operating Throttle-Valves.*—June 8, 1869.

Claim.—The combination of the screw-rod D and lever B, provided with a locking-device, E, with the valve-stem C, or other analogous device, substantially as set forth.

91,080.—Leverett Brown, New York, N. Y.—*Fastening for Topmasts and Top-gallant-Masts.*—June 8, 1869.

Claim.—The method of fitting and securing the topmasts and top-gallant-masts of vessels, in the manner herein described, so that the mast above shall rest upon and be directly supported by the mast immediately below, instead of the trestle-trees of such masts, as and for the purposes set forth.

91,081.—George Burch, Newark, N. J.—*Manufacture of Bracelets.*—June 8, 1869.

Claim.—1. The construction of bracelets, rings, or similar forms from a single strip of metal, with edges rounded inwardly, substantially in the manner set forth.

2. The combination of the dies, constructed as described, with a case, A, or its equivalent, for the purposes set forth.

91,082.—Francis Caffrey and John L. Nettleton, West Cheshire, Conn.—*Machine for Milling the Body of Keys.*—June 8, 1869.

Claim.—The combination of the two mandrels B and C, revolving together, and constructed so as to receive and hold the key, with the mills I I, the whole constructed and operating substantially in the manner set forth.

91,083.—George J. Capewell, West Cheshire, Conn., assignor to "Porter Brothers," New York City.—*Securing Buttons to Fabrics.*—June 8, 1869.

Claim.—Closing inwardly the outer open end of the tubular eyelet, heading the same, and corrugating the said head at one and the same time, and operating substantially as and for the purposes specified and set forth.

91,084.—David F. Carr, East Union Township, Ohio.—*Cultivator.*—June 8, 1869.

Claim.—1. The combination, with the axle B, of the beams C, loops E, braces G, and shovels F, when adjusted and arranged substantially as and for the purpose specified.

2. The lever M and link M^1, in combination with the axle B, and parts above claimed, as and for the purpose set forth.

91,085.—Thomas Carr, Bristol, Great Britain.—*Machine for Disintegrating Fertilizers and other Articles of Manufacture.*—June 8, 1869; patented in England October 2, 1868.

Claim.—1. The mounting of both the solid and hollow shafts of "disintegrator"-machines in separate bearings a^1 and b^1, as herein set forth.

2. The mode of fixing a knife, *d*, in "disintegrator"-machines, by means of an additional short standard, e^2, from the base-plate or frame *e*, as herein set forth.

3. The making of the cover *c* for the cages in

"disintegrator"-machines, so as to commence only at the outer edges of the outer cage, as herein set forth.

91,086.—Stephen Chandler, New York, N.Y. —*Furniture-Caster.*—June 8, 1869.

Claim.—The spherical caster-roller A, in combination with the spring-arms G, and the anti-friction wheels F, when the latter are arranged in pairs, with their axes above the center of the caster-roller, substantially as described.

91,087.—S. G. Cheever, Boston, Mass.—*Harness.*—June 8, 1869.

Claim.—1. A girth made with the devices shown, or their equivalents, at each end of the girth, to receive the saddle and shaft straps, substantially as and for the purpose described.

2. A girth made as above claimed, and with the soft edge or roll, for the purpose set forth.

91,088.—Peter Christiansen, Rochester, Minn. —*Sash-Balance.*—June 8, 1869.

Claim.—The combination of the pulley-block F, toothed sheave E, spring-lever G, and cords or chains D and I, all constructed and arranged, with relation to the frame and sashes, substantially as described and shown.

91,089.— William B. Coates, Philadelphia, Pa., assignor to Edwin Clinton and W. Harrison Eisenbrey, same place, for three-fourths of the invention.—*Hair-Dyeing Brush.*—June 8, 1869.

Claim.—The combination of the brush A with the bottle C, all constructed and arranged as and for the purpose specified.

91,090.—William Compton, New York, N. Y. —*Composition Crayon.*—June 8, 1869.

Claim.—1. The composition for crayons formed of the materials, and as herein set forth.

2. To the crayon formed by rolling the plastic mass between two surfaces, to consolidate the same, as set forth.

91,091.—Joseph Crookes, St. Louis, Mo., assignor to himself and Joseph W. Branch, same place.—*Cotton Bale Tie.*—June 8, 1869.

Claim.—The locking-piece B, arranged with car-pieces B^2, and riveted to the end A', when combined with the joint rivet C and the end A, substantially as herein set forth.

91,092.—John G. Cullmann, Cincinnati, Ohio.— *Device to Prevent Injury to Liquor on Tap.*—June 8, 1869.

Claim.—1. The mode of preserving liquor on tap from souring, by causing the entering air to traverse a purifying liquid or material, substantially as set forth.

2. The cup or ventilator D, having the valve-guarded neck C, stand-pipe E, inverted cup F, and faucet H, or their equivalents, for the purposes explained.

91,093.—Joseph Delaney, Ashland, Pa.—*Apparatus for Raising and Dumping Coal.*—June 8, 1869.

Claim.—In combination with the slope-track B and with rails *c c*, arranged outside of and forming a continuation of the same, a car, H, the wheels of which are so arranged, with respect to the said track and rail *c*, that, after reaching the top of the slope, the said car shall rest both on the rails B and C, and shall be automatically tilted, and its load discharged, all substantially as herein set forth.

91,094.—John Donavan Dennis, Gilroy, Cal. —*Composition for Destroying Ants.*—June 8, 1869.

Claim.—The use of the above-mentioned composition of crystallized corrosive sublimate, pulverized red Cayenne pepper, and pulverized gum-camphor, in about the above-mentioned proportions, for the purpose of perfectly and effectually poisoning, killing, and banishing ants, preventing their harboring, dwelling, or remaining in or about houses, cupboards, and pantries, or any other places or articles whatsoever.

91,095.—Frank A. Desloge, St. Louis, Mo.— *Clothes-Mangle.*—June 8, 1869.

Claim.—1. The roller C, its orifices *e*, and sleeve-journals F, when combined with the shaft D and its perforations E, substantially as set forth.

2. The smoothing-roller C, when combined with the composite roller C', substantially as and for the purpose set forth.

91,096.—H. A. Devendorf, Port Jackson, N. Y.—*Paper Box.*—June 8, 1869.

Claim.—As a new article of manufacture, a paper box, constructed by means of the strips A B, slit at *e e*, and bent up and attached together, substantially in the manner specified.

91,097.—Jonathan D. Devol, Parkersburgh, W. Va.— *Combined Saw-Set, Gummer, Punch, and Wire-Cutter.*—June 8, 1869.

Claim.—1. The jaw A, constructed as shown and arranged, to receive the dies or plates D E F and guide C, in combination with the jaw B, substantially as and for the purpose specified.

2. The combination and arrangement of the jaws A and B, set-punch G, gumming-plate H, round punch I, cutting-punch K, guide C, and plates or dies D, E, and F, substantially as shown, and for the purposes specified.

91,098.—Dexter Dill, New Haven, Conn.— *Peanut-Oven.*—June 8, 1869.

Claim.—The herein-described oven, consisting of the two cylinders C and D, with the space E between them, the central tube F and top G, provided with a door, H, the whole constructed and arranged so as to operate substantially in the manner and for the purpose set forth.

91,099.—Jacob Dourson, Columbus, Ohio.— *Extension-Table.*—June 8, 1869.

Claim.—The arrangement of the slides F F, which are connected with the table-legs on opposite sides of the blocks E, when the latter are attached to the table-top A, and are connected with the parts F F by means of the metallic slides *i i*, all constructed and arranged to operate substantially as described, and for the purpose specified.

91,100.—Nancy A. Downer, Canandaigua, assignor to herself and David C. Chase, Clayton, Mich.—*Process of Reducing the Size of Plaster Molds.*—June 8, 1869.

Claim.—The mode or process herein described for taking wax figures in *alto relievo*, from nature, down to any desirable size or age, and retaining throughout every feature of the original object.

91,101.—William Duchemin, Boston, Mass., assignor to George B. Bigelow, trustee, same place.—*Sewing-Machine for Sewing Turned Shoes.*— June 8, 1869.

Claim.—1. The needle-guard J^6, constructed as described, in combination of the needle K^5, when operating together as described, and for the purpose set forth.

2. The wedge Q Q^1, in combination with the standard P^4, and the arm P P^1, arranged and working substantially as described, and for the purpose set forth.

3. The fingers F^4 F^5, or their equivalents, when operated substantially as described, to seize the loop and give it a quarter turn, substantially as described, and for the purpose set forth.

4. The thread-carrier L^5, arranged and working, in combination with the fingers F^4 and F^5, substantially as described, and for the purpose set forth.

91,102.—G. L. Du Laney, Mechanicsburgh, Pa. —*Harvester Cutter.*—June 8, 1869.

Claim.—1. The sickle-bar D, as shown and described, and for the purpose specified.

2. The stay-loop V, as shown and described, and for the purpose set forth.

3. The beveled shot B, draw-nut C, and stay-pin I, when used in combination with the sickle-bar D and stay-loop V, as shown and described, and for the purpose specified.

91,103.—W. W. DUNGAN, Baltimore, Md., assignor to Mary D. DUNGAN, same place.—*Steam-Generator Smoke-Stack.*—June 8, 1869.

Claim.—1. A smoke-pipe, consisting of sections, arranged to slide one within the other, said sections being provided with sheaves or pulleys, for operating the same, substantially as shown and described.

2. The arrangement of the pulleys or sheaves B B and ropes or chains E E and F F, whereby to raise the sections A^1 and A^2 of the pipe, substantially as shown and described.

3. The arrangement of the shafts D D with their drums, for the reception of the ropes or chains, and the ropes or chains F F, with reference to the stationary section A of the pipe, substantially as shown and described.

91,104.—JOHN E. EARLE, New Haven, Conn.—*Tea and Coffee Pot.*—June 8, 1869.

Claim.—In combination with the perforated cylinder B, within the body A, the arrangement of the material packing *a* between the cover and vessel, substantially in the manner and for the purpose set forth.

91,105.—ZEBINA EASTMAN, Chicago, Ill.—*Street-Car.*—June 8, 1869.

Claim.—A car composed of two or more vertical cylinders, the axles of which are coincident with the centers, around which the wheels oscillate in turning curves, and arranged to embrace said wheels, substantially as shown and described, and for the purpose set forth.

91,106.—JOHN H. ERNEST, Millerstown, Pa.—*Corn-Planter.*—June 8, 1869.

Claim.—1. The lever M, chain *g*, and hook *h*, when arranged and operating substantially as and for the purposes described.

2. In combination with a planter having all the parts herein described, the marker S, when constructed and operating as set forth.

91,107.—F. FISCHBECK, Chicago, Ill.—*Traveling-Bag Frame.*—June 8, 1869.

Claim.—1. A traveling-bag frame, having the rim A of the outer jaw, the protectors B, and the cross-strip E, constructed and arranged substantially as herein described and for the purpose set forth.

2. Hinging the inner jaw E to the ends of the strip D, bent as herein shown and described, or to the protectors B, substantially as set forth.

91,108.—ADDISON C. FLETCHER, New York, N. Y.—*Postage-Stamp, &c.*—June 8, 1869.

Claim.—A postage or revenue stamp, having a portion of its surface composed of thin or fragile paper, or other suitable material, loosely attached, and on which a portion of the design or other matter is printed, substantially as and for the purpose or purposes set forth.

91,109.—FRANCIS M. FRANKLIN, Springfield, Ohio, assignor to himself and EDWARD M. DOTY, same place.—*Plow.*—June 8, 1869; antedated May 24, 1869.

Claim.—1. The bent sheath C, constructed and used substantially as and for the purposes as herein set forth.

2. The arrangement of the beam A, sheath C, bent draught-rod F, eye-bolt H, upright I, and handle B, all substantially as shown and described.

3. The arrangement of the handle B, upright I, round L, forked brace J, thimbles *d d*, washers *e e*, and nuts *c* and *f f*, all substantially as herein set forth.

91,110.—WILLIAM D. FREEMAN, Tomales, Cal.—*Machine for Cleaning Oats.*—June 8, 1869.

Claim.—A riddle, as shown and described, and to be used as an oats-cleaner, and its operation in thrashers and separators, for the purposes specified.

91,111.—SAMUEL N. FRENCH, Fitchburgh, Mass.—*Carpet-Fastener.*—June 8, 1869.

Claim.—The carpet-fastener described, consisting of the base A, having the projections *a a*, and spur *a'*, and swinging-button B, the whole being combined and operated in the manner and for the purpose set forth.

91,112.—MAGGIE E. FRENTZ, New Albany, Ind.—*Corset-Fastening.*—June 8, 1869.

Claim.—The device for fastening corsets, consisting of the male and female clips *a b*, provided with lips to clasp the busk over its outer edge, and with perforated tongues to pass through slots in the busk, being secured in position by means of a key-pin or split ring, substantially as described, and for the purpose set forth.

91,113.—SIGMOND GOGE, Brooklyn, N. Y.—*Glove.*—June 8, 1869.

Claim.—The glove, formed with the seams of the second and third finger pieces converging to the part *6* in the palm, substantially as and for the purposes set forth.

91,114.—OLE CHRISTIAN GREEN, Copenhagen, Denmark.—*Compound for Making Friction-Matches.*—June 8, 1869.

Claim.—The compound formed of the ingredients herein described, substantially as and for the purpose set forth.

91,115.—FREDERICK GRINNELL, Meadville, Pa., assignor to N. C. MILLER and S. R. DUMMER, New York City.—*Axle-Box Cover.*—June 8, 1869; antedated December 8, 1869.

Claim.—1. The arrangement of the oblong slot *b* in one end of the cover A, in combination with the open slot *a* in the opposite end, and with the screw-bolts *c c'*, substantially as and for the purpose described.

2. The projecting lip *e*, on the open slot *a*, in combination with the angular slot *b* in the cover A, and with the screw-bolts *c c'*, substantially as and for the purpose set forth.

91,116.—WILLIAM W. GUILD, Walpole, N. H., administrator of the estate of JAMES W. MELLISH, deceased.—*Guard for Door-Knobs.*—June 8, 1869.

Claim.—1. Cutting a notch or recess in the knob-spindle, to receive a portion of the metal of the sliding-gripe F, and to prevent any movement of the knob-spindle endwise, substantially as herein set forth.

2. In combination with a knob-spindle cut with a notch or recess, as described, the sliding-gripe F, the movable cam-plate G, and the main plate E, all constructed and arranged to operate substantially in the manner and for the purposes set forth.

91,117.—NICHOLAS B. HADLAY, Providence, R. I.—*Machine for Threading Screws.*—June 8, 1869.

Claim.—1. The combination of the notched arbor B, spring-catch D, pulley C^1, tripping-wedge F, tappets G^1 G^2, and retracting spring *f*, all arranged as and for the purposes set forth.

2. The described arrangement of the tripping-piece F, pulley C^1, and spring-catch D, substantially as set forth.

3. The cams G^5 G^6, constructed as described, and arranged as shown, upon the shaft G, in combination with the projection K' of wedge K, and the tool-carrier H and spring J', whereby said wedge is moved back and forth, by a positive motion, under all conditions, as set forth.

4. The relative arrangement of the wedge K, wedge-bar L L', bearing-block H', and tool-carrier H, substantially as herein set forth.

5. The shaft N, in combination with the cams O^1 O^2 O^3, wedge-bar L L', and wedge K, the parts L' N being connected by means of a pin working in a slot, whereby said wedge-bar L' is operated, both longitudinally and laterally, and the said motions are rendered independent of each other, substantially as herein described.

91,118.—ROBERT D. HAINES, Cambridge, assignor to the "BOSTON SILVER-GLASS COMPANY," Boston, Mass.—*Sectional Mold for Glass-Ware.*—June 8, 1869.

Claim.—1. In combination with the hinged or clamping jaws, the sliding-mold blocks, diverging

radially from the axis of the mold, substantially as described.

2. In combination with the hinged jaws and the sectional sliding mold-blocks, the vertically sliding pin *u*, substantially as described.

3. In combination with means for raising the pressed article, the stationary cap-ring *x*, substantially as described.

91,119.—Robert D. Haines, Cambridge, assignor to the "Boston Silver-Glass Company," Boston, Mass.—*Solid Glass-Ware Mold.*—June 8, 1869.

Claim.—1. A solid glass-ware mold, having a series of peripheral matrices, substantially as described.

2. In combination with such mold, the means for bringing each matrix successively into position, and for preventing movement of the mold during the action of the plunger, substantially as described.

91,120.—A. H. Hall and H. T. Lee, Marysville, Cal.—*Steam-Packing.*—June 8, 1869.

Claim.—The construction of the malleable metal strips, substantially as described, and for the purpose set forth.

91,121.—E. R. Hall, Syracuse, N. Y., assignor to himself, William H. Town, and Charles E. Candee, same place.—*Sawing-Machine.*—June 8, 1869.

Claim.—1. The chains *c*, rollers *g* and *m*, shaft *n*, lever *p*, and pinions on the working-shaft, and shaft *u*, as described, when constructed and arranged substantially as and for the purpose specified.

2. The arms *s*, *t*, and *w*, shaft *u*, rods *y* and *a'*, and guide *b*, when all the parts are constructed, arranged, and operating substantially as and for the purposes specified.

3. The arms *c'* and *e*, spring *d'*, and hinged block *f*, when constructed, arranged, and operating substantially as and for the purposes herein specified.

91,122.—William H. Hall, New Gloucester, Me., assignor to himself and John R. Clifford, Chelsea, Mass.—*Elastic Heel-Guard for Horses.*—June 8, 1869.

Claim.—As an article of manufacture, a heel-guard of India rubber, formed as described; that is to say, with the interior projections and rolls lined with kersey, all as herein shown and described.

91,123.—William Smith Hall, Quincy, Mass. —*Homomotive.*—June 8, 1869.

Claim.—1. A carriage constructed and arranged to be driven by hand or foot, or hand and foot, by means of a system of ratchet and pawl clutch mechanism and gearing, substantially as shown and described.

2. The organization of mechanism for changing the direction of rotation of the shaft of the actuated carriage-wheels, substantially as shown and described.

3. The organization of mechanism for steering or changing the direction of movement of the front wheels, substantially as shown and described.

4. In combination with a carriage, which may be driven by hand or foot, or both, removable pedals, substantially as described.

5. In combination with a carriage, which may be driven by hand or foot, or both, hand-operated arms or levers, which may be thrown into position to be operated, or out of such position, substantially as described.

91,124.—George Halstead, Buffalo, N. Y.—*Iron Truss-Bridge.*—June 8, 1869.

Claim.—1. The truss-block J, with its projections K, when arranged and combined with the chords, tie-rods, and columns, as and for the purpose set forth.

2. The bolts H, when combined with the separating-blocks G or G^1 and floor-beams I, in the manner and for the purpose set forth.

91,125.—George Halstead, Buffalo, N. Y.—*Manufacture of Wrought-Iron Columns.*—June 8, 1869.

Claim.—The improved column or shaft herein described and shown, composed of the beaded and rebated segmental plates A and bead-like battens *d*, joined one to the other, and united by rivets or bolts, in the manner set forth.

91,126.—C. C. Hare, Kansas City, Mo.—*Current Changing Apparatus.*—June 8, 1869.

Claim.—1. The sliding-pipe B, in combination with the outer pipe A and the tube H, constructed substantially as and for the purpose described.

2. The hinged and pivoted lip C, in combination with the sliding-pipe B, case A, and tube H, constructed and arranged substantially as and for the purpose described.

91,127.—John K. Harris, Springfield, Ohio.—*Harness.*—June 8, 1869.

Claim.—1. The arrangement of the springs H, thongs *c c*, and plate M, as described, the spring and thongs extending from the end of the plate, so as not to add to the lateral space required for it, substantially as and for the purposes specified.

2. The combination of the side loop or hook *m* or *n* with the plate M, when the latter is employed in connection with the springs H and thongs *c*, substantially as and for the purposes set forth.

3. Arranging the elastic apparatus M H *c h* within the body of the holdback, substantially as and for the purposes specified.

4. The combination of a thill-supporting hook or eye with an elastic holdback, substantially as and for the purposes set forth.

5. Attaching the thills to the harness by means of thill-hooks *f f* and harness-eyes *m m*, constructed and arranged so as to prevent disengaging by an upward pressure upon the thills, substantially as and for the purposes set forth.

91,128.—William Hawkins, Brooklyn, N. Y., assignor to himself and F. W. Barnhart, same place.—*Separator for Meal, &c.*—June 8, 1869.

Claim.—The shaft *a*, with the agitators *o* and inclined conveyers *p*, arranged as set forth, in combination with the adjustable bearings *e f*, case *k l*, screen *m*, hopper *n*, and delivery-spout *r*, as and for the purposes set forth.

91,129.—Jacob Heckendorn, Reading, Pa.—*Plow.*—June 8, 1869.

Claim.—1. The oblique landside A, provided with coulter *a*, shoulder *b*, and round edge *e*, in combination with coulters *d* and mold-board H, substantially as described.

2. Standard B, curved so as to form a continuation of the curve of the mold-board, the head being inclined over the mold-board, substantially as described.

3. The double point C, with coulters *d d d d*, the noses *f f* being made and chilled in a curved line, as arranged, and held in position by lug *i*, in combination with the oblique round-edged landside, substantially as described.

4. The bolt or stem E, so arranged as to be adjustable laterally without changing the position of beam in relation to the standard, substantially as and for the purpose set forth.

5. The standard bolt or stem E, with dovetail head, tongued washer O, and screw-nut, corrugated plate *n*, with transverse slot and transverse corrugated groove *m*, constructed and operating substantially as described.

6. The adjustable cutter F, having a curved shank, constructed substantially in the manner as described.

91,130.—A. B. Hendryx, Ansonia, Conn.—*Lamp-Shade.*—June 8, 1869.

Claim.—A lamp-shade formed from a segment, pivoted at the lower edge, and the upper edge constructed so as to slide, one part upon the other, and provided with the spring *f*, for the purpose of adjusting the shade, substantially in the manner set forth.

91,131.—J. Herr, Carbondale, Ill.—*Animal-Trap.*—June 8, 1869.

Claim.—The combination of the box A, wire-reel

B, and pulley-cord C, spring D, pivoted bottom G, trough H, spring-rod I, trigger K, guide L, and ratchet E, all constructed and operated as herein set forth.

91,132.—Charles H. Hersey and Walter E. Hawes, Boston, Mass., assignors to themselves and F. C. Hersey, same place. — *Glass-Ware Press.*—June 8, 1869.

Claim.—In a glass-ware press, the combination, with the cross-head, to which the platen is connected, of the links *e*, cross-tail *d*, toggles *f g*, links *i*, and the rocker-lever, shaft, and arm, arranged and operating as herein described.

91,133.—James Howard, West Manchester, Pa.—*Paper for Roofing.*—June 8, 1869.

Claim.—The method, hereinbefore described, for preparing paper for roofing purposes, to wit, by passing the paper through liquid asphaltum heated to that degree which will cause the paper and the asphalthum on it to dry as fast as it is drawn from the reservoir of liquid asphaltum.

91,134.—George H. Hurd, Memphis, Tenn.—*Regulator for Vulcanizing-Apparatus.*—June 8, 1869.

Claim.—The application of steam, when used in regulating the flow of gas or heat, in the vulcanizing of rubber, as herein described, using for that purpose the aforesaid apparatus, or any other substantially the same, and which will produce the intended effect.

91,135.—Charles F. Jacobsen, New York, N. Y.—*Chandelier.*—June 8, 1869.

Claim.—1. The combination of two or more burner-rings, B B′, placed, the one above the other, with the pipe or rod A and reflector D E G, substantially as herein shown and described, and for the purpose set forth.

2. The rings B B′, when provided with the flanges O O, to receive and support the glass pendants, as herein shown and described, for the purpose set forth.

3. Forming raised or sunken panels in the foundation, or outer part D, of the reflector D E, substantially as herein shown and described, and for the purpose set forth.

4. Covering the silver coating of the glass E with a water and heat proof cement, when used in reflectors, substantially as herein shown and described, and for the purpose set forth.

5. The combination of the two canopies I and J, provided with borders K and pendants L, with the rod or pipe A and double-cone reflector D E G, substantially as herein shown and described, and for the purpose set forth.

6. The combination and arrangement of the rod or pipe A, rings B B′, provided with burners, double-cone reflector D E G, chains F, canopies I J, provided with raised borders K and pendants L, and pendants N P Q, with each other, substantially in the manner herein shown and described, and for the purpose set forth.

91,136.—Joseph L. Joyce, New Haven, Conn.—*Machine for Cutting Down Heels of Boots and Shoes.*—June 8, 1869.

Claim.—The combination of the adjustable holder B, with the cutter *f* and guide L, arranged upon an adjustable carriage, C, so as to operate in the manner and for the purpose substantially as set forth.

91,137.—Joseph Kay, New Haven, Conn.—*Tuyere.*—June 8, 1869.

Claim.—The arrangement, in the tuyere-plate A, of the swinging-plate B, combined with the two plates *b* and *c*, each constructed with corresponding openings, and so as to operate substantially in the manner herein described.

91,138.—John J. Kenna, San Francisco, Cal.—*Machine for Polishing Shirt-Bosoms.*—June 8, 1869.

Claim.—The roll A, provided with the recess B, substantially as and for the purpose set forth.

91,139.—L. W. Langdon, Northampton, assignor to himself and J. G. Clark, Springfield, Mass.—*Permutation-Lock.*—June 8, 1869.

Claim.—1. In combination with the locking-bolt of a permutation-lock, having studs set on the cylindrical part thereof, a series of revolving ferrules, having annular and longitudinal channels and dogs upon the adjacent ends thereof, when said ferrules revolve on the locking-bolt, are arranged and inclosed within a casing, and are operated by means of power applied to one of the ferrules, substantially as herein described.

2. The combination and arrangement of the bolt E, having projecting studs, the series of channeled and revolving ferrules F, with projecting dogs *f* at the adjacent ends thereof, beveled gears G G′, driving-spindle H, dial M, and graduated knob K, having a projecting pin, *o*, the whole applied to the lock-body, and operating substantially as described.

91,140.—A. Z. Long, Scranton, Pa., assignor to himself and W. G. Dowd, same place.—*Car-Coupling.*—June 8, 1869.

Claim.—1. In connection with the hook B, jointed to the car H, the curved plate E, provided with the notches $e\ e^1\ e^2$, as and for the purpose specified.

2. As a whole, the automatic car-coupling device, consisting essentially of the jointed hook B, plate E, having three or more notches, $e\ e^1\ e^2$, and casting C, having the slot c^1; the oblique curved walls $c^2\ c^2$, and the inclined bottom *c*, substantially as and for the purpose described.

91,141.—John C. Love, Philadelphia, Pa.—*Lamp-Burner.*—June 8, 1869.

Claim.—1. The flange *p*, with its notches, at the upper end of the perforated casing *n*, in combination with the outer cone A and its slot *d*, all as described.

2. The combination of the springs *f*, their fingers *i*, and the set-screws *h*, all arranged on a burner, operating as set forth.

91,142.—Obadiah Marland, Boston, Mass.—*Hardening Steel.*—June 8, 1869.

Claim.—1. The process for hardening steel, consisting in subjecting the heated steel to the action of a cooling current, which is maintained under pressure in a receptacle for the heated steel, through which receptacle the cooling current flows, by the action of a head or pressure against a contracted outlet, substantially as described.

2. A receptacle for the heated steel article, arranged with an inlet and outlet for the cooling current, when shaped to correspond to the form of the piece to be hardened, and to permit a substantially uniform flow of the cooling-current past all the surfaces of said piece, substantially as described.

3. A receptacle for the piece to be hardened, when provided with adjustable studs, arranged to clamp and hold said piece in position for the action thereon of the cooling current.

4. A receptacle for the piece to be hardened, when provided with an inlet valve or gate, and a grid or series of bars, *c*, arranged to allow deposit or drainage or leakage of the cooling medium, and to admit the contact of the cooling current with the lower surface of said piece.

5. The combination of the check bars *k* with the receptacle for the heated steel, substantially as and for the purpose specified.

6. The combination, with the receptacle for the hot steel, of a cover or door, provided with the means for locking it when closed, substantially as described.

7. The combination, with the receptacle for the hot steel, of adjustable plates, arranged to contract the area of the passage of the cooling-current, as it passes from the inlet to the outlet, substantially as and for the purpose specified.

91,143.—E. G. Matthews, Newton, assignor to F. F. Holbrook, Dorchester, Mass.—*Seed-Planter.*—June 8, 1869.

Claim.—1. The combination, with the markers J and arms I I, of the pins *e* and *f*, substantially as and for the purposes set forth.

2. The conductor or opening-plow K, made substantially as and for the purposes set forth.

3. The combination, with the hopper and conduc-

tor, of the seed-dial plate, substantially as and for the purposes set forth.

4. A seed-dial plate, constructed in the particular manner above described, in combination with the hopper, substantially as and for the purposes set forth.

5. The stirrer D, substantially as and for the purposes set forth.

6. The combination with the pieces A A and handles R R, of the curved joint-pieces S S, as shown and described.

91,144.—E. G. Matthews, Newton, Mass.—*Hand-Cultivator.*—June 8, 1869.

Claim.—1. The arrangement, with the slotted frame A and adjustable wing-frames D D, of the central wheel B, substantially as described.

2. The combination, with frames A and D, of the wheels B and F, substantially as and for the purposes set forth.

3. The arrangement of the teeth E, as respects the wheels B and F, and each other, as shown and described.

4. The plant-lifting arms J J, substantially as and for the purposes set forth.

91,145.—Ives W. McGaffey, Chicago, Ill.—*Sweeping-Machine.*—June 8, 1869.

Claim.—1. A machine, substantially such as is herein described, having a rotating fan, arranged to draw or suck a current of air, and with it the dust or dirt from the floor, up into the machine, as set forth.

2. The combination of the case A with its fan, the conductor B, and mouth-piece C, when arranged to operate as and for the purpose set forth.

3. The combination of a fan for drawing or sucking up the dirt, by a current of air, and a porous receptacle, which serves to retain the particles of dirt, while permitting the air to escape.

91,146.—R. A. McKanna, Young America, Ill.—*Swivel Cock-Eye.*—June 8, 1869.

Claim.—The grooved metal plate A, securing the sides and ends of the leather B, and provided at its end with a swivel cock-eye, D, all connected together by bolts C, substantially as set forth.

91,147.—A. J. McKee and S. D. McKee, Beaver Dam, Ohio.—*Hay-Loader.*—June 8, 1869.

Claim.—1. A hay-gatherer, consisting of the frame A, mounted on wheels, and having teeth E, arranged to slide therein longitudinally, and also to have their front ends elevated and lowered by the cords *k*, windlass *g*, with ratchets G, and levers H, provided with pawls *h*, all constructed and arranged to operate substantially as herein described.

2. The combination of the teeth E with the bail K, provided with the arms L, for operating it, when constructed and arranged substantially as described, and for the purpose set forth.

3. The hook F, provided with the lever *e*, in combination with the teeth E, when constructed and arranged to operate substantially as herein described, and for the purpose set forth.

91,148.—William S. McNeil, Springfield, Mass., assignor to American Car-Heating Company, New York City.—*Car Heater and Ventilator.*—June 8, 1869.

Claim.—1. The employment, with the conduit for conducting air from the exterior of the car to the heating-apparatus, of a slanting or inclined partition within such conduit, for receiving and deflecting the cinders and other impurities entering with the air, and a discharge orifice, located at or near the lowest point of the partition, for the escape of the cinders and other matter thus collected, substantially as herein set forth.

2. The combination with the air-induction pipe and slanting partition, as above described, of a second pipe or conduit, leading to the heating-apparatus, and extending up through the said partition, so as to receive air from the air-induction pipe, and provided with a conical or tapering screen, for deflecting upon the partition the impurities which enter with the air, substantially as and for the purposes described.

3. The combination, with the elements named in the preceding clause, of the water-cylinder or chamber, within which the inclined partition and the pipe passing through the same are arranged, as hereinbefore shown and specified.

4. The air-purifying apparatus, constructed as herein specified, in combination with the heating-apparatus, substantially as shown and set forth.

5. The arrangement, in an apparatus such as described, of the fire-box, the feed-hopper or magazine, the upper heating-space, the two receiving and heating chambers, and the dome surmounting said parts, substantially in the manner shown and specified.

6. The employment, in connection with the dome and the hopper or feed-tube opening into the fire-box, as described, of a sliding screen-plate, covering the hopper, and adapted to be locked or held in place by the door carried by the dome, as and for the purposes shown and set forth.

91,149.—Stephen W. Miller, Dundee, N. Y.—*Sewing-Machine.*—June 8, 1869.

Claim.—The combination, with belts G G, and rollers E F, of the rotating disk I, arranged between the belts to raise the cloth from the pins in the belt, as described.

91,150.—S. G. Monce, Bristol, Conn.—*Tool for Cutting Glass.*—June 8, 1869.

Claim.—1. The cutter A, constructed substantially as shown and described, and for the purposes set forth.

2. The combination of the cutter A, frame B, and handle C, substantially as and for the purposes described.

91,151.—James A. Morrell, New York, N. Y.—*Pump.*—June 8, 1869.

Claim.—The combination of the piston-rod C, cross-head D D, rods C′ C′, and cylinder A, all arranged substantially as and for the purpose specified.

91,152.—Andrew J. Morse, Boston, Mass.—*Syrup-Cock.*—June 8, 1869.

Claim.—The cylindrical elastic valve, the curved surface of which impinges against the inner side of the faucet-tube, and covers and uncovers the eduction orifice, the elasticity of the valve permitting its expansion, and enabling it to be suitably expanded, at will, when worn, and the valve, when operated, having an endwise and rotative movement, substantially as described.

91,153.—Porter C. Moulton, New Haven, Conn.—*Neck-Tie Retainer.*—June 8, 1869.

Claim.—In combination with a neck-tie, the retainer, consisting of a supporting-plate, B, and a spring, C, between the outer ends of which the edges of the collar are clasped, and the neck-tie held in position, substantially as shown and described.

91,154.—Thomas H. Neal, Allegheny, Pa.—*Attaching Handles to Picks.*—June 8, 1869.

Claim.—The pick-holder B and clamping-screw C, when constructed and arranged substantially as herein described, and for the purpose set forth.

91,155.—Isaac E. Newton, Waterbury, Conn.—*Stone Cutting and Dressing Saw.*—June 8, 1869.

Claim.—The herein-described method of setting diamonds in stone cutting or dressing instruments, consisting of the two blocks B B, constructed and arranged substantially as set forth.

91,156.—O. R. Nitsch, New York, N. Y.—*Fan.*—June 8, 1869.

Claim.—As a new article of manufacture, a fan, whose leaves are attached together and opened by a spiral spring, attached to the outer leaf, substantially as described.

91,157.—William O'Neill, Pine Level, Ala.—*Plow.*—June 8, 1869; antedated May 28, 1859.

Claim.—The additional improvement to my patent of September 13, 1859, viz, the mode of adjusting the land-side J by the wedge K, as herein described, and for the purpose set forth.

91,158.—Joseph F. Paul, Boston, Mass.—*Wood Pavement.*—June 8, 1869.

Claim.—A pavement composed of a series of oblong blocks of wood, united together by grooves and a tongue, extending entirely across the foundation, when the tongue and grooves, by which they are united, are of such nature as to admit of a single block being driven directly upon the tongue, at any point in its entire length, when each alternate row of blocks thus connected is supported by a longitudinal strip of plank, of such width as to form a support for the entire base of one row, and ledges for the support of the two contiguous rows of blocks, the same being substantially as before explained.

91,159.—Charles Peck, New Haven, Conn.—*Lifting-Device for Drop-Presses and Hammers.*—June 8, 1869.

Claim.—1. The lock-bars D and E, in combination with the springs *b* and *c*, bolts *e* and *f*, and frame A, substantially as herein described.

2. The slotted bolt F, in combination with the sweep C, spring G, pawl *a*, and ratchet-wheel, arranged and operated in the manner substantially as herein described.

91,160.—George C. Perry, Ortonville, Mich.—*Horse Hay-Fork.*—June 8, 1869.

Claim.—1. The straight tine B, when used in the manner and for the purpose specified.

2. The tines A and B, levers C, braces D and E, and jaw F, when all are combined and operated substantially in the manner and for the purpose set forth.

91,161.—O. M. Pond, Independence, Iowa.—*Combined Seeder and Cultivator.*—June 8, 1869.

Claim.—A seeder and cultivator, consisting of seed-box C. plates *b b'*, screws *a a*^{1}, plates *a*^{1} *a*^{1}, levers *d* and *k*, chain *j*, cultivators *h' h' h'*, and bars *i i'*, all combined, arranged, and operating substantially in the manner and for the purpose described.

91,162.—Josiah M. Read, Boston, Mass.—*Boot-Crimper.*—June 8. 1869.

Claim.—1. The mode of attaching the auxiliary jaws D to or suspending them from the clasp B, by means of the overlapping ears *a a*, or their equivalents, which, while supporting said jaws, enables them to be instantly removed from or applied to the clasp, substantially as described.

2. The peculiar formation of spreader J, and its combination and arrangement with the auxiliary jaws, so as to allow the jaws and the clasp to be supported upon said spreader in the manner shown and described, and for the purpose set forth.

91,163.—John Reiser, Trenton, N. J.—*Door-Pulley.*—June 8, 1869.

Claim.—The thumb or set screw B, applied to the weight A, when arranged, constructed, and combined as herein shown and represented, for the purposes set forth.

91,164.—Sanford Riley, Northcutt's Store, Ky.—*Shovel-Plow.*—June 8, 1869.

Claim.—The combined arrangement of the reversible shovel, having diverse ends F F^1, and a working-face, concave in its length from point to point, and convex in its width from side to side, with a plurality of bolts E E, for securing it to its standard, B, as and for the purpose described.

91,165.—William D. Rinehart, Pittsburgh, Pa.—*Machine for Making Horseshoes.*—June 8, 1869.

Claim.—1. The lever *c*, having its upper end resting in a recess in the lower part of the die *e*, and arranged to be operated by the cam-wheel N, on the shaft D, substantially as described.

2. The holder *l*, constructed substantially as described, and arranged to be operated by the lever *h* and cam *h'*, as set forth.

3. The arrangement of the inclined die *e*, located below the former T, to receive the blank as it is dropped from the former, in combination with the correspondingly inclined swage *t*, operated by the knuckle-levers I I' and cam M, on the shaft D, substantially as described.

91,166.—C. A. Roberts, West Meriden, Conn.—*Attaching Pen-Racks to Inkstands.*—June 8, 1869; antedated April 27, 1869.

Claim.—A pen-rack, having the base constructed with the projection *a* and set-screw *d*, so as to be arranged upon and secured to the inkstand, in the manner and as herein set forth.

91,167.—Ira J. Ryerson, Piercetoh, Ind.—*Gate-Hinge.*—June 8, 1869.

Claim.—The adjustable wing E, pivoted to the plate D, and made to turn on the guide G, in combination with the adjustable stop *d*, substantially as specified and shown.

91,168.—Moritz Saulson, Troy, N. Y.—*Dinner-Pail.*—June 8, 1869.

Claim.—1. The combination, with the pail A, of the inner vessel B, provided with hinged bail E, as herein shown and described.

2. The combination with the pail A, of the canteen F, provided with the flange *b* and ring I, and removable standards or legs L, as herein shown and described, and for the purpose set forth.

91,169.—Friedrich Schmitt, Springfield, Ill.—*Velocipede.*—June 8, 1869.

Claim.—1. The within-described velocipede, constructed and arranged substantially as set forth, with the revolving-axle A, rear-wheels B B, guide-wheel G, and guide F, and operated by means of the pinion *b*, driving-wheel *c*, axle *d*, ratchet-wheel *e*, upright vibrating-lever *f*, connecting-bar *h*, seat-support and seat *q*, cross-piece *i*, jointed levers *k k*, and snappers *l l*, substantially as and for the purpose shown.

2. In combination with the above, the collar-band *p*, and catch *n*, substantially as and for the purpose shown and described.

91,170.—Charles H. Scholle, Cincinnati, Ohio.—*Coffee-Boiler.*—June 8, 1869.

Claim.—The arrangement of pot A, annular diaphragm B, removable percolator D, covered discharging-spout E G, and curved injectors F F', for the purpose set forth.

91,171.—Francis Schweizer, Green Point, N. Y.—*Bolt-Heading Machine.*—June 8, 1869.

Claim.—1. The arrangement of cam-slides L L D and slides I K K B B' on the upper surface of the bed A, cam-slide Q, and slide P on the under surface of said bed, in combination with cams E, R, N N, H, on the main shaft F, all as shown and described.

2. The mechanism for adjusting the header-gauge, in combination with the device for adjusting the retracting-mechanism, arranged and operating as described.

91,172.—John F. Seiberling, Akron, Ohio.—*Harvester.*—June 8, 1869.

Claim.—1. In a tilting double platform, the front edge of which rises from the finger-beam, arranging the hinges which unite the two sections of the platform and the hinges or pivots upon which the platform tilts in or nearly in the same vertical plane, substantially in the manner and for the purposes set forth.

2. So pivoting and operating a dropping platform, the front edge of which rises from the finger-beam, that the forward edge of the same, as it rises, will move forward in relation to the finger-beam, and, as it descends, will move backward, substantially as set forth.

3. Making the double platform extensible, by moving the rear section backward and forward on the hinges that unite the two sections, substantially as described.

4. In combination with the tilting platform, dividing-boards, and cut-off rod or bail, the hook *l*, Fig. 5, forming a hinge, on which the bail is raised from the front of the platform, when the latter is tilted, substantially as described.

5. The slotted adjustable support *p*, or the equivalent thereof, for adjusting the rear end of the double platform to the height required, for the purposes set forth.

6. So constructing and arranging a harvester that

the rear section of the platform may be folded up, and the finger-beam then swung horizontally backward, substantially in the manner and for the purposes set forth.

7. The combination and arrangement of the dropping or tilting platform, main frame, and raker's stand, substantially in the manner and for the purposes specified.

8. The combination of the crooked brace-bar H R, the piece Y, and the shoe, substantially as described

91,173.—E. B. SINTZENICH, Rochester, N. Y.—*Steam-Generator.*—June 8, 1869.

Claim.—1. The combination and arrangement of the water-tubes *a b c d* with reference to each other, and to the steam and water spaces of upright boilers, substantially as described.

2. The steam-chamber C, with its corresponding water-chamber C′, communicating with the annular steam and water spaces of upright boilers at opposite sides, in combination with the water-tubes *a b c d*, substantially as set forth.

91,174.—THOMAS SLAIGHT, Newark, N. J.—*Knob-Latch.*—June 8, 1869.

Claim.—The spring F, and levers C E, in combination with the latch D, provided with the oblong slot *b*, all arranged to operate in the manner substantially as and for the purpose set forth.

91,175.—DAVID MCCONNELL SMYTH, Orange, N. J., assignor to HENRY G. THOMPSON, New York City, and REUNE MARTIN, Orange, N. J.—*Machinery for Sewing Books.*—June 8, 1869.

Claim.—1. The series of needles, all of them provided with an eye, near the upper end, for holding the bands, and without hooks at their upper ends, substantially as described, in combination with the traveling-hook or the equivalent thereof, for carrying the thread in front of the needles, as described.

2. The combination of the following: The series of needles, the hook, or equivalent, for laying the thread in front of the needles, and the lifters, having mode of operation substantially such as described, for lifting the sheet over the needles and forming the fold.

3. The combination of the series of needles and the hook, or equivalent thereof, for laying the thread in front of the needles, the lifters for forming the fold, and the assistant folder, substantially as and for the purpose specified.

4. The combination of the series of needles, the hooks, or equivalent, for laying the thread in front of the needles, the lifters for folding the sheets, and the arms for operating the binding threads, substantially as and for the purpose described

5. The combination of the receiving-table with the series of needles, the hook for laying the thread, and the folder, substantially as and for the purpose specified.

91,176.—BENJAMIN F. STEPHENS, Brooklyn, N. Y.—*Method of Preparing Beef, &c.*—June 8, 1869.

Claim.—The preparation of animal substances by grinding the same up into small pieces previous to drying, so as to render the drying more uniform and rapid, and then grinding the same into a flour, as and for the purposes set forth.

91,177.—ORRIN STONE, Ionia, Mich.—*Combined Seeder and Sower.*—June 8, 1869.

Claim.—In combination with a cultivator-frame, carried by and adjustable on an axle and wheels, by means of the rack G, cogged segment H, lever *c*, and dog or pawl *d*, arranged near the driver's seat, as herein described, a seed-box for carrying, and the appliances for distributing and sowing the seed therein, said seed-box being arranged with regard to the cultivator and tongue, as herein represented, and for the purpose set forth.

91,178.—JOSEPH STONE, Keeseville, N. Y., assignor to himself, C. S. BAUM, M. T. CONRO, E. W. REYNOLDS, and G. T. THOMAS, same place.—*Machine for Welding and Cutting Railroad-Rails.*—June 8, 1869.

Claim.—The arrangement above described, consisting substantially of the cross-head c^4, with attachments, eccentrics *c* c^1, d^2 d^3, cross-head d^4, rocking-lever E^2, connecting-rod E, and dies e^1 e^2, as and for the purpose set forth.

91,179.—THOMAS B. STOUT, Keyport, N. J.—*Carpet-Stretcher.*—June 8, 1869.

Claim.—1. The fulcrum B, arranged and operating, in combination with the claw C of a carpet-stretcher, substantially as and for the purpose herein specified.

2. The dog D, attached to the handle A, and operating in combination with the claw C, pivoted upon the fulcrum B, substantially as and for the purpose herein set forth.

91,180.—LEVI B. SWARTZ and JAMES M. OPDYCKE, Lumberville, Pa.—*Door-Bolt.*—June 8, 1869.

Claim.—1. The hollow frame A, divided into two apartments, and slotted as described, in combination with the two slides C and I, and pin B, when used in the manner and for the purpose set forth.

2. The drum D, grooved as set forth, in combination with the notched bolt F, cam H, and spring G, when used in the manner specified.

3. The arrangement of the frame A, slides C and I, spring G, pin B, cam H, and notched bolt F, when all are combined for the purpose set forth.

91,181.—BENJAMIN TATHAM and JOSEPH STEGER, New York, N. Y.—*Railway-Car Brake.*—June 8, 1869.

Claim.—1. Giving to the friction plate or bar H a double-wedge shape from the center toward its ends, substantially as shown and described.

2. The friction plate or bar H, when the same is arranged, in combination with levers to be pushed and pulled, substantially as and for the purpose set forth.

3. The automatic take-up M, in combination with the buffer or coupling N, and brake rope or chain G, substantially as and for the purpose set forth.

91,182.—DE WITT C. THOMAS, Easton, N. Y.—*Potato-Digger.*—June 8, 1869.

Claim.—The separator D, in combination with a shovel, and the operating parts of a potato-digger, constructed substantially in the manner and for the purposes above described.

91,183.—J. L. W. TOWNSEND, Mount Blanco, Ohio.—*Yoke.*—June 8, 1869.

Claim.—The key *a*, constructed as described, when combined with the yoke A, in the manner and for the purpose set forth.

91,184.—JOHN L. TUCKER, Laconia, N. H.—*Door-Spring.*—June 8, 1869.

Claim.—The adjustable door-stop, for holding the door open in any desired position, arranged and operating substantially as and for the purpose herein specified.

91,185.—WILLIAM P. UHLINGER, Philadelphia, Pa.—*Sawing-Machine.*—June 8, 1869.

Claim.—The radial levers *y*, in connection with a crank or crank-pin, and segmental pinion or roller, and the jaws *s* and *v*, either toothed or smooth, to give a reciprocating motion, in a right or straight line, to bands, for the purpose of working saws, substantially as specified.

91,186.—ROBERT B. VARDEN, Uniontown, Md.—*Coal-Stove.*—June 8, 1869.

Claim.—1. The arrangement and construction of the air-heating chambers in such manner that while A acts as a fire-box and air-heater, B shall be enveloped by flame and products of combustion through its axis and on its outer periphery, substantially in the manner and for the purpose set forth.

2. The arrangement and construction of drawers *c′ c′*, as described.

91,187.—CHARLES WETTERHAN, Fond Du Lac, Wis.—*Rocker for Chairs and Cradles.*—June 8, 1869.

Claim.—A rocking-chair, consisting of the rockers E, frame C, rods D, and locking-device F, all constructed and arranged to operate substantially as herein described.

91,188.—R. WHITE, Mechanicsburgh, Pa.—*Lock-Nut.*—June 8, 1869.

Claim.—1. The single or double cap D, placed over a nut or nuts, upon the end of a bolt, substantially as shown and described.

2. The groove cut in the side of the nut B, in the manner and for the purpose specified.

3. The pin E, when used to lock the safe D and grooved nut B together, substantially as described.

4. The combination of the grooved nut B, bolt C, safe D, and pin E, when all are used in the manner and for the purpose set forth.

91,189.—DAVID WILCOX, Boston, Mass., assignor to himself, W. H. SLOCUM, and W. A. BROWN, same place.—*Hat.*—June 8, 1869.

Claim.—A hat, whose body is shaped into folds H I C D, substantially as described, and for the purpose set forth,

91,190.—ALFRED WILKIN, Lucas County, Ohio.—*Fire-Place.*—June 8, 1869.

Claim.—The plate D, with its curve G and perforations H H and C C, in combination with the grate B, and when constructed with reference to the back of an ordinary fire-place, substantially as and for the purpose described.

91,191.—JOHN K. WRIGHT, Philadelphia, Pa.—*Printing-Press.*—June 8, 1869.

Claim.—1. The combination of a series of two or more printing-cylinders, the surface of each of which is equally divided into equal alternate sections or divisions of type space or spaces and blanket space or spaces, or the combination of two or more such cylinders, with two or more plain blanket-cylinders, for the purpose of printing both sides of a sheet of paper at one operation, substantially as set forth.

2. The device, consisting of the endless flexible or jointed frisket *h*, with its projecting sharp points *n*, or any mechanism for holding the paper thereon, in combination with the endless flexible side-belts *k l*, attached to said frisket, for propelling it, substantially as set forth.

3. A removable sliding surface-plate, m^2, in combination with any printing-cylinder, to facilitate the placing of the type-forms on such cylinder.

4. The rollers *p q s t u*, endless belts or belt or blanket *v*, roller *r*, with its springs or weights, in combination with the paper-roller *o*, in the manner and for the purpose substantially as shown and described.

5. Giving the fly or flies of a printing-press a revolving motion, by attaching it or them at one of its or their ends to a rotary or movable base, to effect rapidity of discharge, substantially as set forth.

6. The fly v' w', with its serrated knife y', the auxiliary fly z', c^2, and the following-fly f^4 g^4, in combination with the cylinder p^1, projecting points s', cams x', h^2, and cams d^2, by means whereof the continuous strip of printed paper is cut into sheets of the desired size, and discharged, substantially as set forth.

91,192.—HENRY C. YERBY, Leslie, Mich.—*Lantern.*—June 8, 1869.

Claim.—1. The cylinder b', constructed with two rows of holes, c' c', d' d', and provided with slide *d*, in combination with the inner cylinder *e*, all arranged to operate substantially as and for the purpose set forth.

2. The cylinder b', constructed as described, perforated slide *d*, and cylinder *e*, in combination with cylinders *f* and *g*, and slide g^2, all constructed, arranged, and operating substantially as and for the purpose set forth.

91,193.—JAMES YOST, White Deer Township, Pa.—*Elevator.*—June 8, 1869.

Claim.—1. The dumper *f g*, with crossed braces *h h*, all constructed, arranged, and operated as herein described.

2. The pawls N N, arranged as described, and operated simultaneously, in combination with the drums I, on the sectional shafts G G′, for the purpose set forth.

3. The removable sectional shafts G G, G′ G′, joined together substantially in the manner described, and provided with the detachable drums I, all constructed, arranged, and operating substantially as described.

4. The combination and arrangement of the sectional removable shafting, detachable drums, pawls N N, and movable shaft K, with drum J, and lever M, all operating substantially as herein set forth.

91,194.—JAMES C. YOUNG, Bloomington, Ind.—*Car-Coupling.*—June 8, 1869.

Claim.—The coupling described, consisting of the central pivoted bearing C, when combined with the jaws B B and spring D, and operated, as described, by means of the lever H, for the purpose set forth.

91,195.—CHARLES ZAISER, Newark, N. J.—*Lamp.*—June 8, 1869.

Claim.—The outer shell, when so constructed as to inclose the entire oil-chamber, the space between the two being filled with absorbent material, and so made as to be partially opened when desired, substantially as herein described.

91,196.—ANTHONY ZINK, Lancaster, Ohio.—*Propelling-Apparatus.*—June 8, 1869.

Claim.—The adjustable arms D D, that protect the paddle on each side, as herein described, and for the purposes set forth.

91,197.—SAMUEL C. ADAMS, Buffalo, N. Y.—*Nut-Lock.*—June 15, 1869.

Claim.—The spring-metal plate C, slitted at *c*, and sprung up at *b*, and perforated to allow the bolt B to pass through it, when said plate constitutes in itself a stop-pawl, and the stop-pawl *b* yields to the pressure of the nut at the time the nut is screwed upon the bolt D, and afterward springs outside of the nut, and prevents it from turning, all in the manner herein described and shown.

91,198.—ALBERT B. AUER, Chicago, Ill.—*Check-Book Clip.*—June 15, 1869.

Claim.—The cutter B, with a suitable spring-fastening, for fastening the same to the check-book, when constructed and operating substantially as and for the purposes specified.

91,199.—NOYES BALDWIN, Buffalo, N. Y.—*Vise.*—June 15, 1869.

Claim.—1. The manner of inserting the nut N in the part E, as or substantially as set forth.

2. The chill C, as and for the purpose set forth.

91,200.—ASHBEL P. PARLOW, Kalamazoo, Mich.—*Slide-Block for Muley-Saw Mills.*—June 15, 1869.

Claim.—The slide-block for saw-mills above described, when made of raw-hide, in the manner and for the purposes substantially as described.

91,201.—WILLIAM BARRY, Chicago, Ill.—*Compound Tool for Reaming and Squaring Pipes.*—June 15, 1869.

Claim.—The bit B, provided with the reamer *n*, and cutting-edges C C, in combination with the stock A, bit E, and keys D J, the whole being constructed to operate as and for the purpose set forth.

91,202.—CHARLES L. BEAMER, Cambria, N. Y.—*Grain-Binder.*—June 15, 1869.

Claim.—1. The shell formed in two parts, A and B, the grooved cog-wheel C, having cam *k* on its outside, and cogs 3, 4, 5, &c., on a segment of its inner side, in combination with the compressers E E′, arms *g g′*, shaft *h*, spring *i*, and frame *j*, constructed and operating as herein set forth.

2. Three disks or twisters, *t u v*, beveled gear G, and spur-gear H, in combination with the shell A B, and cog-wheel C, arranged and operating as herein described.

3. The nipper and cutter F, in combination with the cog-wheel C, cam L, and brace M, as herein set forth.

4. The construction of the machine as a whole, consisting of shell A B, braces *a a b b*, arms E E′ *g g*, cog-wheel C, provided with groove *d*, the twist-

ers *t u v*, beveled and spur gears G H, and nipper and cutter F, all arranged and operating in the manner and for the purpose herein specified.

91,203.—Henry Berix, Petersburgh, Ohio.—*Bee-Hive.*—June 15, 1869.

Claim.—1. The frame or box F, provided with the rollers *f*, and hinged support H, substantially as and for the purpose shown.

2. The comb frames G G, &c., when provided with the horizontal wooden cross-piece *g''*, and vertical wires *g''*, substantially as herein set forth, and for the purpose specified.

3. The insect-traps L L, when constructed and attached to the hive, substantially as and for the purpose shown.

4. The arrangement of the ledges K and O O, for the purpose specified.

91,204.—Charles W. Bierbach, Milwaukee, Wis.—*Wagon-Wheel.*—June 15, 1869.

Claim.—The screw-clamps C, bolts B, and jam-nuts D, in connection with a recessed tire, when arranged and operating substantially as described, and for the purposes specified.

91,205.—Albert J. Blakslee and Garner C. Williams, Du Quoin, Ill.—*Injector.*—June 15, 1869.

Claim.—The injector, consisting of the sockets A A', the suction pipe B, the steam-pipes C C', opening into the chambers *a a*, the pipe D D', with contracted openings *d d'*, the outlet-pipe E, the stand pipe F, and the caps G G', when constructed and arranged as above set forth.

91,206.—A. W. Brian, Ouachita County, Ark.—*Cotton-Seed Planter.*—June 15, 1869.

Claim.—The combination of the plow F F' F'', when provided with the scraper wings or blades G G', with a cylindrical seed recipient and planter, K, and covering-drag W, when all these parts are constructed and arranged relatively to each other, and operate substantially as herein described, for the purpose set forth.

91,207.—Leonard C. Briggs and Albert Howard, Boston, Mass.—*Let-Off Mechanism for Looms.*—June 15, 1869.

Claim.—The combination and arrangement of the beam D, wheel W, frame *f f'* F, levers L L', and springs S S', as described, and for the purpose set forth.

91,208.—Authur W. Browne, Brooklyn, N.Y. assignor to Mary A. Van Alen, same place.—*Lamp-Burner.*—June 15, 1869.

Claim.—The lamp-burner, constructed with the wick-tube *b*, air-tube *g*, and wick-raisers, in the manner specified, so that the flat wick passes in a folded condition through the wick-tube and wick-raisers, and is then spread into a round form at the argand flame, as specified.

91,209.—Bradford Buckland, Plantsville, Conn., assignor to S. Stow Manufacturing Company, same place.—*Tinsmiths' Machine.*—June 15, 1869.

Claim.—The combination of the spring *s*, rocker-bearing or shaft K, and the shaft C, substantially as described, and for the purposes set forth.

91,210.—C. I. Carter, Union City, Ind.—*Cider-Mill.*—June 15, 1869.

Claim.—The combination of two tiers of vertical rollers, as described, with the belts E F and triangular slots *e e*, the whole being constructed to operate substantially in the manner set forth.

91,211.—Plumer Cheswell, Manchester, N. H.—*Feed-Pump for Locomotive-Engines.*—June 15, 1869.

Claim.—The construction and arrangement of the valve-seat B, substantially as described, and for the purpose set forth.

91,212.—B. M. Close, West Camden, N. Y.—*Cultivator.*—June 15, 1869.

Claim.—1. The combination, with the cultivator-frame, of the thills, pivoted to the same, substantially in the manner described, so as to be capable of swinging or turning upon their pivot from side to side, independently of the cultivator, for the purposes set forth.

2. The combination, with the pivoted thills and cultivator-frame, of the segment and its loop or guide, attached respectively to said thills and frame, and arranged to operate in connection therewith, substantially as and for the purposes shown and set forth.

3. The combination, with the frame of the cultivator, of the thills, the hinged pivot or rod, on which the same turns, and the segment, and its loop or guide, under such an arrangement that the said thill may be capable both of rocking and of being turned or swung from side to side, substantially as shown and set forth.

91,213.—W. H. Covel, New York, N. Y.—*Carbureter.*—June 15, 1869.

Claim.—1. The combination of a case, C, filled (or flowing through) with water or other desirable fluid, with tank A and space B, with their appropriate connections.

2. Restoring the latent heat to a carbureting fluid, by means of a stream of water, operating substantially as set forth.

91,214.—Thomas Crane, Fort Atkinson, Wis.—*Knitting-Machine.*—June 15, 1869.

Claim.—1. The bar C, arranged across the machine in a plane parallel to the needle-bed, and constructed as described, so that it may be turned or moved back from the work, to allow access to the work, and also, when in working position, will prevent the needle-latches from casually falling forward upon the hooks of the needles as the latter advance to receive yarn from a distributer, G, substantially as described.

2. The latch-holder C and the work-holder B, so connected that they will both move together, substantially as described.

3. A latch-holder, C, so arranged that it will serve as an auxiliary support for the arm F^1 of the yarn-carrier, substantially as described.

4. The work-holder B, having teeth or guides *s s* rising from its upper surface, said teeth being beveled or curved on their under front edges, and formed directly upon the bed, by grooving the same in such a manner that the bases of the teeth are on a plane with the bases of the needle-grooves, all substantially as described.

5. The device *g*, for the purpose described.

6. Adjustable nut G^3, applied to the vibrating arm G^2 of the carriage G, and arranged within a flaring opening, r^1, made in said carriage, or their respective equivalents, for regulating the throw of needles, substantially as described.

7. The slide F of the yarn-carrier, constructed with an opening in the one side, with the hooks *j j*, for receiving a tongue, *p*, on the cam-carriage, substantially as described.

8. The auxiliary tension-spring, applied to a bow-spring, I, substantially as described.

9. The perforated, curved, and angular yarn-distributer, wholly arranged above the plane of the hooked ends of the needles, and so arranged as to allow the needle-latches to close gradually upon the hooks during the act of distributing the yarn, substantially as described.

10. An upwardly acting tension-device, in combination with a yarn-distributer, G, which is constructed substantially as described, to guide the latches of the needles, as set forth.

11. The pawl *t* and cam-lever *t'* on the cam-carriage G, in combination with a cam, S, on the needle bed or frame A, said parts being adapted for communicating an intermittent rotary motion to the counting-plate O, substantially as described.

12. The vibrating arm G^2, fixed rod H', and turning-sections H, combined with the cam-carrying slide, substantially as described.

13. A vibrating cam, k^1, in combination with a cam, *k*, which is rigidly fixed to the cam-carriage, the cams being constructed and operating substantially as described.

14. The conical spool N, having a flange, N^3, a

eross-bar, N^1, and a thimble, N^2, in eombination with the pin J, all eonstructed as and for the purpose described.

15. The spurred seetional roller D^1, eonstructed and applied so as to operate upon narrow knit work in the same manner as it operates upon wide work, substantially as deseribed.

16. The arrangement of a swinging-temple beneath knitting deviees, substantially as deseribed.

17. The knittting-machine needle-mover R, eonstructed with a guide, *w*, and teeth *w'*, as and for the purpose set forth.

91,215.—Thomas Crane, Fort Atkinson, Wis.—*Knitting-Maehine and Knitted Fabrie.*—June 15, 1869.

Claim.—1. A fabrie, eonsisting of two separate yarns or threads, knit together, in the manner substantially as described.

2. The movable needles of different lengths, applied to a knitting-machine, and operated substantially as deseribed.

3. The combination of the two eam earriages F M, carrying eams whieh are adapted for operating knitting-needles of different lengths, substantially as described

91,216.—Ferdinand Dickenson, Jr., Hartford, Conn., assignor to himself and James E. Coleman, same place.—*Composition to be Used in the Manufacture of Paints, Cements, Hard and Soft Rubber, and the Like.*—June 15, 1869; antedated June 4, 1869.

Claim.—A mineral substanee, substantially as deseribed, with oil or oily material, or with gum-caoutchoue, or other gums, as a new componnd for rubber goods, paint. putty, and other articles to whieh it may be applicable.

91,217.—William Dixon, Boston, Mass.—*Theater-Chair.*—June 15. 1869.

Claim —1. The combination of the back B, hinge C, seat A, stop *d*, and shell F. eonstructed as deseribed, for the purpose speeified.

2. The arrangement and eombination of the spring D, rod or cord *k*. stand *b*, and hook *a*, with the rear slotted end of the seat, and with the column, in the manner and for the purpose set forth.

3. The arrangement and combination of the removable spittoon E with the base and shaft of the column, in the manner, by the means, and for the purpose herein shown and deseribed.

4. A theater-chair as deseribed, all the parts of whieh are constructed, eombined, and arranged in the manner and for the ourpose specified.

91,218.—Edward Douglass, Gorham, Me.—*Composition to Destroy the Appetite for Tobacco.*—June 15, 1869.

Claim.—A medical eompound, eomposed of the ingredients herein mentioned. combined substantially in the manner and proportions herein set forth.

91,219.—Peter Farrell, Albany, N. Y.—*Machine for Finishing Leather, Paper, &e.*—June 15, 1869.

Claim.—Breaking instantaneously the eontaet of the roller *s*, or its equivalent tool. with the hinged spring-bed *n*, by means of the hinged tumbler *o*. acting in eonnection with the stop *p*, or its equivalent, substantially as deseribed, for the purpose set forth.

91,220.—W. E. Farrell, Philadelphia, Pa.—*Paper for the Manufaeture of Paper Bags.*—June 15, 1869; antedated June 4, 1869.

Claim.—Paper, in sheets or rolls, of unequal widths, alternately fluted and calendered smooth, to be used in the manufacture of funnel-mouthed bags.

91,221.—Addison C. Fletcher, New York, N. Y.—*Paddle-Wheel.*—June 15, 1869.

Claim.—The combination of the floats or buekets D and E, the latter of a double or reverse parabolic curvature, the former of a single curvature, with its upper edge arranged to eonverge toward the mid-depth of the former, substantially as speeified.

91,222.—O. V. Flora, Madison, Ind., assignor to A. Balding and J. C. Moore, same plaee.—*Door-Spring.*—June 15, 1869.

Claim.—The projeeting fulerum E and frietion-wheel D, when arranged to operate in eombination with the spring and case B, and forked rod C, to form a door-spring, substantially in the manner and for the purposes as set forth.

91,223.—John Fullagar and Miles Byrne, New York, N. Y.—*Composition Cement for Setting Slates, Making Gutters, &e.*—June 15, 1869.

Claim.—The use of fine sand, lime, coal-tar, in combination with fine coke-dust, earbon-dust, or sweepings of furnaees and retort-benches, to form a cement.

91,224.—William Fuzzard, Chelsea, Mass.—*Steam-Engine.*—June 15, 1869.

Claim.—1. The eonstruetion and arrangement of the exhaust-steam ports of an engine, whereby to be enabled to admit the exhaust steam to one or both sides of the piston, substantially as herein set forth.

2. The arrangement of the exhaust-passages *b b'* stop-valves *e e'*, passages *f f'*, and openings *g g*, with referenee to the eylinder A, substantially as set forth.

91,225.—A. J. Gibson, Cineinnati, Ohio, assignor to W. C. Davis and J. W. Garrison, same plaee.—*Bung-Cutter.*—June 15, 1869; antedated June 8, 1869.

Claim.—The eutter-head A and eutters F, herein deseribed, eonstructed, and arranged to operate substantially as and for the purpose set forth.

91,226.—Robert E. Gleason, Libertyville, Ill., assignor to himself and Edwin W. Parkhurst, same place.—*Oar.*—June 15, 1869.

Claim.—1. The oar A B, when made in two parts, and provided with the irons *a b*, substantially as speeified.

2. The oar A B, shaft and pivoting-pin H *h*. rod C. slide D. and rods E F, combined and arranged substantially as and for the purposes speeified.

91,227.—Aaron Guinzburg, Boston, Mass.—*Household-Implement.*—June 15, 1869.

Claim.—The metallie implement as herein deseribed. with its wedge-formed points B B B B, slots C C, and holes A A A A, as shown, for the purpose deseribed.

91,228.—John Gunn, Salem Township, Ill.—*Mode of Attaching Hubs to Axles.*—June 15, 1869.

Claim.—The eombination of the ehamber Z. in the hub S, with the burr A, the plate B, the eollar C on plate B, and the screw D on the axle. Fig. 4, substantially as and for the purpose speeified.

91,229.—Charles F. Hadley, Chieopee, Mass., and Elisha Johnson, Wethersfield. Conn.—*Feeding-Device for Machines for Combing Cotton, &e.*—June 15, 1869.

Claim.—1. The independent lap-carrying sliding-table F, operated substantially as deseribed, and carrying the roll of lapping to be fed to the jaws of a jaw eombing-machine, in the manner and for the purposes set forth.

2. In combination with the lap-carrying sliding-table F, the feeding-rollers C C, the gill-eomb D, and compresser-bars E, substantially as before set forth.

91,230.—John A. Hammon, Franeonia, Minn.—*Whiffletree-Hook.*—June 15, 1869.

Claim.—The whiffletree-hook C, provided with the vertical, lozenge-shaped knob or guard *e*, substantially as shown and deseribed.

91,231.—W. P. Hepburn and William Reiner, Clarinda, Iowa.—*Stove-Drum.*—June 15, 1869.

Claim.—A stove, having arranged within its fire-ehamber, and between the fire-bed and the escape-pipe for the produets of eombustion, a number of hollow angular sections, B', united to vertical sections B B, and adapted to operate substantially as deseribed.

91,232.—Sullivan Hill, Spencer, Mass., assignor to himself and E. A. Hill, same place.—*Settee.*—June 15, 1869.

Claim.—A settee, made of separate chairs, united securely by proper connecting-rails, or strips, the end chairs being provided with single arms, C, as shown and described.

91,233.—John W. Hyatt, Jr., Albany, N. Y.—*Checker-Men.*—June 15, 1869.

Claim.—A wooden medallion-checker, as a new article of manufacture, produced substantially as described.

91,234.—John W. Hyatt, Jr., Albany, N. Y.—*Domino.*—June 15, 1869.

Claim.—A domino, with the perforated plates H and the embossed wooden back G, constructed substantially as described.

91,235.—John W. Hyatt, Jr., Albany, N. Y.—*Manufacture of Dominos.*—June 15, 1869.

Claim.—The embossed wooden domino, with the enameled cavities B and C, and center-pin A, substantially as described.

91,236.—Jasper Newton Jackson, Brookhaven, Miss.—*Machine for Loading Locomotive-Tenders.*—June 15, 1869.

Claim.—1. The supporting-frame A B C D and the carrying turning-frame E G J, in combination with the hinged dumping-boxes L M N, constructed, arranged, and operating substantially as before described.

2. The vertically pivoted turning-frame E G J, constructed with platforms Q, in combination with hinged dumping-boxes, arranged substantially as described.

91,237.—Joseph Jorey, North Manchester, Conn.—*Horseshoe-Calks.*—June 15, 1869.

Claim.—The herein-described horseshoe-calk, with steel point and core, constructed from the blank *a*, in the manner and for the purpose set forth.

91,238.—Charles Lehman, Hartford, Conn.—*Machine for Peeling Fruit.*—June 15, 1869.

Claim.—The rough-surface cylinder *a*, with the diaphragm *m* and operating-mechanism, constructed and arranged substantially as described, and for the purpose set forth.

91,239.—Wilhelm Lehmann, Nuremberg, Germany, assignor to himself and Stehn & Wulfing, New York City.—*Hot-Air Engine.*—June 15, 1869.

Claim.—The air-heating cylinder or "hat" D, the cylinder A, with water-jacket W, in combination with the displacement-cylinder G, piston K, and connections to the fly-wheel shaft, substantially in the manner set forth.

91,240.—George Little, Hudson City, N. J., assignor to himself and Marshall Lefferts, New York City.—*Apparatus for Perforating Paper for Telegraphing.*—June 15, 1869.

Claim.—1. The segment *d* and lever e^2, constructed and applied substantially as specified, to give the electrical pulsations for the respective characters by the movement of the one lever, substantially as set forth.

2. The lever e^2, fitted to swing on the shaft *b* and provided with a friction-clamp, to move the shaft *b*, and effect the feed of the paper, when the lever e^2 is depressed to close the circuit, substantially as set forth.

3. The punch *i*, set in the yoke *n*, upon the arms l', in combination with the vertical standard *k*, carrying the die 7, substantially as set forth.

4. The feeding-disks *q*, arranged to act on each side of the punch *i*, against the standard *k*, substantially as set forth.

5. The standard *k*, sustained in the tube k', and fitted so that a slight end-movement can be given to the same, in combination with the feeding-disks *q*, for the purposes set forth.

6. The magnets *u* and loose or self-adjusting extension-poles, forming a brake or stop, substantially as set forth.

7. The magnets *u*, and extension-poles *v*, in combination with the feeding-mechanism, punch, and circuit-closer *w*, substantially as and for the purposes set forth.

8. A single punch, for perforating and embossing paper for telegraphic communication, actuated by the direct action of an electro-magnet, in combination with mechanism for giving motion to the paper between the various perforations forming the letters or characters, substantially as set forth.

91,241.—George Little, Hudson City, N. J., assignor to Marshall Lefferts, New York City, and Marshall Lefferts, assignor to himself and George Little.—*Apparatus for Perforating Paper for Automatic Transmitters.*—June 15, 1869.

Claim.—1. The method herein specified of perforating or indenting paper, to be used in transmitting a telegraphic message, by a magnet acting upon a lever and punch, combined with a die, substantially as set forth.

2. The aforesaid magnet, lever, punch, and die, in combination with conducting and non-conducting surfaces acting to give the pulsations of electricity through the magnet, for composing a telegraphic message, substantially as set forth.

3. The lever *k*, actuated by the armature and magnet, in combination with the punch and feeding-mechanism, substantially as set forth, whereby the movement of the paper is checked when the punch is operating, substantially as specified.

4. The wheel *d* and roller h^1, in combination with the lever *k* and punch *n*, substantially as set forth, for stopping the motion of the paper while being punched or embossed, and bringing the feeding-motion into operation as the punch is released.

5. The non-conducting surface *s* and its pins or conductors t', in combination with the clamp *g*, lever or key *f*, and spring *t*, substantially as and for the purposes specified.

6. The lever or key *f*, jointed near one end of the divided ring-clamp *g*, and provided with a roller, 3, to act against the projection 24 upon the other end of the clamp, for closing the same around the cylinder or disk, in combination with the adjusting-screws 4 and 5, substantially as and for the purposes set forth.

7. The punching-mechanism and the means for moving the paper, in combination with the key *f*, or its equivalent, that simultaneously controls the action of the punch and the movement of the paper.

91,242.—Abraham W. Lozier, New York, N. Y.—*Hay-Loader.*—June 15, 1869.

Claim.—1. The combination, with the inclined detachable derrick, of the perforated drum-wheel G and actuating-lever K, for raising and lowering the load upon the carriage, the whole constructed and operating substantially as described.

2. The arrangement and combination of the inclined shaft B, the crane C, and link D, attached to the spindle *a*, and the tripping-lever E, the whole constructed and operating substantially as described and specified.

3. The combination, with the drum-wheel G, of a brake-lever, K, and stop *o*, for controlling the machine, substantially as described, and for the purposes specified.

4. The combination, with the brake K, of the swivel P, whereby the brake-rope is always kept at the center of the wheel, substantially as described, and for the purposes specified.

5. The combination and arrangement of the piece Q, hoist-rope L, ring *w*, and tripping-rope N, constructed and operated substantially as described, and for the purposes specified.

91,243.—Abraham W. Lozier, New York, N. Y.—*Hay Raker and Loader.*—June 15, 1869.

Claim.—1. The construction and arrangement of the upright E, the beam F, and the shears D D, in combination with the carriage, substantially as described and for the purposes specified.

2. The combination, with the rake or sweep W, of the sweep-ropes *w*, for collecting the hay in bundles, substantially as described and specified.

3. The combination, with the frame D E F, of the

rake or sweep, and sweep-lines, substantially as described and specified.

4. The open-eyed needle Y, for thrusting the baling ropes or sling under the hay, constructed and operating substantially as described and specified.

91,244.—SEBEUS C. MAINE, Boston, Mass.—*Cabinet-Bedstead.*—June 15, 1869.

Claim.—1. A folding or cabinet bedstead, operating automatically as to the easing, so constructed that when the bedstead is extended, no upright ease remains, substantially as described.

2. The wings D, operating in combination with the arms F, substantially as set forth.

3. The combination of the spring S, ease *h*, and strap or cord *m*, as and for the purpose herein described.

4. The combination of the spring-mechanism above mentioned, with shaft or roller G, and bed frame or bottom A A′, as set forth.

5. The combination of automatically operating shelf *a* and door *b*, with the bed-frame A A′, as described.

6. The combination of cord *c*, bed-frame A, and finish L, having supports L′, substantially as described.

7. The combination of all the above-named parts in an automatically or otherwise operating cabinet-bedstead, in which the ease is removed when the bedstead is extended.

91,245.—H. MALLORY, Milwaukee, Wis.—*Stove-Damper.*—June 15, 1869.

Claim.—A damper, constructed substantially as described.

91,246.—JOHN P. MANNY, Rockford, Ill.—*Harvester.*—June 15, 1869.

Claim.—1. The lifting-lever, constructed and arranged as described, so as to be adjustable to be operated from either the driver's or raker's seat.

2. The combination of the rock-shaft, the locking-plate, and the lifting-lever, substantially as set forth.

3. The combination of the lifting-lever, the rock-shaft and its pinion, a sector-rack and vibrating-arm, all mounted on the main frame, with a finger-beam, suspended by flexible connections from said frame, substantially as set forth.

4. The combination of the tumbling-shaft, the stationary shaft on the rake-standard, and the interposed sliding-shaft and its clutch-coupling, arranged and operating substantially as set forth.

5. The combination, substantially as set forth, of rake and reel arms, revolving with a hub having its gearing in different vertical planes, with driving-pinions arranged eccentrically on their shaft, to produce a slow motion of the rake and reel while the gavel is being swept from the platform.

6. The combination of a continuously rotating rake, with bevel segment-gears, on a revolving hub, at different distances from the center, with driving-pinions likewise arranged at different distances from the center, substantially as described.

7. The combination of the stationary disk, carrying the pinion-shaft, with the projecting rib or flange overhanging the segment-gear, as set forth.

8. The combination of the rotating hub, the rake-shaft turning axially in its socket on the hub, and the fixed cam-way inside the hub, with the guide traversing in the cam-way to oscillate the rake; all these parts being constructed for joint operation, substantially as set forth.

9. The combination of the continuously rotating rake, having an intermittent oscillating movement with its rake-head, reciprocated longitudinally by link-connections mounted on the rake-arm, and connected with the reel-axle, substantially as set forth.

10. The combination of the radially adjustable reel-arms, and the longitudinally adjustable beaters, with the oscillating socket S, substantially as set forth.

91,247.—CARLILE MASON, Chicago, Ill.—*Steam-Generator.*—June 15, 1869.

Claim.—The plates A A, located within the boiler, substantially as specified.

91,248.—JOHN MAYS and ELIPHALET W. BLISS, Brooklyn, N. Y.—*Machine for Manufacturing Metal Cans.*—June 15, 1869.

Claim.—1. The construction and arrangement of the sliding-cap E F, supported on the oblique standard C, in combination with the lever D, rod H, and treadle G, substantially as set forth.

2. The swinging-jaws J, made in the same piece with the levers K, or firmly attached thereto by a fixed joint, substantially as described.

3. The toggle-joint M, in combination with the central piece or slide N, the levers K, and swinging-jaws J, substantially as specified.

91,249.—JOHN R. MCGINNIS, Washington, D. C.—*Cartridge-Box.*—June 15, 1869; antedated June 2, 1869.

Claim.—The combination, as set forth, of the reversible pivoted cartridge-receptacle with the restraining-ledge, for the purposes specified.

91,250.—ANDREW MCMULLIN, Paterson, N. J.—*Piston-Packing.*—June 15, 1869.

Claim.—The piston-head C, the rings G, and holders L, the channels F and K, and rod A, all constructed and arranged substantially as described.

91,251.—HENRY MERRIMAN, Bloomington, Ill.—*Mechanical Movement.*—June 15, 1869.

Claim.—1. The construction and arrangement of the clutches A and B, in the manner and for the purpose herein described.

2. The combination of the clutches A B with the rods *a b* and treadle *c*, in the manner and for the purpose herein described.

3. The means herein shown and described, by which the clutches are adjusted to the shaft or axle, for the purposes herein set forth.

91,252.—JOHN METZGAR, Rancho Gap, Pa.—*Apparatus for Bending Tire.*—June 15, 1869.

Claim.—1. The arrangement of the adjustable frames D, D and E E, rollers F F, and screws H H, substantially as and for the purpose shown and described.

2. The combination of the lower rollers F F, movable frames D D and E E, adjusting-screws H H, upper rollers J, ratchet-wheel L, pivoted pawl M, and lever N, the slotted housings C C, and ways B B, all operating substantially as herein shown, and arranged upon a bed, A, for the purpose set forth.

91,253.—GEORGE H. MILLER and JOHN JAGELER, Binghamton, N. Y.—*Ice-Velocipede.*—June 15, 1869.

Claim.—The adjustable spring E and adjusting-screw G, in combination with the box D, shaft and pinion C, driving-wheel F, toothed wheel B, and directing-runner K, all being constructed and operating as herein described and represented, for the purpose set forth.

91,254.—ROBERT B. MITCHELL, Chicago, Ill.—*Steam-Generator.*—June 15, 1869.

Claim.—The steam-generator C, air-tight water-reservoir A, connecting-pipe B, and air-vent tube F, when constructed and arranged substantially as specified.

91,255.—DAVID M. NICHOLS, New York, N. Y.—*Steam-Generator.*—June 15, 1869.

Claim.—1. The combination of the steam-jet with a separator, for separating the steam from the water which is mixed with it, substantially as before set forth.

2. The combination of the steam-jet and separator with a valve, to contract the passage for the escape of the current of gases, substantially as before set forth.

91,256.—THOMAS NUTTING, Georgiaville, R. I.—*Fruit-Picker.*—June 15, 1869.

Claim.—The improved fruit-picker, as made, with the brace-wires *d d*, connected, at their upper ends, with the lateral hooked wires *b b*, and arranged and combined with the annulus A and the remaining hooked wires, in manner substantially as described.

91,257. — GEORGE OERLEIN, Utica, Minn.—*Thrashing-Machine.*—June 15, 1869.

Claim.—1. Straw-carriers D, in combination with the straw-whippers C, constructed and arranged substantially as described.

2. Sieve I, in combination with the sliding-board K, substantially as and for the purpose described.

3. Hinged board L, in combination with sieve I and sliding-board K, substantially as and for the purpose described.

91,258.—GEORGE PADDINGTON and WALTER F. CREW, Waubeck, Iowa.—*Hames-Strap.*—June 15, 1869.

Claim.—The arrangement of the plates A and C, guides D, spring B, and cam-latch E, when combined and operating substantially as and for the purposes herein set forth.

91,259.—THOMAS PAYNE, Grand Rapids, Mich., assignor to WALTER WILKINS and ADELMER D. PLUMB, same place.—*Bed-Bottom.*—June 15, 1869.

Claim.—The combination of the end-springs C and side-springs E with the cross-slats A and D, and with the longitudinal slats B and F, substantially as herein shown and described, and for the purpose set forth.

91,260.—JOHN S. PERRY, Albany, N. Y.—*Magazine Cooking-Stove.*—June 15, 1869.

Claim.—A fuel-magazine and water-reservoir combined, substantially as described.

91,261.—CHARLES F. PIERCE, Providence, R. I. —*Safety-Attachment for Breast-Pins.*—June 15, 1869.

Claim.—The combination of the hinged shield *d* with its slotted stud, and the tongue of a breast-pin, or like article, operating substantially as described, for the purposes specified.

91,262.—PETER PLAMANDAN and NATHAN A. MAHER, Atchison, Kans.—*Grain-Sieve.*—June 15, 1869.

Claim.—A sieve-plate, perforated in the manner described.

91,263.— GEORGE PUGH, Cleveland, Ohio.—*Lamp.*—June 15, 1869.

Claim.—The combination of the single-wick tube D, enlarged at its lower end, with the gas-tubes E E, when constructed in the manner and arranged with relation to the cap C, and to operate substantially as set forth.

91,264.—JOHN EDWIN RACE and HIRAM WHITNEY, Chicago, Ill.—*Machine for Measuring and Winding Cloth, &c.*—June 15, 1869.

Claim.—The combination, with the frame A B C, provided with the ribs D, the adjustable smoothing-board E, and guides G, of the measuring-wheel N, the feed-wheel O, the arm J, the index-wheel Q, and the roller V, with the hollow studs S and W, and disk A′, when constructed and operating as and for the purpose above described.

91,265.—J. S. RANKIN, Pittsburgh, Pa.—*Uterine-Supporter.*—June 15, 1869.

Claim.—The construction of the pessary, as herein described, that shall, when inflated, entirely fill the cavity of the vagina, holding the uterus in its normal position, and furnishing a soft cushion to it and all the adjoining parts, and having an opening through it, of sufficient size to allow of the free passage of all uterine discharges, as herein described.

91,266.—EDMUND B. REDFIELD, White's Corners, and E. C. HUBBARD, Water Valley, N. Y.—*Bee-Hive.*—June 15, 1869.

Claim.—1. The front board B and side board or braces *b*, permanently attached to the bottom board of the hive, and forming a frame, in which the comb-frames are arranged and secured by wedges, or equivalent, substantially as set forth.

2. The outer case C, with open front, combined and arranged with the board B, as set forth.

3. The corner-spaces *j′*, formed by cutting off the beads *j*, so as to have a passage from one comb to the other, substantially as shown and described.

4. The inner lining Q, in combination with the honey-boxes O, made so as to be readily taken apart, substantially as and for the purpose set forth.

5. The mat R, applied in the manner and for the purpose specified.

91,267.—JOSEPH REPETTI, Philadelphia, Pa.—*Machine for Making Lead Shavings.*—June 15, 1869.

Claim.—1. The combination of the knife-box *s*, rods *r r*, cross-head *q*, cord or chain *o*, and weight *p*, with the head *m*, sheave-pulleys *n n*, and column *h*, substantially as and for the purpose specified.

2. The combination of the compartments s^1 s^1, recesses and knives *u u u u*, with the knife-box *s*, substantially as and for the purpose specified.

3. The combination of the stands *t t t t*, cones t^1 t^1 t^1, adjusting-screws *w*, and fastening-screws w^1, with the knife-box *s*, substantially as and for the purpose specified.

4. The cylindrical lead ingot c^1, Fig. 1, with the axial hole and screw-thread *d*, substantially as and for the purpose specified.

5. The use of shaved metallic lead, for the manufacture of white lead, and other useful purposes, when the same has been produced by the machine, and in the manner substantially as described in this specification.

91,268.—A. S. RICHARDS, Montgomery County, Md.—*Paper-File.*—June 15, 1869.

Claim.—1. The within-described paper file and binder, consisting of the binding-strips A A′, cords B B, needles *b b*, hooks *c c*, and rubber band *d*, constructed and arranged to operate substantially as and for the purpose shown.

2. The application of the rubber band *d* to the cords B B, substantially as shown and for the purpose specified.

3. The needles *b b*, constructed, as described, with an additional eye, in combination with the hooks *c c* and rubber band *d*, or its equivalent, substantially as and for the purpose shown.

91,269.— CHARLES RICHARDS and WILLARD CURTISS, Cleveland, Ohio.—*Cutter-Head.*—June 15, 1869.

Claim.—The herein-described cutter-head, consisting of the sections A and B, substantially in the manner set forth, and for the purpose specified.

91,270.—HENRY RICHMANN, Cincinnati, Ohio.—*Grain-Separator.*—June 15, 1869.

Claim.—1. The combination of the concave brush G and convex perforated wire gauze H, when placed in a horizontal or nearly horizontal position, substantially as and for the purpose described.

2. The mechanism set forth, for the purpose of forming a passage-way, L, for the dust after it has passed through the wire gauze, which passage-way is independent of and has no connection with the clean grain, substantially as and for the purpose described.

3. The mechanism set forth, for the purpose of forming the independent chamber J, substantially as and for the purpose described.

4. The mechanism described, for the purpose of equally and accurately adjusting the brushes G to the wire gauze on the cloth-wheel H, substantially as and for the purpose described.

5. The slide or door Y, substantially as and for the purpose described.

6. The combination of the fan S and chambers J and L.

7. The sliding curb U and stationary curb X combined, substantially as and for the purpose described.

8. The combination of the sliding curb U, stationary curb X, and chamber J, substantially as and for the purpose described.

9. The combination of the sliding curb U, stationary curb X, brushes G, and wire gauze on cloth-wheel H, all substantially as shown and described.

10. The combination of the scouring-apparatus, composed of brushes G and wire gauze, with the winnowing-chambers O and M, substantially as shown and described.

91,271.—XISTE ROBERT, Worcester, Mass.—*Process for Recutting Files.*—June 15, 1869.

Claim.—The process of renewing or recutting files, by sifting over the layer of files placed in the bath, as described, a compound of pulverized or crushed blue vitriol and borax, and then running oil of vitriol over the surface of the files thus coated, substantially in the manner set forth.

91,272.—ANTONIO ROBIRA, Galveston, Texas.—*Syringe for Destroying Cotton-Plant Worms.*—June 15, 1869.

Claim.—The instrument for destroying the cotton-worm, consisting of the cylinder D, piston A, valve *h*, passage *g*, and perforated plate A′, all operating substantially as and for the purpose herein set forth.

91,273.—M. E. RUSSELL, China, Me.—*Meat-Chopper.*—June 15, 1869.

Claim.—The arrangement of crank *h*, shaft *m*, gear *i*, gear *k*, shaft *o*, eccentrically attached link *f*, adjustable beam *c*, rod *d*, and knives *t*, substantially as herein described.

91,274.—SILAS T. SAVAGE, Greenbush, N. Y., assignor to himself and JOHN S. PERRY, executor and trustee.—*Coffee-Pot.*—June 15, 1869.

Claim.—1. The removable vessel A, constructed with a flanged bottom, D, a pipe, E, rising from the bottom, and perforations *b* through its side, in combination with an external casing, B, substantially as described.

2. The vessel A, provided with a cover, A′, and otherwise constructed substantially as set forth, in combination with a chamber, P^2, formed as described.

91,275.—AUGUSTE SCHWANKE, La Prairie, Ill.—*Cooking-Stove.*—June 15, 1869.

Claim.—The fire-box A, separated into two parts by means of the flue-chamber I, when constructed and arranged as described.

91,276.—FREDERICK J. SEYMOUR and ORSON N. PERKINS, Meriden, Conn.—*Percussion-Cap Holder.*—June 15, 1869.

Claim.—1. A percussion-cap holder, in which the space between the inside of the cap or cover is adjustable, for the purposes and substantially as set forth.

2. The lever *f*, with a cavity near the end, in combination with the cap-holder, the parts being constructed and applied as set forth.

91,277.—C. LATHAM SHOLES, Milwaukee, Wis.—*Paging-Machine.*—June 15, 1869; antedated June 4, 1869.

Claim.—1. Cam U, in combination with moving dogs O and P, which, turning the unit-disks K, as they rise from the bed-piece, after having printed, so as to print other figures, substantially as described.

2. Stationary cam N, between the disks, for carrying and operating the dogs L and M, substantially as described.

3. The dogs L and M, setting loosely in radial slots in the disks, in combination with cam N, to properly move the disks.

4. Unit-disks K, divided so as to contain, one the even, the other the odd figures of the ten units, these even and odd figures being repeated on the respective disks, and being moved by any suitable device, and controlled by the dogs L and M, or any other suitable arrangement for moving the other disks, substantially as and for the purpose described.

91,278.—DEXTER SMITH, Springfield, Mass.—*Metallic Cartridge.*—June 15, 1869.

Claim.—The arrangement of the cavity A, with flange C around it, in the rear central surface of the shell-head, and small holes, *a*, extending through, and the manner of holding the fulminate in place by the means of the flange C being turned over, substantially as herein shown and described.

91,279.—W. BELL SMITH, Charleston, S. C.—*Portable Furnace for Shrinking on and Removing Tires.*—June 15, 1869.

Claim.—The furnace F, adapted to be applied circumferentially of the tire, and to remain attached thereto during the entire operation of adjusting in place or removing, substantially as and for the purposes set forth.

91,280.—WILLIAM C. SPALDING and CAROLUS P. SOUTHWELL, Watertown, Wis.—*Thill-Coupling.*—June 15, 1869.

Claim.—The head A, clip B, with ears *b b′*, and side-piece C, having the lip c^2, with or without the spring D, when constructed and arranged as described, for the purpose set forth.

91,281.—E. M. STEVENS, Chelsea, Mass.—*Machine for Rounding up Boot and Shoe Soles.*—June 15, 1869.

Claim.—1. For use in the stock *a* of a "rounding-up" machine, the knife made with a cylindrical pivot, *b*, grooved across, substantially as and for the purpose described.

2. The combination of the edge-cutting knife with the stock *a*, by means of the groove in the knife-pivot *b* and the cross-pin *c*, substantially as and for the purpose described.

91,282.—OLE O. STORLE, Norway, assignor to himself, J. G. FLINT, Jr., and MARY M. MASON, Milwaukee, Wis.—*Grain-Binder.*—June 15, 1869.

Claim.—1. Wheel O, pinions P and Q, head Y, knife R, and wheel *l*, substantially as and for the purpose described.

2. Head Y, wheel *l*, and knife R, operating substantially as described.

3. Head Y and wheel *l*, for the purpose of holding and twisting the wire, substantially as described.

4. Yoke W, platform B, arm L, and pin *e*, operating together, substantially as and for the purpose described.

5. Rake K, arms L L, handle E, wheels U U, chain V, trucks D D, and pin *d*, all in combination, substantially as described.

91,283.—HENRY D. STOVER, New York, N. Y.—*Hoisting-Apparatus.*—June 15, 1869; antedated June 2, 1869.

Claim.—The combination, with a boring-machine, B, or other machine having a rest-bed for heavy bodies, of the vertical screw A, hand-wheel E, and lifting and swinging nut D, when constructed, arranged, and operated substantially in the manner as shown and described, and for the purpose set forth.

91,284.—HENRY P. STRAUB, Cincinnati, Ohio.—*Millstone-Pick.*—June 15, 1869.

Claim.—1. In millstone-picks, having divided and clamping heads for holding the bits, points, or cutters, the projecting ends of one part over the other part, so as to avail of the leverage of the projecting one for binding on said bits, substantially as and for the purpose described.

2. In combination with sectional or divided clamping heads, for holding bits, points, or cutters, a series of recesses, *i*, on different planes, for the heels of said bits, points, or cutters to take into, when griped between said heads, substantially as described.

3. In combination with a socket on one of the parts of the head, to receive the handle, a headed screw, dropped into and through said socket, to receive and hold the other part of said head to its mate or fellow, and to the handle, substantially as described.

91,285.—JOSEPH B. SULGROVE, Indianapolis, Ind.—*Corder for Sewing-Machines.*—June 15, 1869.

Claim.—The corder, furnished with the curved longitudinal grooves G and H, and guides B, C, D, and E, constructed and arranged substantially as and for the purpose set forth.

91,286.—JOHN TEMPLE, Van Buren, Ohio.—*Instrument for Paring Horses' Hoofs.*—June 15, 1869.

Claim.—An instrument for paring horses' hoofs, constructed and operating substantially as shown and described.

91,287.—JOHN M. THATCHER, Bergen, N. J.—*Fire-Place Heater.*—June 15, 1869.

Claim.—In combination with the fire-pot and feeder, the slicer, for holding up the coal, and a suitable opening, to introduce the slicer, substantially as described.

91,288.—ANDREW S. UPSON, Unionville, Conn.—*Machine for Making Metallic Nuts.*—June 15, 1869.

Claim.—1. The combination of the edge-swages, crown-swage, punch, and shears, when so arranged, substantially as described, in relation to each other, as to act upon the blank lying in the same spot, while all the necessary operations upon it are performed.

2. In combination with the edge-swages, punch, crown-swages, and shears, arranged as described, the aperture in the bed-plate or table, and the cam, to give additional motion to one of the edge-swages, so that it acts as a transferrer to discharge the nut.

91,289.—FREDERICK WALTON, Staines, England.—*Mode of Constructing Houses.*—June 15, 1869; patented in England December 11, 1868.

Claim.—The combination of the planks or pieces *e*, blocks *d*, and bolts *e*, substantially as herein described.

91,290.—ISAIAH WEBSTER, Bucksport, Me., assignor to JAMES F. MOSES, same place.—*Jaw for Booms.*—June 15, 1869.

Claim.—1. In combination with a metallic jaw of a boom or gaff, constructed substantially as described, a series of friction-rollers, arranged and secured therein, substantially as set forth.

2. The metallic jaw, constructed substantially as described, when connected with the spar by its shank *k*, tongue *f*, and slotted block *e*, substantially as set forth.

91,291.—FRANZ RUDOLPH WEGMAN, Hartford, Conn., assignor to himself and FREDERICK C. HYDEL, same place.—*Pipe-Coupling.*—June 15, 1869.

Claim.—A pipe-coupling of hard metal, having one end or portion of it straight, and interiorly screw-threaded, and the other end or portion somewhat conical or flaring, and interiorly screw-threaded in an opposite direction.

91,292.—G. W. WELLS, Washington, D. C.—*Guide for Sewing-Machine.*—June 15, 1869.

Claim.—The combination of the guiding presser or holder B, and the spring A, when constructed and operating substantially as herein described.

91,293.—J. BURNS, West Geneseo, N. Y.—*Machine for Cutting Rasps.*—June 15, 1869

Claim.—1. The combination of the automatic feed-mechanism with the vibrating burring-tool, all the parts being constructed for joint operation, as set forth.

2. The combination of the automatic feed-mechanism, vibrating cutters, and oscillating shaft, the whole constructed for joint operation, substantially as set forth.

3. The combination of the vibrating cutters with the retracting springs and stops, the whole constructed for joint operation, as set forth.

91,294.—ISAAC N. WILFONG, Philadelphia, Pa.—*Steam-Generator.*—June 15, 1869.

Claim.—1. The arrangement of a series of curvilinear tubes, connecting to parallel cylinder boilers, substantially as described.

2. The passages *g g'*, formed by the partitions *h h h*, substantially as set forth.

3. The combination of the partitions *h h h*, passages *g g'*, and flues *f* and *f'* with the cylindrical boilers *a* and *a'*, substantially as specified.

4. The arrangement of the heater *m*, pipe *r*, "three-way cock" *n*, branch *s*, and boilers *a* and *a'*, substantially as specified.

91,295.—ALEXANDER W. WINALL, Cincinnati, Ohio.—*Hanging Millstones.*—June 15, 1869.

Claim.—Laterally adjusting journal-blocks H, inclosed by elastic blocks F, and fitted into a cavity in the hopper-stool, and limited in their movement, substantially in the manner and for the purposes described.

91,296.—FRANCIS M. WOODBURY, New York, N. Y., assignor to himself and JOHN P. BONNELL, same place.—*Compound for Cleaning and Scouring Wood, Metal, &c.*—June 15, 1869; antedated June 8, 1869.

Claim.—The combination of the refuse material from the sawing and grinding of marble, known as marble-dust, in combination with crude guano and soap of any kind, as before described, and for the purpose specified.

91,297.—DAVID AARON, San Francisco, Cal.—*Automatic Fan.*—June 15, 1869.

Claim.—Giving the fan E, pivoted at *b*, a quick return-motion by means of the slotted bar G, wrist-pin *a*, and disk D, driven by a spring and gears, or other moving power, substantially as set forth.

91,298.—LAUREN B. ARNOLD, Lansing, N. Y.—*Mode of Preparing Rennet for Use in Making Cheese.*—June 15, 1869.

Claim.—1. The use of charcoal filters, made as described, in combination with layers of charcoal, prepared substantially as and for the purposes set forth, in clarifying rennet for use.

2. The purified and salted rennet, made and fitted for use, substantially in the manner and for the purposes set forth.

91,299.—THOMAS F. BAKER, Cincinnati, Ohio.—*Fire-Place.*—June 15, 1869.

Claim.—1. A fire-place, whose back has the convex middle and the oblique side portions surmounted by an arched crown, as set forth.

2. Such a fire-back, when the crown projects forward so as to contract the throat at its central portion, as and for the purpose designated.

91,300.—FREDERICK BARNETT, Paris, France.—*Swimming-Apparatus.*—June 15, 1869.

Claim.—1. The combination of the webbing, the distending-strips, the finger-loops, and the wrist-band for the hands, substantially as described.

2. The distensible sack, the strips, and the ankle-strap, combined substantially as described, for supporting the feet.

91,301.—STEPHEN M. BAYARD, Ionia, Mich.—*Heating-Drum.*—June 15, 1869.

Claim.—1. The diamond-shaped grates B, having a diaphragm separating them into two triangular-shaped chambers, as and for the purposes herein represented.

2. The arrangement of the air-supply pipe *b*, with relation to the smoke-pipe I' and stove, so that the air shall pass through the flue G' in the opposite direction to that in which the products of combustion pass around it, through the flue I', and thus be more thoroughly heated, as and for the purpose set forth.

91,302.—H. V. BELDING, Oppenheim, N. Y.—*Carriage-Hub.*—June 15, 1869.

Claim.—The cases A, shaped as described, the wood hub C, and the axle-boxes D, combined and arranged substantially as specified.

91,303.—I. A. BENEDICT, West Springfield, Pa.—*Cultivator.*—June 15, 1869.

Claim.—The combination, with the cultivator-plow A, of the plates D, when arranged as specified.

91,304.—JOHN F. BOYNTON, Syracuse, N. Y.—*Apparatus for Extinguishing Fires.*—June 15, 1869.

Claim.—1. In combination with the generator of a fire-extinguisher, constructed to operate as described, the hermetically sealed or securely closed acid-bottle or capsule, arranged therein, substantially as herein described.

2. In combination with the acid-bottle or capsule, the tube D, for holding the same, substantially as described.

3. The method of liberating the acid, by breaking or piercing the acid-bottle or capsule, substantially as described.

4. The employment of rubber bands, or equivalent elastic substance and spring, in combination with

the acid-bottle or capsule, for the purpose herein described.

5. As a new article of manufacture, the hermetically sealed capsule, containing acid, as herein described.

91,305.—PETER BROOKS, New Haven, Conn., assignor to himself and C. O. CROSBY, same place.—*Loom for Weaving Hats.*—June 15, 1869.

Claim.—1. The wheel N, constructed with the recesses *t*, and combined with the cam-wheel M and thread-guides *c*, so as to operate as specified.

2. The combination of the two wheels N and P, each constructed with recesses *t*, and cam-wheel M, with the thread-guides *a* and *c*, so as to operate substantially as specified.

3. In combination with the cam-wheels N and P, the pattern-wheel R, so as, at the proper time, to turn either or both the said wheels, for the purpose of introducing new warp-threads.

4. In combination with the thread-guides *a* and *c*, the tension-bars *m*, operating as described.

5. In combination with the shuttles and warp-thread carriers, operated as described, the follower S^1, all arranged so as to operate together substantially as and for the purpose set forth.

91,306.—THOMAS S. BROWN, Boston, Mass., and GEORGE W. GOULD, Camden, Me.—*Tire-Cooler.*—June 15, 1869; antedated June 9, 1869.

Claim.—1. The combination and arrangement of a wheel-supporter or platform, A, a tub, C, and mechanism by which the tub is moved so as to immerse the platform, and a wheel, when laid on it, in water, when contained in the tub, the whole being substantially as and for the purpose specified.

2. The arrangement and combination of levers, slider *f*, and guide *g*, as described, applied to the tub and the platform-supporting frame, and for effecting the movements of the tub, and for guiding it vertically, as described.

3. The arrangement and combination of the series of arms, or the open hinges, with the frame B, the platform, and the tub, provided with mechanism for operating the latter, as set forth.

91,307.—LOREN D. CARPENTER, Buffalo Grove, Iowa.—*Grain-Sieve.*—June 15, 1869.

Claim.—1. Grain-sieves, composed of the angle-plates B, plain plates C, and frames A, arranged substantially as specified.

2. Suspending the said sieves, by links E, from the case C and shafts F, for operation, substantially as specified.

3. The combination, with cases D, adapted for application to the shaking-shoes of fanning-mills, of sieves, constructed substantially as specified.

91,308.—LUCIUS C. CHASE, Boston, Mass.—*Fastening for Hand-Rein.*—June 15, 1869.

Claim.—1. The within-described stud, when used as a substitute for a buckle in fastening reins and other parts of saddlery or harness, substantially as set forth.

2. The stud C, in combination with the reins A B, when constructed substantially as described.

91,309.—OTIS DEAN, Richmond, Va.—*Vise and Drill Combined.*—June 15, 1869.

Claim.—1. The jaw-support A, connected to the fixed bracket I, by means of the adjustable vertical spindle H, and ball and socket joint, substantially as specified.

2. The arrangement, in either the fixed or movable jaw of a vise, of a drill-mandrel, substantially as specified.

91,310.—DANIEL I. DE GROAT, Newburgh, N. Y.—*Iron Fence.*—June 15, 1869.

Claim.—The combination, with iron-fence sections, constructed with slotted openings at their intersections, of the bolt B, provided with a head upon one end and a cross-head upon the other, as set forth.

91,311.—G. W. DICKERSON, Prairieton, Ind.—*Water-Elevator.*—June 15, 1869.

Claim.—1. The band or strap L, in combination with the fixed wheel J, and the crank K, substantially as herein shown and described, and for the purpose set forth.

2. The crank K, in combination with the band or strap L, shaft B, and loose wheel H, substantially in the manner herein shown and described, and for the purpose set forth.

3. Connecting the bail d^1 to the bucket D, by means of the angular eyes d^2, and angular pivots d^3, substantially as herein shown and described, and for the purposes set forth.

4. The combination and arrangement of the pawl I, ratchet-wheel *h*, loose wheel H, shaft B, fixed wheel J, band or strap L, crank K, and spring M, with each other, substantially as herein shown and described, and for the purpose set forth.

91,312.—JOHN DICKINSON, Bay Ridge, N. Y.—*Tool for Holding Diamonds for Dressing Stone.*—June 15, 1869.

Claim.—An adjustable diamond or mineral-carbon holder, consisting of the metallic block A, provided with fixed jaws B, and reversible jaws C, suitably notched at their ends, and held in place by screws D D, or their equivalents, all constructed as described, and for the purpose set forth.

91,313.—SILAS R. DIVINE, New York, N. Y.—*Mode of Treating the Spent Oxide of Iron used for Purifying Gas.*—June 15, 1869.

Claim.—1. Volatilization or sublimation of sulphur by means of superheated steam.

2. The revivification of hydrated peroxide of iron, which has been used for the decomposition of sulphide of hydrogen, by means of superheated steam.

3. The recovery of the sulphur, by delivery into water, or by condensing the steam and sulphur, by any of the known methods.

91,314.—W. U. DUDLEY, Port Richmond, N. Y.—*Back for Brushes.*—June 15, 1869.

Claim.—As a new article of manufacture, the toilet-brush, having the back B and the body A, carrying the bristles *a'*, secured together by means of the struck-up metallic band C, hinged together at one end, and with its tangs *c'* adapted to screw into the handle F at the opposite end, as herein shown and described, for the purpose specified.

91,315.—JOHN C. DURBOROW, Ellicott's City, Md.—*Harvester-Rake.*—June 15, 1869.

Claim.—1. The inclined plate J, provided with the flange *e* and curved bar *f*, in combination with the movable gears A A and fixed segment C, when constructed and operating substantially in the manner and for the purpose as herein described.

2. The movable gears, provided with the pins *k k*, in combination with the guide L, substantially as and for the purpose set forth.

3. The rake-arms, provided with forked heads *g*, when pivoted or hinged to the backs of the gears, in combination with the flange and curved bar, substantially as set forth.

91,316.—JAMES EATON, Bridgeport, Ill.—*Steam-Generator.*—June 15, 1869.

Claim.—1. The combination with steam-boilers of an elevated water-chamber and an internal steam-chamber, substantially as specified.

2. The combination, with the elevated water-chamber, of the perforated plates, substantially as specified.

3. The combination, with the water-chamber F and steam-chamber D, of the pipe H, substantially as specified.

4. The combination with the steam-boiler and the elevated water-chamber of the steam-pipe K, substantially as specified.

5. The combination, with the steam-chamber D, inclosed within the shell of the boiler, of the pipe L, substantially as specified.

6. The combination, with a steam-chamber adapted for delivering the steam from near the bottom of a delivery-pipe, M, arranged for receiving the steam therefrom, substantially as specified.

91,317.—AUGUSTIN ELLIS and OLIVER ALBERTSON, Salem, Ind.—*Hoe and Rake.*—June 15, 1869.

Claim.—The hoe or rake head, when provided with the curved tang C and the metal socket E, secured to the handle D, when provided with the curved mortise *b*, corresponding to the curvature of the tang, and with the end set-screw F, adapted to engage with the outer convex side of the tang, by means of the recesses formed therein, as herein shown and described, for the purpose specified.

91,318.—Myron J. Ferren, Stoneham, Mass., assignor to himself and William J. Battles, same place.—*Sewing-Machine.*—June 15, 1869.

Claim.—The oscillating lever *d*, and rock-shaft *e*, in combination with the needle *b*, and shuttle-race *c*, arranged and operating as described, for the purpose specified.

91,319.—James J. Fifield, East Boston, Mass. —*Pipe-Coupling.*—June 15, 1869.

Claim.—The combination and arrangement of the two screw-nuts, and the two wedge-rings, with the duplex bell-mouthed coupling-pipe C, applied or to be applied to the two pipes A B, the same being substantially as and for the purpose of effecting the coupling of such pipes A B, as set forth.

91,320.—Joseph H. Finch, Rochester, N. Y.—*Tea and Coffee Pot.*—June 15, 1869.

Claim.—The inwardly curved top of the pot A, having notches *d*, when employed in connection with the partly-inclosed and projecting receptacle B, having bead *g* and lug *f*, whereby, when the parts are locked, the bead rests on the upper edge of the curved top, with the lugs *f* beneath it, for the purpose and in the manner described.

91,321.—John E. Finley, Enon, Ohio.—*Bee-Hive.*—June 15, 1869.

Claim.—1. The removable comb-frame B, constructed with the sharpened edges *g g g*, as shown and specified.

2. In combination with said frames when they are constructed as set forth, the hive herein described, with ventilator, entrances, and honey-boxes.

91,322.—Daniel P. Flint, Nueces County, Texas.—*Velocipede.*—June 15, 1869.

Claim.—1. The treadle-levers E, when the same are connected with the cranks *a a'* by means of the slots *c c'*, and are provided with adjustable vibrating-fulcra F, substantially as herein described, for the purposes set forth.

2. The combination of a steering or guiding rod, N, and its pinion *g*, with a circle, I, when the latter connects with pinion *g*, by a cog-periphery, and is secured to and rests on a spring, K, that is fixed on the axle B, in the manner and by the means substantially as herein described and for the purposes set forth.

3. The above combination, in combination with a rider's seat, P, when all the parts are constructed and arranged substantially as herein described, for the purpose set forth.

91,323.—Daniel P. Flint, Nueces County, Texas.—*Velocipede.*—June 15, 1869.

Claim.—The combination of crank-arms *a a'*, provided with slots *c c'*, with a pitman or link, *h*, and a lever-treadle, *j*, when the latter is provided with an adjustable fulcrum, by means of a slotted pendent arm, *m*, and the several parts are constructed, arranged, and operated substantially as herein described, for the purpose set forth.

91,324.—J. Lee Floyd, Philadelphia, Pa.—*Manufacture of Iron and Steel.*—June 15, 1869.

Claim.—The use of fluor-spar and horse-manure, or their respective chemical equivalents, and wood and carbon, in the manner, and in the quantities, and in the combinations, and for the purposes substantially as above set forth, for the smelting of iron, gold, silver, and copper ores, and other ores, and in the manufacture of iron, steel, and brass.

91,325.—Jim B. Fuller, Norwich, Conn.—*Lamp.*—June 15, 1869.

Claim.—The tubes *c*, *d*, *e*, and *f*, the projections *g* and *e'*, the chimney-holder *h*, with the arms *h'*, and collar *x*, the deflector *i*, the cheek-plate *f'*, the annular spaces 2 and 4, the reservoir *a*, the plug *m*, and the stand *j*, or its equivalent, the whole being constructed, arranged, and operated substantially as shown and described, and for the purposes specified.

91,326.—John G. Gabel, Lebanon, Pa.—*Sash-Cord Fastening.*—June 15, 1869.

Claim.—The above-described fastening for sash-cords, the same being a recess made in the wood or sash itself, so as to receive and hold the cord, by seizing the knot, substantially in the manner set forth.

91,327.—Caroline Garcin and U. Adam, Colmar, France.—*Mechanism for Driving Sewing-Machines.*—June 15, 1869.

Claim.—The arrangement, as herein described, of the shafts *a b e*, with their barrels C, springs *g*, cog-wheels and pinions, the shaft *d*, with its pulley *l* and worm-wheel *m*, the worm-shaft *n*, and lever I, for the purpose set forth.

91,328.—S. T. Godfrey, Seaville, N. J.—*Plow.* —June 15, 1869.

Claim.—1. The combination of the pivoted knife I, connecting-rod G, lever F, and wheel E, having pins, *e'*, projecting from its side, with the plow A B C D, substantially in the manner herein shown and described, and for the purpose set forth.

2. The combination of the spring-guide K with the plow A B C D, substantially as herein shown and described, and for the purposes set forth.

91,329.—Benjamin J. Greely, Boston, Mass.—*Ash-Sifter.*—June 15, 1869.

Claim.—The ash-sifter herein described, composed of the box A, removable sieve B, and piece C, when constructed and arranged together substantially as described.

91,330.—Arthur Greenman, East Kendall, N. Y.—*Fruit-Stand.*—June 15, 1869.

Claim.—The improved stand, composed of the parts A B C, constructed and arranged as described, and operating in the manner and for the purpose specified.

91,331.—G. P. Hachenberg, Hudson, N. Y.—*Envelope.*—June 15, 1869.

Claim.—As a new article of manufacture, the envelope herein described, provided with the fold A, substantially as set forth, for the purpose specified.

91,332.—Floyd Hamblin, Madrid Springs, N. Y.—*Extension-Table.*—June 15, 1869.

Claim.—The combination, with the table A, having hinged leaves B C, of the extension-arms F and legs G, carrying hinged leaves H, provided with the braces K, and all arranged substantially as specified.

91,333.—Gregor Heiss and Martin Schmidt, Houston, Tex.—*Coffee and Tea Pot.*—June 15, 1869.

Claim.—1. A coffee or tea pot, consisting of the cylinder A, internal permanent strainer C, and discharge-pipe J, all combined and operating substantially as herein shown and described.

2. The spiral stirrer-plate F, when suspended from the tube E, that is, swiveled in the cover of the pot, so that it can be freely revolved, substantially as herein shown and described.

3. The sliding-cap H, when arranged in connection with the permanent strainer C, so that it can be let down to close the perforations of the same, substantially as herein shown and described.

4. The tubular shank I, of the adjustable cap H, when arranged to serve as a handle and steam-escape pipe, substantially as herein shown and described.

5. The double perforated cover D G, having the rim *h*, and supporting the swivel-tube E, substantially as herein shown and described.

6. The combination of the vessel A, strainer C, pipe J, and double perforated cover D G, with the spiral stirrer F, swivel-tube E, handle *f*, adjustable cap H, and tubular handle I, all arranged and operating substantially as herein shown and described.

91,334.—J. C. HEMPEL, Baltimore, Md.—*Diaper.*—June 15, 1869.

Claim.—As a new article of manufacture, the diaper, formed of the main piece *a* and gore *b*, the latter being sewed to the flaps *e e*, whereby edges *e e* are formed, to which the inclosing-flaps *d d* are adapted to be buttoned, substantially as described and for the purposes specified.

91,335.—THOMAS HOLMES, Williamsburgh, N. Y.—*Revolving Dough-Mixer.*—June 15, 1869.

Claim.—1. The revolving cylindrical vessel B, made in two unequal parts, and provided with knives J K L, and operating substantially as herein shown and described, and for the purpose set forth.

2. The combination of the bar G, keepers H, and catches or brackets I, with the cylindrical vessel B and frame A, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the adjustable transverse partition N, constructed with the lateral arms, with the cylindrical vessel B, substantially as herein shown and described, and for the purpose set forth.

91,336.—ERASTUS W. HOPKINS, Oneonta, N. Y.—*Milking-Stool.*—June 15, 1869.

Claim.—The combination, with the seat arranged to balance on the legs B, of the sliding-leg C and arm D, when arranged substantially as specified.

91,337.—WILLIAM H. HOWLAND, San Francisco, Cal.—*Steam-Engine Stop-Valve.*—June 15, 1869.

Claim.—1. The construction and arrangement of the above-described valve, with reference to the case A, provided with the recess E, and the ports K and J, substantially as specified.

2. The soft-metal packing *e*, when arranged longitudinally through the face of the arms F, substantially as described.

91,338.—RODNEY HUNT, Orange, Mass., assignor to himself, JAMES B. WAITE, and DAVID B. FLINT, same place.—*Water-Wheel.*—June 15, 1869.

Claim.—1. The wheel, made as described, viz, with the direct and reaction sets of buckets, arranged and communicating together, as set forth, and with the inner and outer rims of the lower set of buckets, and with inner vents to the upper set, and an internal chamber, as explained.

2. The arrangement of the gate and its cap with the wheel, made as specified, and with the series of inducts, provided with a draught-box, as described.

91,339.—JOHN S. HUNTER, Lowellville, Ohio.—*Manufacture of Railway Rails.*—June 15, 1869.

Claim.—The improved forms or shapes herein described and illustrated of the iron portion of the rail and of the steel cap-piece, said parts producing, when welded together, in the main, as described, a finished rail, of the character substantially as illustrated in Fig. 3 of the drawings.

91,340.—CARLOS S. HUTCHINS, Canton, Conn.—*Line-Holder.*—June 15, 1869.

Claim.—The combination of the holder *a* with the pad *b* and plate *c*, having openings *d*, for a line-holder, substantially as shown and described.

91,341.—JOHN W. HYATT, Jr., Albany, N. Y., and ISAIAH S. HYATT, Rockford, Ill.—*Method of Making Solid Collodian.*—June 15, 1869.

Claim.—1. Dissolving pyroxyline under pressure, substantially as described.

2. Dissolving pyroxyline under pressure, when combined with ivory-dust or other material, substantially as described.

91,342.—GEORGE H. IRELAND, Somerville, Mass.—*Burglar-Proof Safe.*—June 15, 1869.

Claim.—1. The filling for walls, consisting of the tubes A A, that are arranged in layers, and combined with the plates B, substantially as herein shown and described.

2. The rods C, having the springs *a*, when arranged within the tubes of a wall-filling, substantially as herein shown and described.

91,343.—ANDREW P. JACKSON, Memphis, Ind.—*Hominy-Mill Burr.*—June 15, 1869.

Claim.—The shaft A, in combination with the screws *c c e*, knives *d d d*, and fans *g g g*, all arranged to operate substantially in the manner and for the purpose described.

91,344.—DANIEL W. KEEFER, Leechburgh, Pa.—*Field-Fence.*—June 15, 1869.

Claim.—A field-fence, when its panels have oblong pieces cut out of their extremities, the corners of the same being beveled, so as to bear against the faces of corresponding panels of other sections of fencing, and interlocked in such a manner that the extremities of said panels will bear against the vertical bars B, substantially as described and set forth.

91,345.—J. R. KELSO, Freedom, Mo., assignor to himself and ERNEST QUAST, same place.—*Gun-Carriage.*—June 15, 1869.

Claim.—The carriage, swiveled or otherwise mounted upon supports at each end, arranged to traverse in grooves or upon ways at right angles to each other, substantially as specified.

91,346.—SOLOMON KEPNER, Pottstown, Pa., assignor to JOHN E. MEISTER and JOHN F. EVANS, same place.—*Apparatus for Detaching Horses from Carriages.*—June 15, 1869.

Claim.—1. The box C, and collars *d d*, in combination with the single-tree D, substantially as and for the purpose shown and described.

2. The bolt and double loop E, secured to the single-tree, and connected with the rubber band F, and the strap for operating said single-tree, substantially as shown, and for the purpose specified.

3. The guards H H, secured to and forming a part of the ferrules upon the ends of the single-tree, in combination with the hooks G G, and single-tree D, substantially as and for the purpose shown.

4. The rubber band F, secured to the cross-bar B and loop E, and operating through said loop upon the single-tree D, substantially as shown, and for the purpose set forth.

91,347.—JOHN KERSHAW, Kent, Ohio.—*Harvester.*—June 15, 1869.

Claim.—1. The arrangement and combination of the wheel B, case C, and door or top M′, for the purpose set forth.

2. The staple *b*, bar *d*, and block *f*, in combination with the hooks *c*, pitman and cutter-bar, constructed and arranged in the manner and for the purpose set forth.

3. The ball and socket joint *a*, pivoted lug or wrist *b′*, in combination with the shoe O and coupling-brace P, constructed and arranged in the manner and for the purpose set forth.

4. The rack R, wheel S, ratchet and pawl D′ G′, and levers B′ E′, all arranged and combined to operate in the manner as and for the purpose set forth.

91,348.—JOHN KILLEFER, West Richfield, Ohio.—*Machine for Threading Bolts and Nuts.*—June 15, 1869.

Claim.—1. The arrangement of the cutters B, set-screws *b e*, and jam-nuts *d*, in the holder A, all fitted together in the manner described, for the purpose specified.

2. The combination of the mechanism, (for automatically opening and closing the jaws,) with the bolt-holding mechanism and the thread-cutting dies, all arranged and operating together as described.

3. The arrangement of the several parts of the shipping-mechanism with the cone Q and the lever die-holders, as herein shown and described.

4. The combination of the spring-clutch D′, having the set-screw H′, and recess I′, the hollow shaft A′, and the guard G′, with the mechanism for holding and advancing the nut, substantially as described, for the purpose specified.

91,349.—F. KUTSCHER, New Haven, Conn.—*Bottle-Stopper.*—June 15, 1869.

Claim.—The combination of the plate B, having the cone *a* formed upon its under side, and combined with the plug A, so that the said cone serves to expand the plug, as and for the purpose specified.

91,350.—James Lee, New York, N. Y.—*Child's Chair and Carriage.*—June 15, 1869.

Claim.—An improved combined child's chair and carriage, formed by the combination of the bars A and B, rounds C D E F, four or more, wheels H, flexible seat and back G, arms I, and stops J, with each other, said parts being arranged and operating substantially as herein shown and described, and for the purpose set forth.

91,351.—John M. Lemon, Polk City, Iowa.—*Conveyer-"Flight."*—June 15, 1869.

Claim.—The "flight" A, constructed as described, to be applied to a conveyer-shaft, for the purposes set forth.

91,352.—Samuel Lewis, Williamsburgh, N. Y.—*Rock-Drill.*—June 15, 1869.

Claim.—1. The combination of the eccentrics H H, drill G, sliding rotating-tube F, collar E, cam C, and disk J, as and for the purpose specified.

2. The revolving disk J, in combination with the eccentrics H, attached to the sliding and rotating tube F, substantially as herein shown and described, and for the purpose set forth.

91,353.—Charles Lockwood, Haverstraw, N. Y.—*Sand-Screen.*—June 15, 1869.

Claim.—1. An improved screen, formed by the combination of the side-bars A, cross-bars B, longitudinal wires C, and plates D, with each other, and with the detachable wooden frame E, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the stake G, cross-bar H, springs I, and detachable rod J, with each other and with the screen A B C D E, substantially as herein shown and described, and for the purpose set forth.

91,354.—Josiah Long, Leavenworth, Ind.—*Plow.*—June 15, 1869.

Claim.—The plow-standards D, constructed, arranged, and secured to the plow-beam A, substantially in the manner herein shown and described, and for the purpose set forth.

91,355.—Jesse Mallett, Catherine, N. Y.—*Wool-Table.*—June 15, 1869.

Claim.—A wool-tying table, consisting of the bed A, with the slotted end-pieces B and the hinged sides C, having the notches *h* formed therein, to receive the windlass E, attached to the straps D, all constructed and arranged to operate as herein described.

91,356.—Charles Marcher, New York, N. Y.—*Spittoon-Footstool.*—June 15, 1869.

Claim.—The bent spring F, arranged and operating as described, for the purpose specified.

91,357.—George Mayer, Cincinnati, Ohio.—*Cooking-Stove.*—June 15, 1869.

Claim.—The combination with the ash-pit A, having an aperture, B, lugs E, and flanges H H, arranged substantially as herein described, of the gratings C D, removable handle F, and the removable ash-pan G, constructed, arranged, and employed substantially as and for the purposes set forth.

91,358.—John Mayer, Rondout, N. Y.—*Brick-Truck.*—June 15, 1869.

Claim.—The combination of the spring E and its adjusting-nut F with the caster A B, screw-threaded stem C, frame D, and the front end of the platform of a brick-truck, whose rear end is supported upon the wheels G H, arranged as herein shown and described.

91,359.—John H. Morse, Peoria, Ill., assignor to himself and Henry W. Wells, same place.—*Permutation-Lock.*—June 15, 1869; antedated May 28, 1869.

Claim.—1. The changeable wheel A, with its rim L, core B, and screw *m*, in combination with the rubber-tired friction-wheel *h*, lug *n*, all arranged substantially as and for the purposes described.

2. The friction-wheel *h*, in combination with the crooked lever J and bolt R, arranged substantially as and for the purpose described.

91,360.—J. L. Nettleton, West Cheshire, Conn., assignor to himself and F. Caffrey, same place.—*Churn.*—June 15, 1869.

Claim.—1. A churn-dash, consisting of the bar A and the two legs B B, bent from a single piece of material, and constructed so as to be attached to the spindle E, substantially in the manner set forth.

2. The arrangement of the beaters, formed as described, and combined with the spindle E, column F, wheels H and I, and cover G, all in the manner as herein set forth.

91,361.—T. Campbell Oakman, Paterson, N. J.—*Cotton-Bale Tie.*—June 15, 1869.

Claim.—The bale-tie or fastening, consisting of the cam-lever A, provided with the journals B, flattened on one side, and having their bearings H in the angles of the bent side-bars of the frame C, all constructed and operating as set forth.

91,362.—Samuel P. Parmly, New Orleans, La.—*Bag-Fastener.*—June 15, 1869.

Claim.—A bag-fastener, consisting of the knotted string D, star-shaped, perforated, or notched plate B, and wire-hook C, all arranged, combined, and operating substantially as herein shown and described.

91,363.—Henry Pattison, Duck Creek, Ill.—*Animal-Trap.*—June 15, 1869.

Claim.—The combination of the weighted wheel C, lever F, trigger G, stop H, wing or flange I, and partition B, with each other, and with the trap A and entrance D, substantially as herein shown and described, and for the purpose set forth.

91,364.—Shadrach H. Pearce, Boston, Mass.—*Mosaic Covering for Floors.*—June 15, 1869.

Claim.—A covering for floors, &c., composed of a series of elastic blocks, sections, or tiles, substantially as described.

91,365.—M. Perl, Houston, Texas.—*Apparatus for Destroying Worms on Cotton-Plants.*—June 15, 1869; antedated June 9, 1869.

Claim.—The combination of wagon A, with gas-generator B, blower E, cog-wheels *e e'*, crank *f*, and hose G', constructed, arranged, and operated substantially as described.

91,366.—Lawrence M. Platt, Chicago, Ill.—*Railway-Car Duster.*—June 15, 1869.

Claim.—1. The construction and arrangement of a railway-car "safety platform or bridge," in the manner and for the purpose herein described.

2. The combination of the piece B, adjustable slide C, and platform A, in the manner and for the purpose herein described.

91,367.—J. C. Richardson, Ilion, N. Y.—*Fork-Blank.*—June 15, 1869.

Claim.—1. In the manufacture of a fork-blank, substantially such as described, crowding the metal which occupied the space *a* into that part of the blank constituting the head, in the manner specified, so as to condense the metal of said head, and thereby strengthen the shoulder at its junction with the tang B, all substantially as described.

2. The improved new article of manufacture herein described, to wit, the fork-blank, with the metal which occupied the space *a* forced into the head of the blank, at the junction of the head with the tang B, all as set forth.

91,368.—F. Rochow, New York, N. Y.—*Valve and Opening for Steam-Engines.*—June 15, 1869.

Claim.—1. The arrangement of the valve L, cylinders K^1 and K^2, and channels 1, 2, 3, 4, 5, and 6, substantially in the manner set forth.

2. The induction and eduction slide-valve L, constructed and arranged as described, in connection with the passages 3 and 4, whereby to admit live steam directly from the steam-chest into either one of the auxiliary cylinders, and exhaust it from the opposite end of the auxiliary cylinder, as described.

3. The combination of a slide-valve with a row of openings in the cylinder of an engine, when this slide-valve is made adjustable, so as to uncover only one or any other desired number of these openings, substantially as set forth.

4. The combination and construction of valve U, valve V, and stem W, and openings 8, 9, 10, 11, and 12, substantially as herein set forth.

5. The valve-chest, J ,with its chambers *i i*, in combination with the rows of holes 8, 9, 10, 11, and 12, valves U and V, and the channels 5 and 6, substantially as described.

91,369.—J. B. SARGENT, New Haven, Conn.—*Cabinet-Hook.*—June 15, 1869.

Claim.—The herein-described hook, struck up from sheet-metal, so as to form a double convex surface, as and for the purpose specified, as an improved article of manufacture.

91,370.—JAMES A. SEVEY, Boston, Mass.—*Machine for Rounding Whalebone for Corsets.*—June 15, 1869.

Claim.—1. The arrangement of the blades *a a*, of the two gauge-cutters A A, viz, so as to stand with their convexities in opposite directions, and with their backs at an acute angle with each other, as specified.

2. The arrangement of the blade of each cutter, with respect to its furcated shank, the blade, under such arrangement, having its back at an acute angle with the axis of the shank, and one side of the shank disposed on or about on a line with the axis of the blade, as set forth.

3. The combination of the two knives A A, arranged and provided with operative mechanism, substantially as described, with the bed-wheel G, the gauge K, and the rack H, disposed with and applied to the bench C, as set forth.

91,371.—R. M. SELDIS, New York, N. Y., assignor to MYER STERN, same place.—*Fur Collar.*—June 15, 1869.

Claim.—A fur collar, provided with ear-flaps B B, pockets C C, sustaining-cord *b*, and lapels D D, arranged substantially as described.

91,372.—J. C. SHERWOOD, West Cornwall, Conn.—*Milk-Cooler.*—June 15, 1869.

Claim.—The milk-cooler, consisting of the box A, perforated cover B, vessel E, pipe *d*, strainer *e*, perforated trough D, and cooling-pan C, the latter having the inclined bottom *b*, and the perforated transverse plates *e e*, all combined and operating substantially as herein shown and described.

91,373.—WILLIAM CAMERON SILLAR, MATHERAN SYDENHAM HILL, ROBERT GEORGE SILLAR, 7 Cintra Park, Upper Norwood, and GEORGE WILLIAM WIGNER, Grove Lane, Camberwell, Great Britain.—*Mode of Purifying and Deodorizing Sewage, &c.*—June 15, 1869.

Claim.—1. The mixture of chemical substances above described, for the purpose of purifying sewage or water impregnated with sewage.

2. The right of using the mud precipitated from sewage, as above described, for the purpose of purifying a further quantity of sewage.

3. The addition of an acid to the mud, in order to retain the ammonia, and fit it for sale as a manure.

91,374.—J. PLUMER SMITH, Cleveland, Ohio.—*Liquid-Meter.*—June 15, 1869.

Claim.—The combination of the valve I and chamber H, as arranged in relation to and with the needle-valve L, and operating conjointly therewith, substantially as and for the purpose set forth.

91,375.—SAMUEL P. SNEAD, Louisville, Ky.—*Fire-Proof Ceiling.*—June 15, 1869.

Claim.—The ornamented plates B, supported upon the flanges of the beams A, when provided with the arched ribs *b*, constructed as described, for the purpose specified.

91,376.—JOSEPH H. SNOW, Providence, R. I.—*Automatic Gas-Regulator for Blow-Pipes.*—June 15, 1869.

Claim.—The combination of the blow-pipe A, flexible tube B, and automatic valve D, operating substantially as described.

91,377.—DANIEL SPILL, Paradise Terrace, Hackney, England.—*Compound Containing Xyloidine.*—June 15, 1869.

Claim.—The manufacture and production of compounds containing xyloidine, in conjunction with oils, camphor, paraffine, and gutta-percha, or other similar substances, by the employment of non-volatile solvents, such solvents becoming and remaining a part of the resulting compound.

91,378.—DANIEL SPILL, Paradise Terrace, Hackney, England.—*Mode of Protecting Insulated Telegraph-Wire.*—June 15, 1869.

Claim.—The coating and protecting of telegraphic wires, which have been previously coated or covered with an insulating-material, with any of the compounds or combinations hereinbefore referred to, or with other similar compounds, they having, as parts of their constituents, xyloidine or gun-cotton, in conjunction with a non-volatile solvent, and they being applied in a manner as hereinbefore described.

91,379.—FISHER A. SPOFFORD and MATTHEW G. RAFFINGTON, Columbus, Ohio.—*Velocipede.*—June 15, 1869.

Claim.—The combination of the lever H with the rods *h h*, toothed segments G G, pinions *e e*, spring-pawls *f f*, ratchet-wheels *d d*, and axle B, all arranged and operating substantially as and for the purpose herein shown and described.

91,380.—ABRAHAM STAFFER and PETER STAFFER, Salt Creek, Ind.—*Saw-Gummer.*—June 15, 1869.

Claim.—The arrangement of the lever E, the screw H, nut I, and cutter D, in combination with the block A, all the parts being constructed as described, and for the purposes set forth.

91,381.—ABRAHAM STAFFER and PETER STAFFER, Salt Creek, Ind.—*Flour-Cooler.*—June 15, 1869.

Claim.—The arrangement of the floors D E F, having openings alternately at the center and periphery, and the arms *h i j k*, having the wings *o*, inclined in opposite directions alternately, the arms *i k*, having end-wings *u*, all operating as described, to discharge the flour from one floor to another through the openings *q r s t*, for the purpose specified.

91,382.—MYER STERN and R. M. SELDIS, New York, N. Y.—*Muff.*—June 15, 1869.

Claim.—1. A muff which is adapted to be spread out, and closed in cylindrical form, substantially as and for the purpose specified.

2. A supporting-frame, B, provided with a locking-device, whereby a divided muff is adapted to be spread flat and secured together in cylindrical form, substantially as described, for the purpose specified.

91,383.—LINUS STEWART, San Francisco, Cal.—*Steam-Plow.*—June 15, 1869.

Claim.—1. The arrangement of the revolving cutters within a supplementary frame, all in the same line, at right angles to the line of travel, and so placed that the curves described by the arms or blades a^1 a^1 may intersect each other, substantially as described.

2. The horizontal connecting-shaft G, united to the shafts *a* and a^2, by universal joints *b b*, substantially as and for the purpose described.

3. The segmental racks e' e', attached to the supplementary frame, and engaging with the pinions *e e*, on the shaft H, said shaft being operated by an endless screw, *i*, engaging with a pinion, *f*, on the shaft H, substantially as and for the purpose described.

91,384.—SAMUEL SYKES, Chippewa Falls, Wis., assignor to himself and MICHAEL GORLAND, same place.—*Sawdust-Feeder for Furnaces.*—June 15, 1869.

Claim.—1. The hoppers D, constructed as described, and arranged within the furnace above the grate B, with its discharge-orifices between the

boilers A, as herein described, for the purpose specified.

2. The hoppers D, arranged within the furnace above the grates, having their discharge-orifices between the boilers, in combination with the flies F, upon the vertical shaft G, resting upon the shelves E above the grate, as herein described, for the purpose specified.

91,385.—M. J. TROWBRIDGE, Cazenovia, N. Y.—*Center-Square.*—June 15, 1869.

Claim.—A center-square, consisting of the jointed arms A A C C, of the reversible swivel sockets B D, which hold and slide on the tongue F, and of the squaring-pins E, arranged in the sockets *c d* of the arms, all arranged and operating substantially as herein shown and described.

91,386.—ROBERT B. TUNSTALL, Norfolk, Va.—*Seeder.*—June 15, 1869.

Claim.—1. The combination of the seed-wheel A with the wheel B and supporting-frame, all substantially as specified.

2. The seed-wheel A, constructed as described, and provided with the detachable plates E, substantially as specified.

3. The combination, with the wheel A, arranged and operated as described, of the chain and roller, arranged substantially as specified.

91,387.—A. VAUGHAN, Chicago, Ill.—*Post-Auger.*—June 15, 1869.

Claim.—In the construction of post-augers, the point F, which is provided with recesses on its opposite sides; conical holes I I, communicating with the tubular shank, and ribs J J, protecting the holes from earth, and also with arms D D, for the support of the lips B B, as set forth and shown.

91,388.—ARTHUR WADSWORTH, Newark, N. J.—*Attachment of Main-Springs to Watch-Barrels, &c.*—June 15, 1869; antedated December 15, 1868.

Claim.—The pivoted segment *d*, fitted in the periphery or side, *b*, of the barrel A, with the pivots, which are at one end of the segment, working in the fixed bearings in the barrel, and the opposite or free end of the segment, attached to the outer end of the spring C, all arranged substantially as and for the purpose herein set forth.

91,389.—JOHN H. WEEDEN, Waterbury, Conn., assignor to himself and L. G. ARNOLD, same place. *Head-Rest for Church-Pews.*—June 15, 1869.

Claim.—An improved head-rest or cushion, for attachment to church-pews, formed by the combination of the stuffing A, covering B, plate C, band D, base-plate E, and springs F, with each other, substantially as herein shown and described, and for the purpose set forth.

91,390.—JACOB WELKER, Attica, N. Y.—*Trace-Buckle.*—June 15, 1869.

Claim.—A trace-buckle, consisting essentially of the bent frame A, with cross-plate *c* and disconnected side-bars *a a*, and of a tongue-frame, D, hinged to the ends of said side-bars, and provided with an extension, *g*, the whole constructed, arranged, and operating as set forth.

91,391.—JOHN WETTSTEIN, Lynchburgh, Va.—*Rolling Tobacco.*—June 15, 1869.

Claim.—1. The feed-rollers E and E^1, and feeding-belt, in combination with the feeding-table C, when constructed and operated substantially as and for the purpose described.

2. The combination, with the feed-rollers and belt, of the means arranged, substantially as described, for stopping the feed, as and for the purpose set forth.

3. The combination, with the feed-rollers and belt, of the cutters, substantially as and for the purpose described.

4. The combination, with the feed-rolls and belt, of the means for automatically setting them into gear with the driving-mechanism, substantially as and for the purpose described.

5. The combination, with the said means for setting the feed-rolls into gear with the driving-mechanism, of the sliding-cutter frame, substantially as and for the purpose described.

6. The forming-rolls *c* and e^2, and forming-belt c^2, arranged for joint operation, substantially as and for the purpose described.

7. The combination of the same with the driving-roll e^2, substantially as and for the purpose described.

8. The combination, with the same, of the adjustable roller c^6, substantially as and for the purpose described.

9. The forming-roller e^1, arranged in oscillating bearings, substantially as and for the purpose described.

10. The combination, with the forming-rolls and belt, of the means, substantially as described, for connecting and disconnecting the said rolls and belt with the driving-mechanism, as and for the purpose specified.

11. The combination, with the forming rolls and belt, of the wrapping-plate *h*, substantially as and for the purpose described.

12. The combination, with the forming-mechanism, of the feeding-mechanism, substantially as and for the purpose described.

91,392.—ELONZO S. WHEELER, Westport, Conn.—*Carpet Stretcher and Nailer.*—June 15, 1869.

Claim.—The lever A, combined with the spindle D, the lever arranged for stretching the carpet, and the spindle, provided with a clasping-device to hold the tack, the whole constructed and arranged to operate in the manner herein set forth.

91,393.—EDWARD ORANGE WILDMAN WHITEHOUSE, Stoke Newington, England.—*Mode of Protecting Insulated Telegraph-Wires.*—June 15, 1869.

Claim.—The coating and protecting of telegraphic wires, which have been previously coated or covered with an insulating material, with any of the compounds or combination hereinbefore referred to, or with other similar compounds, they having, as part of their constituents, xyloidine or gun-cotton, in conjunction with a violatile solvent, and they being applied in a manner as hereinbefore described.

91,394.—ANDREW F. WHITING, Greenville, Conn.—*Knob-Latch.*—June 15, 1869.

Claim.—1. The combination of the dog or catch C, lever or dog E, tumblers G G′, and sliding-bolt B, substantially as shown and described.

2. The combination of the tumbler G′, the lever F, disks D, and bolt B, substantially as and for the purpose described.

3. The arrangement of the incline on bolt B, with reference to lever F, disks D, and tumbler G′, substantially as and for the purpose set forth.

91,395.—H. WHITTINGHAM, New York, N. Y.—*Steam-Generator.*—June 15, 1869.

Claim.—1. A sectional steam-generator, in which each section consists of a series of horizontal tubes, A, connected in front and rear by vertical tubes B C, and in the middle by a tube or tubes, D, and provided with smoke-flues E, that pass through the tubes A, substantially as herein shown and described.

2. The ribs *e e*, formed on the sides of the vertical pipes of each section, to form transverse partitions, substantially as herein shown and described.

3. The ears *d d*, formed on the tubes A, B, and C, when arranged as described, to admit bolts *c*, for securely connecting the tubes of one section, substantially as herein shown and described.

91,396.—FLAVIUS L. WICKHAM, Pavilion, Ill.—*Washing-Machine.*—June 15, 1869.

Claim.—1. The rubber, formed by the combination of the rubber-strip I, curved rubber-board H, bars or levers J, shaft L, pivoted bars M, and cross-bar or handle N, constructed and operating substantially as herein shown and described, and for the purposes set forth.

2. The adjustable board G, in combination with the detachable washing-board D, rubber H I J K L M N, and box A, substantially as herein shown and described, and for the purpose set forth.

91,397.—CHARLES P. WING, Lyonsville, Ill.—*Table-Leaf Support.*—June 15, 1869.

Claim.—The combination of the jointed brace-bar D, with the catch E and cord F, substantially as and for the purpose set forth.

91,398.—JOHN C. WIRTZ, New York, N. Y.—*Velocipede.*—June 15, 1869.

Claim.—1. The combination of the protecting-case or box F with the frame, consisting of the cross-bar *a*, converging-bars *b b*, and front-reach *c*, with the seat E, and with the driving-mechanism, that consists of the foot-board D, rods *i*, wheels *f*, and pinions *e*, all arranged and operating substantially as herein shown and described.

2. The combination of the hood I with the enlarged front-reach and with the steering-cords *m*, beam *l*, wheel *k j*, and post H, all arranged and operating substantially as and for the purpose herein shown and described.

91,399.—GEORGE H. WOOD, Cambridge City, Ind.—*Corn-Planter.*—June 15, 1869.

Claim.—1. The endless toothed belt or chain, arranged as described, for operating the dropping-device of a corn-planter, substantially as herein set forth.

2. The combination of the toothed belt or chain J, polygonal wheels D E, axles F G, pins or projections K, and springs M, with the platform or frame C, and dropping-slides L, of the seed-hoppers N, substantially as herein shown and described, and for the purpose set forth.

3. The combination and arrangement of the pivoted curved arms S, arms or levers T, pivoted connecting-bars U and V, arms W, and shaft X, provided with a lever or handle, Y, with each other and with the runners A, and platform or frame C, substantially as herein shown and described, and for the purpose set forth.

91,400.—JOHN WRIGHT, Middleport, Ohio, assignor to himself and J. W. WELLS, same place.—*Punch.*—June 15, 1869.

Claim.—1. The combination of the right and left threaded operating-screw, sleeve supporting the punch, screwed lug C, lug D, and ratchet and pawl, when arranged substantially as specified.

2. The double pawl K, provided with the lip M, sliding-spring N, ratchet-lever, and wheel, combined and arranged substantially as specified.

3. The arrangement of the sleeve G, double hollow nut H, and punch, all substantially as specified.

4. The arrangement of the right and left threaded screw F, sleeve G, punch-lugs C and D, and hand-crank, all substantially as specified.

91,401.—ABRAM ADAMS, Boston Station, Ky.—*Harvester-Rake.*—June 15, 1869.

Claim.—1. The arrangement and combination of the crank-shaft D, crank *a*, beam F, slotted arm G, standard H, slotted bar I, angular bar or box *d*, rake-handle J, and rake K, all substantially as and for the purposes herein set forth.

2. The arrangement of the rake K, rods *e e*, bars *f f*, and inclined railing *h*, all constructed and operating substantially as and for the purposes herein set forth.

3. The arrangement of the rods *e e*, bars *f f*, spring *i*, and pin *m*, on the rake K, all constructed and operating substantially as and for the purposes herein set forth.

91,402.—HENRY W. ADAMS, Philadelphia, Pa. *Apparatus for Tanning Hides.*—June 15, 1869.

Claim.—1. In combination with a close vat, containing tanning-liquor, a reciprocating plunger, in which the hides are confined in horizontal parallel planes, and caused to move in the direction of their edges through the liquor by the application of a suitable force, substantially as set forth.

2. The combination of the vat, the reciprocating plunger, the cover, and a clamping-device, substantially as set forth.

3. The combination, in the plunger, of the hides and cords, or equivalents, for holding the hides in parallel horizontal planes, substantially as set forth.

91,403.—JOHN H. ADAMS, Martinsville, Ind.—*Device for Carrying Lumber from the Saw in Circular-Saw Mills.*—June 15, 1869.

Claim.—Attaching the off-bearing truck or car D to the forward end of the log-carriage, and operating the same in the manner substantially as herein described.

91,404.—ARTHUR M. ALLEN, New York, N. Y.—*Railway-Car Brake.*—June 15, 1869.

Claim.—1. The toggle-levers G, arms *b*, and cross-head H, and lever I, in combination with the windlass J, and rising and falling brake-shoes F, constructed and operating substantially as shown and described.

2. The elastic cushions *g*, in combination with the blocks *f*, of rising and falling brake-shoes F, substantially as set forth.

91,405.—JOHN BACHELDER, Norwich, Conn.—*Neck-Tie.*—June 15, 1869.

Claim.—The combination of the clamp *a* and supporting-plate *b*, whereby the parts of the bow are secured together, the supporting-plate being provided with means for attachment to the shank or head of a shirt-stud, substantially as described.

91,406.—JOHN BACHELDER, Norwich, Conn.—*Fastening for Neck-Tie.*—June 15, 1869.

Claim.—The fastening for neck-ties, consisting of the plates *a* and *b* and stud *h*, the plate *a* being provided with an enlarged entering-eye, *i*, and a securing-eye, the two connected by a slot or neck, and the latter countersunk, to conform to the convex head of the stud, and retain it in a fixed position, all arranged substantially as shown and described.

91,407.—HAYDN M. BAKER, Washington, D. C.—*Process of Cleaning Cotton and Woolen Waste from Oils, Grease, &c.*—June 15, 1869.

Claim.—1. The use of soluble alkaline oleates, margarates, and stearates, (known in the market as soaps,) either in the anhydrous or hydrated state, for the removal of oils, gums, resins, &c., from fibrous substances.

2. The process, herein described, for the separation and recovery of the soaps and oils.

91,408.—HAYDN M. BAKER, Washington, D. C.—*Process for Cleaning Plate-Printers' Cloths, &c.*—June 15, 1869.

Claim.—The use of soluble alkaline oleates, margarates, and stearates, for the purpose of removing printers' ink from plate-printers' cloths, in the manner substantially as herein described, for the purpose set forth.

91,409.—WILLIAM E. BEAMES, New York, N. Y.—*Cabinet for Dressing-Bureau.*—June 15, 1869.

Claim.—1. The combination of the side-acting hinges *e* and *e'* with the tilting-arrangement, in connection with the cabinet-case, when constructed substantially as described.

2. The bolt *f*, having the combined action of a bolt, when the front is closed, and pivot, on which it may be tilted when used for that purpose, the same being described and set forth.

91,410.—MYRON T. BOULT, Battle Creek, Mich.—*Machine for Carving and Ornamenting Wood-Work.*—June 15, 1869.

Claim.—The arrangement of the cutter-head C with one or more angular or curved cutters, D, adjustable gauge-plate F, and adjustable table G, with its arms H H H, roller I, and spring J, or the equivalents, all constructed substantially as shown and described.

91,411.—JOHN F. BOYNTON, Syracuse, N. Y.—*Fire-Extinguisher.*—June 15, 1869.

Claim.—1. The use of a cylinder of compressed air or gases, placed within another cylinder filled with fluids, and so arranged that, by opening the cylinder of compressed gases, they will eject the liquids from the superior cylinder by their expanding force.

2. The application of a cylinder of condensed gases or air to the outside of a larger cylinder, for expel-

ling liquids from the same, by the expansive force of the compressed gases.

91,412.—ABRAM BURKHOLDER, CORNELIUS BURKHOLDER, and HENRY K. BURKHOLDER, Clear Spring, Pa.—*Grain-Separator.*—June 15, 1869.

Claim.—1. The combination of the scoops or scrapers upon the board E, with the four rakes L, F, P, and O, when they are used in the manner and for the purpose set forth.

2. The grooved roller K, when provided with cranks for operating the shoe I, and regulating the feed to the blast, in the manner and for the purpose set forth.

3. The shaker-board G, when provided with three rakes, above, below, and upon one end, in combination with the rake F, pitman *x*, and shoe I, when arranged and operated in the manner and for the purpose set forth.

4. The fan M, in combination with the adjustable covers and weight N, when used in the manner and for the purpose set forth.

91,413.—CHARLES BURLEY, Cincinnati, Ohio. *Safety-Valve.*—June 15, 1869.

Claim.—1. The arrangement, in combination with the vessel D and pipe C, of the connecting-pipe C′, inclined while in a state of rest, as shown.

2. The tube R, inclosed within the vessel D, so as to leave the pipes C C′ free for the circulation of steam and water, substantially as set forth.

3. The combination of the loose valve F, gasket G, and collar *c*, with the pipes C C′ and vessel D, substantially as shown and explained.

4. The arrangement of the counterbalance O P, to act in connection with the pipe C′ and vessel D, substantially as described.

91,414.—JAMES W. CAMPBELL and WILLIAM J. MILLER, New York, N. Y.—*Gluing-Hopper.*—June 15, 1869.

Claim.—The gluing-hopper A, having attached to its bottom the combined guide-strip and regulator *a*, substantially as and for the purpose herein set forth.

91,415.—HORACE CARRIER, Kirtland, Ohio.—*Potato-Digger.*—June 15, 1869.

Claim.—The shovel K, endless belt Y Y, separator G, levers I and J, and drag-fork R, combined, arranged, and operating as and for the purpose set forth.

91,416.—ALANSON CARY, New York, N. Y., assignor to the AMERICAN COMPOUND TELEGRAPH-WIRE COMPANY, same place.—*Telegraph-Wire.*—June 15, 1869.

Claim.—A telegraph-wire, constructed as herein described, that is to say, having the steel core, and the strip or strips of copper, or other good electric conductor, applied thereto, and soldered in place by means of a bath of tin, substantially as set forth.

91,417.—ALANSON CARY, New York, N. Y., assignor to the AMERICAN COMPOUND TELEGRAPH-WIRE COMPANY, same place.—*Machine for Making Compound Telegraph-Wire.*—June 15, 1869.

Claim.—1. The combination of the device for folding the sheathing upon the wire with the device for drawing the compound wire, substantially as described.

2. In a machine for simultaneously grooving and twisting sheathing upon wire, the employment, in combination with the rotating device F, of die-wheels N N′, or other equivalent device, substantially in the manner and for the purpose set forth.

3. The method of making telegraph-wire by twisting about the common wire a sheathing of metallic ribbon, and drawing them both through a suitable die, in the manner specified a d own.

91,418.—JOHN F. CHASE, Augusta, Me.—*Hoop-Skirt.*—June 15, 1869.

Claim.—As a new article of manufacture, the herein-described hoop-skirt, consisting of the lower or main skirt A, having no hoops at its upper part, and the upper or flounce skirt B, the skirts A B being connected together only at the waist-band, and the skirt A being made adjustable by hooks and eyelets, substantially as described.

91,419.—FELIX CHILLINGWORTH, Springfield, Mass.—*Cartridge-Box.*—June 15, 1869.

Claim.—1. A cartridge-box, having two compartments, C and H, one above another, the lower one of which is hinged at A, and operated by means of the strap D, all constructed and operating substantially as herein described and set forth.

2. A cartridge-box, containing the compartments C H, the lower being hinged at A, the strap D, buttons E G, flap-lining L, and openings F Q, all constructed and arranged substantially as herein set forth.

91,420.—MILTON CLARK, Oakley, Ill.—*Corn-Stalk Cutter.*—June 15, 1869.

Claim.—In combination with a revolving slotted cylinder, a reciprocating knife or cutter, arranged and operated in the interior of said cylinder, and so as to strike through the slots or openings therein, substantially in the manner and for the purpose described and represented.

91,421.—LOUGHLIN CONROY, New York, N. Y.—*Breech-Loading Fire-Arm.*—June 15, 1869.

Claim.—1. The cartridge-shell extractor, constructed as described, and applied to work on a pivot in a recess in one side of the breech-receiver, and operated with a motion accelerated, with respect to that of the breech-block, by an attached pawl, H, and spring *f*, and a projection, *h*, on the breech-operating lever or breech-block, substantially as herein specified.

2. The combination of the tenons *m n* and shoulders 16, on the breech-operating lever, the swinging breech-block, the recoil-block, and the spring *q*, substantially as herein described.

3. The spring-case L, containing the main-spring, and applied to the fire-arm, substantially as herein described.

4. The sere, applied within the spring-case, substantially as herein specified.

91,422.—HENRY T. COOPER, New York, N. Y., assignor to himself and WILLIAM PITMAN, same place.—*Curtain-Fixture.*—June 15, 1869.

Claim.—The bracket A, carrying-roller *a*, slotted at *e*, and having hook *b*, in connection with pin *d* and spring *e*, said pin guiding the bracket, and supporting one end of the spring, when the parts are constructed to operate together, substantially as described.

91,423.—E. HALL COVELL, New York, N. Y.—*Apparatus for Making Light from Hydrocarbon-Liquids.*—June 15, 1869.

Claim.—1. In an apparatus for generating gas or vapor from hydrocarbon-liquids for a head-light, a tank or vessel for holding the liquid, which is inclosed in a jacket containing non-condensing material, substantially as and for the purpose set forth.

2. The employment of the shut-off cock C, with gauging stop-screw *a*, in the manner and for the purpose set forth.

3. The conical valve D, arranged in combination with and in relation to the supply-pipe C, generator *d*, and steam-chamber E, substantially as set forth.

4. The combination of the conical valve D with the gauged set-cock C′, for regulating accurately the influx of the liquid into the vaporizer, substantially as set forth.

5. The combination, with the valve D and chamber *d*, of the piston *e*, for varying the capacity of the generating-chamber by the movements of the valve, substantially as set forth.

6. In combination with the generator *d*, and the burner or burners, of the intermediate reserve-chamber H, for the gas or vapor, substantially as set forth.

7. The arrangement, in combination with the reserve-chamber H, of the steam-pipe G, for maintaining the requisite temperature of the gas or vapor, substantially as set forth.

8. The equalizing-device, consisting of the diaphragm *i i*, in the pipe I, provided with graduated openings, diminishing in size as they approach the burner, substantially as set forth.

91,424.—Daniel M. Cummings, Enfield, N. H., assignor to himself, Francis H. Wells, and Salmon R. Godfrey.—*Railway-Car Axle.*—June 15, 1869.

Claim.—1. Securing the wheel-carrying sleeve *d* to the tapering axle-end *b*, by means of the inwardly screw cut and flanged tubular coupler *c*, which acts conjointly with the screw-threads on the periphery of said sleeve, and with the radial flange *e*, on the car-axle, when the said wheel-carrying sleeve *d* extends outside the car-wheel, and forms the journal-bearing surface at that end of the axle, all substantially as herein set forth.

2. The journal-sleeve *g*, when the inner end of said sleeve extends only partially through the hub of the wheel, on that end of my improved car-axle, and is retained in its position by the severe pressure of the inner periphery of said hub upon portions of the axle and the sleeve, substantially as herein represented and described.

91,425.—J. S. H. Dickinson, Jackson, Pa.—*Harness-Tug.*—June 15, 1869.

Claim.—The perforated metallic plates *c c*, provided with oblique slots *o o*, bent arm *d*, having a projection, *m*, at its forward end, and secured to the trace C, in combination with the loop D, all arranged, constructed, and operated in the manner and for the purpose set forth.

91,426.—John Fanning, Brooklyn, N. Y., assignor to Thomas Otis Le Roy & Co., New York City.—*Mold for Casting Solder.*—June 15, 1869.

Claim.—Forming the bottom of the mold with the recess for receiving the movable bottom, that is slipped into place as set forth, and contains the letters or characters to be formed in casting upon the ingot or bar, substantially as set forth.

91,427.—A. C. Flanders, Owatonna, Minn.—*Animal-Trap.*—June 15, 1869.

Claim.—The arrangement of the incline C, arm F, spring S, staple *n*, cord R, and catch-apparatus *e* E D, when said parts are constructed to operate substantially in the manner and for the purposes specified.

91,428.—Joseph Flint, Rochester, N. Y.—*Saw-Handle.*—June 15, 1869.

Claim.—The saw-handle, formed by combining the handle A, ferrule D, slotted bolt B, with its nut *f*, when all the parts are constructed and arranged as shown and described.

91,429.—Nelson B. Forrest, Auburn, N. Y.—*Match-Boxing Machine.*—June 15, 1869.

Claim.—1. The combination of the sliding-gate M, scraper H, and plunger W, when constructed and arranged to operate substantially as and for the purposes herein set forth.

2. The arrangement of the bent arm *v*, cross-bar *z*, arms a^1 a^1, and evener e^1, all substantially as and for the purposes herein set forth.

3. The slotted carriage A′, provided with spring-boxes B′ B′ and dividers *k′ k′*, or their equivalents, in combination with the arm n^1 and the inclined l^1, substantially as described.

4. The combination of the plungers z^1 z^1, handles a^2 a^2, cross-bar b^2, sliding-bars c^2 e^2, inclined bar l^2, and slotted hinged cover E′, all constructed and arranged to operate substantially as and for the purposes herein set forth.

5. The hinged rack F^1, or its equivalent, constructed so as to receive the boxes of matches, when packed, and carry them to the place where the covers are to be placed on the same, substantially as herein set forth.

6. The combination of the frame J′, rack F^1, and plungers a^3, with the spring-boxes I′ I′ on said frame, all constructed and arranged to operate substantially as and for the purposes herein set forth.

7. The sliding-carriage G′ and sliding-plungers d^3 d^3, constructed and arranged to operate substantially as and for the purposes herein set forth.

8. The arrangement of the shaft B, pulley C′, weight D′, chains x^1 y^1, and carriage A′, all constructed and operating substantially as and for the purposes herein set forth.

91,430.—Theodore M. Fuller, Hainesville, N. J.—*Turbine Water-Wheel.*—June 15, 1869.

Claim.—1. The bucket *a*, with the rounded back and nearly tangential and vertical face, but the lower part thereof curved outward and downward, as herein set forth.

2. The arrangement of the wheel *o*, plates *l* and *h*, in their relation to the outer end of the gates *i*, and for operating said gates, as herein recited.

91,431.—John F. Gebhart, New Albany, Ind.—*Harness-Operating Mechanism for Looms.*—June 15, 1869.

Claim.—1. The combination of the eccentric cams C C and levers J J, constructed and arranged as described, and mounted upon one end of the main frame A, and above the heddle-frames K, so as to free the same from the falling dirt and dust, substantially as set forth.

2. The combination of the cross-shaft F with miter-wheel F″, vertical shaft H, with wheels G′ I, stand B, cross-shaft D, with wheels E, cams C, levers J, and frames K, all constructed and arranged upon the frame A, with its pulleys, and operating substantially as set forth.

91,432.—A. G. Good, Reading, Pa.—*Device for Raising and Kneading Bread.*—June 15, 1869.

Claim.—A bread kneading and raising apparatus, having lining A, shaft C, with its beaters, wedge E, stoppers G, and pan H, constructed, arranged, and operating substantially as specified.

91,433.—Charles H. Goss, Troy, N. Y.—*Laundry-Heater.*—June 15, 1869.

Claim.—1. A laundry-heater, with a sloping top, constructed in the form of a polygon, with concave faces or sides *e e*, substantially as hereinbefore described and specified.

2. The said sloping top, constructed in the form of a polygon, with a partition, *f*, placed in the center of each of the concave sides or faces *e e* thereof, substantially as hereinbefore described and specified.

3. The said sloping top, constructed in the form of a polygon, with concave sides or faces *e e*, in combination with the reflecting-collar G, substantially as hereinbefore described and specified.

91,434.—John D. Coxwell, Gibson, Ga.—*Guano-Distributer.*—June 15, 1869.

Claim.—The machine, constructed and operating substantially as herein described; that is to say, having the wheel C, belt J, shaft L, agitator G, with arms *e e*, hopper A, and handles E E, all arranged and combined as and for the purpose set forth.

91,435.—J. Ashton Greene, Brooklyn, N. Y.—*Mode of Attaching Rubber Tires to Wheels.*—June 15, 1869.

Claim.—The employment, in combination with the grooved felloe and rubber tire, of a metallic auxiliary tire or tires, covering the periphery of the felloe, on each side of the groove, and pinching or compressing laterally the rubber, substantially as and for the purpose shown and set forth.

91,436.—Daniel Gusweiler, Cincinnati, Ohio, assignor to himself and Jacob Hoffner, same place.—*Hot-Air Furnace.*—June 15, 1869.

Claim.—1. The combination of the fire-pot A, the air-distributer D, and diaphragm E, all constructed and arranged to operate as described.

2. The arrangement of the combustion or heat chambers G, H, and H′, and the air-chambers I, I′, and M′, with the perforated base C, all as herein shown and described.

91,437.—Cordelia C. Hall, Saratoga Springs, N. Y.—*Miniature Rink.*—June 15, 1869.

Claim.—The stellated box or chamber A, the mirrors B B, the revolving disk or table C, and the open crown *a*, all constructed and arranged as and for the purpose set forth.

91,438.—C. A. Harper, New York, N. Y.—*Velocipede.*—June 15, 1869.

Claim.—1. The combination of the jointed levers

I, arms or levers H, slides I[1], springs *a*, connecting-rod K, levers L, and ratchet-wheels G, for converting the reciprocating motion into a continuous rotary motion, substantially as and for the purpose set forth.

2. The arrangement of the swinging portion *b* of the levers L, substantially as and for the purpose set forth.

91,439.—LEVI M. HARVEY, Albany, N. Y.—*Skirt-Board and Ironing-Table.*—June 15, 1869; antedated June 4, 1869.

Claim.—The standards *b b*, curved as and for the purpose described, in combination with the hinged cross-bars *c c*, board *a a*, and stalls *d d*, the whole arranged and operating substantially as and for the purposes set forth.

91,440.—THOMAS D. HAWLEY, Detroit, Mich.—*Apparatus for Shoveling Grain.*—June 15, 1869.

Claim.—In apparatus for shoveling and conveying malt or grain, the combination of the scoop G, rope F, and clutched drum C, with the clutch *e'*, rotated by a shaft, A, and the guiding-posts H, when constructed, arranged, and operating substantially as and for the purposes herein set forth.

91,441.—CHARLES WASHINGTON HILL, New York, N. Y.—*Cornice for Curtains.*—June 15, 1869.

Claim.—A cornice composed of a backing, A, of wood or metal, and of a facing, B, of leather, muslin, or paper, as shown and described.

91,442.—A. C. HOBBS, Bridgeport, Conn.—*Cartridge-Case Charger.*—June 15, 1869.

Claim.—1. A cartridge-loader, consisting of the body or piston A, for shoving in the wads or charge, and a sliding-rod, with its pin or point *e*, for removing the cap from the shell, substantially as described.

2. The projection *l*, constructed substantially as described, for inserting the caps in the recess in the head of the shell, as set forth.

91,443.—JOHN HORTON, New York, N. Y.—*Extension-Slide for Gas-Fixtures.*—June 15, 1869.

Claim.—A gas-slide or extension-joint, composed of the outer cylinder A, inner cylinder B, slot *e*, washers *a a*, screw-plugs D D, and stem or pipe C, when used in combination with oil, or other oleaginous substance, as and for the purposes hereinbefore described.

91,444.—WILLIAM B. HUBARD, Arrington Depot, Va.—*Corn-Harvester.*—June 15, 1869.

Claim.—The combination and arrangement of the vertical beveled reciprocating knives *m*, with like stationary knives *n*, bevel gear-wheel *h*, bevel-pinion *g*, shaft F, disk G, pin *i*, slotted standard *k*, reciprocating knife-bar H, reels I, provided with arms *o*, grooves *p*, bands or ropes *q*, vertical grooved pulleys *r*, and grooved wheel J, on axle A, all arranged to operate as herein described.

91,445.—LEAVITT HUNT, Weathersfield, Vt.—*Plow.*—June 15, 1869.

Claim.—1. The employment of a vertically adjustable plow-wheel, located between the mold-board and landside, when the same is mounted in bearings suspended from or attached to the plow-beam, substantially as and for the purposes described.

2. The combination, with the mold-board and landside of an adjustable plow-wheel, located between said parts, and one or more upright friction-rolls, mounted on the landside, in the manner and for the purposes described.

4. The detachable and adjustable skeleton landside, carrying one or more friction-rolls, and applied to the share, substantially in the manner shown and specified.

4. The adjustable wheel on forward part of plow-beam, in combination with its two upright supporting-bars, vertical plate-sockets, and socket-frame, extending beneath plow-beam and bolt, or equivalent means for fixing said bars in the desired position in their sockets, as shown and described.

5. The combination of the adjustable wheel between the mold-board and landside, and the adjustable wheel forward on the plow-beam, for the purpose of raising the plow when going to or returning from the field, and of supporting plow and regulating depth of furrow while the work is in progress.

6. The combination and relative arrangement of the adjustable plow-wheel, the landside friction-rollers, and the adjustable wheel forward on the plow-beam, substantially as herein shown and set forth.

91,446.—JOSIAH B. KENDALL, Boston, assignor to himself and JAMES O. SAFFORD, Salem, Mass.—*Oil for Curriers' Use.*—June 15, 1869.

Claim.—An oil or "stuffing" for curriers' use, consisting of oleaginous and resinous substances, in combination with an alkaline solution, prepared in the manner substantially as set forth.

91,447.—JAMES J. JOHNSTON, Allegheny City, assignor to JOHN T. TYLER, A. R. HURST, HENRY M. MYERS, and DAVID M. ARMOR, Pittsburgh, Pa.—*Apparatus for Distilling Hydrocarbon.*—June 15, 1869; antedated June 12, 1869.

Claim.—1. Evolving hydrocarbon-oil into a vapor, by causing it to flow through a series of layers of charcoal, placed on inclined ways, arranged in a chamber, substantially as herein described, and for the purpose set forth.

2. Separating the lighter part of hydrocarbon-oil from the heavy part, by causing it to flow through a series of layers of charcoal, placed on a series of inclined ways, arranged in a chamber, provided with suitable means for drawing off the heavy part of the hydrocarbon-oil, substantially as herein described, and for the purpose set forth.

3. The evaporator D, provided with inclined ways 2, and pipes *f*, *e*, and 1, constructed, arranged, and operating substantially as herein described, and for the purpose set forth.

91,448.—JAMES J. JOHNSTON, Allegheny City, assignor to JOHN T. TYLER, A. R. HURST, HENRY M. MYERS, and DAVID M. ARMOR, Pittsburgh, Pa.—*Apparatus for Distilling Hydrocarbon-Oils.*—June 15, 1869; antedated June 10, 1869.

Claim.—1. Distilling hydrocarbon-oil by distributing it, through the medium of a pipe, in small jets or streams, against the inner surface of a revolving still, in which is placed a revolving shaft, armed with a spiral flange, so arranged that it will force the vapor evolved from the hydrocarbon from the still, into the condenser, as hereinbefore described.

2. The combination and arrangements of the still *g*, provided with the hollow trunnions D and D', the shaft *h*, provided with flange or wings *i*, and the pipe *k*, constructed, arranged, and operating substantially as herein described, and for the purpose set forth

91,449.—HORACE K. JONES, Kensington, Conn.—*Method of Making Carpenters' Squares.*—June 15, 1869.

Claim.—1. The method herein described of graduating squares by means of a die, sunk into a recess in a block, to preserve the shape of the square.

2. As an improved method of making squares, cutting the blank out whole from the plate, grinding it upon a revolving grindstone, and stamping the graduations upon it, by means of a recessed die, for preserving the shape of the edges, substantially as herein described.

3. The particular form, herein described and shown, of the plate from which the blanks are cut.

91,450.—ANDREW J. KENNEDY, St. Louis, Mo.—*Sad-Iron Heater.*—June 15, 1869.

Claim.—The sad-iron heater, when constructed with the shell A, having apertures *e*, partition C, having apertures *a*, and chamber D, with the gas-tube H, coil, and two or more burners, *h* and *h'*, all arranged in the manner and for the purpose set forth.

91,451.—D. A. KENNEDY, Beloit, Wis., assignor to himself, WILLIAM WADSWORTH, and E. D. MURRAY.—*Oven.*—June 15, 1869.

Claim.—1. The combination, with the rotating-table A, of the hand-wheel A', shaft B, wheels C and

D, braces H, and supports F, when all arranged substantially as specified.

2. The combination, with the rotating-table and the oven, of the water-tube K, when arranged to form a track for the table, as herein described, for the purpose specified.

3. Impregnating bread or other articles, while baking, with aromatic or other flavor, by means of aqueous vapor or steam generated in the presence of flavoring substances, substantially as specified.

91,452.—WILLIAM KNAUS, Otterville, Mo.—*Nail-Extractor.*—June 15, 1869.

Claim.—The implement herein described, consisting of the fulcrum-plate B, the hook C, and lever A, all constructed and arranged as set forth.

91,453.—GEORGE KNELL, Moorestown, N. J.—*Combination of Rocker, Sled, and Swing.*—June 15, 1869; antedated June 8, 1869.

Claim.—1. A frame, consisting of side-pieces A and A′, and of cross-pieces B and B′, so constructed and arranged as to form, when properly adjusted, a rocker, a sled, or the base of a swing, substantially as herein described.

2. In combination with the above, the seat F, having hinged arms *i i*, arranged to be fastened together, and a projection, *a*, on its under side, for attachment to the cross-piece B, or to a swing, substantially as and for the purpose described.

91,454.—GOTTLEIB LANGE, East Saginaw, Mich.—*Churn-Dasher.*—June 15, 1869.

Claim.—In churn-dashers, the tubes B, in connection with the disks A and handle C, when constructed and operating substantially as described.

91,455.—C. W. LANGWORTHY, Bergen, N. J.—*Roofing-Paint.*—June 15, 1869.

Claim.—The composition herein described, when compounded of the ingredients substantially in the manner herein specified.

91,456.—WILLIAM LAUVER, Peru Mills, Pa.—*Horse-Power.*—June 15, 1869.

Claim.—1. The counterbalance K or K′, applied in connection with a sun and planet wheel, substantially as shown and described.

2. The combination and arrangement of the horizontal wheel A, vertical miter-wheels E H, sun and planet wheels F J L, and E *e* N *n*, shafts G *m* Q, and arms I M, all constructed, combined, and adapted to operate in connection with each other, in the manner and for the purposes set forth.

91,457.—THOMAS S. LINES, Newcastle, Ind.—*Wind-Wheel.*—June 15, 1869.

Claim.—1. The frame A B C D, with cross-beams E F, cross-heads G, rod O, axle H, balance-wheel Z, supported by rods M M′ M″ M‴, when combined and used with wind-wheel W W′ W″ W‴, substantially as and for the purposes set forth,

2. The guides Q Q′ Q″ Q‴, in combination with the frame A B C D, and the other parts of said machine, when used in combination with wind-wheel W W′ W″ W‴, substantially as and for the purposes set forth.

91,458.—R. O. LOWREY, Salem, N. Y.—*Fabric from Fibrous Sheets and Hard Rubber.*—June 15, 1869.

Claim.—Covering and uniting paper, woven fabrics, wood, and similar materials, with a hard-rubber compound, and submitting them to the vulcanizing process, substantially as herein described, and for the purpose set forth.

91,459.—S. C. MAINE, Boston, Mass.—*Fire-Extinguisher.*—June 15, 1869.

Claim.—1. The self opening and closing valve *v*, constructed and operating substantially as described.

2. The combination of chambers A, B, C, D, and E, and valves *v v′ v″ v‴*, as and for the purpose described.

3. The combination of the chambers A B C D E, valves *v v′ v″ v‴*, cocks H I J G, and pipes F and F′, substantially as set forth.

4. The combination of chambers A, B, C, D, and E, with covers *a a′ b c d e*, or their equivalent, valves *v v′ v″ v‴*, cocks H I J G and K M N L, induction-pipe F, with branch-pipe F′, pipe S′, cock P, outlet R, with cock R′, and air-chamber Z, all constructed and operating relatively to each other, substantially as and for the purpose set forth.

91,460.—M. W. MARSHALL, Hudson, Mich.—*Skate.*—June 15, 1869.

Claim.—1. The shaft D, which has one or more slots in its end, a screw-thread and ratchet upon its surface, and one end so formed as to be used as a thumb-screw, substantially in the manner and for the purpose specified.

2. The screw-shaft D and strap C, constructed and arranged as described, for the purpose of fastening the skate to the foot, substantially as herein set forth.

3. In combination with the screw-shaft D and strap C, the clamp B, working on the same shaft, substantially as and for the purposes herein set forth.

91,461.—WILLIAM MARTIN, Bay City, Mich., assignor to himself and HIRAM B. EVERETT, Washington, D. C.—*Sawing-Machine.*—June 15, 1869.

Claim.—The arrangement of the curved feed-spring L, provided with a loop or slide, K, at its forward end, to which the saw-frame I is attached, arm J, levers F F″, and crank C, all constructed and operated in the manner and for the purpose set forth.

91,462.—ARNOLD P. MASON, Gowanda, N. Y., assignor to himself and ZALMON HANFORD, same place.—*Horse-Fetter.*—June 15, 1869.

Claim.—The combination of the nose-band *a*, martingale *b*, shear *d*, cord *e*, and boots *l*, as and for the purpose set forth.

91,463.—A. P. MASON, Gowanda, N. Y., assignor to himself and ZALMON HANFORD, same place.—*Bridle-Bit.*—June 15, 1869.

Claim.—The combination of the bit A, provided with one round and one angular side, with the double rings B, as and for the purpose described.

91,464.—A. B. MATTOON, Auburn, N. Y.—*Coulter-Cleaner.*—June 15, 1869.

Claim.—The combination of the clearing-arm D and wheel B, when constructed and arranged to operate substantially as herein described, for the purpose specified.

91,465.—W. W. MAUGHLIN, Baltimore, Md.—*Sash-Fastener.*—June 15, 1869.

Claim.—1. A sash-fastener, adapted to move horizontally, and furnished with clamping-lugs, to hold the sash independently of the beads.

2. The latch or fastener B, provided with the holding-lugs or ears b^2 b^2, and slotted boss or head B′, constructed and operating substantially as described.

91,466.—FERDINAND F. MAYER, New York, N. Y.—*Manufacture of White Lead.*—June 15, 1869.

Claim.—Producing pyroligneous acid for the manufacture of white lead, by treating pyroligneous acetates with phosphoric acid, or phosphates having an acid reaction, substantially as described.

91,467.—DAVID MCCURDY, Ottawa, Ohio.—*Churn-Power.*—June 15, 1869.

Claim.—In churn-powers, the combination of the semi-circular recessed clip L, provided with a thumb-screw, *l*, with the connecting-rod K, wrist J, slotted balance-wheel H, pinion G, internally geared wheel E, crank *e′*, standard D, tripod A, A′, and B, cross-tie C, notched latch *c*, button *c′*, and dash-rod M, when constructed, arranged, and operating as herein described, and for the purpose specified.

91,468.—THOMAS MCEWEN, Chicago, Ill.—*Rotary Steam-Engine.*—June 15, 1869.

Claim.—A rotary steam-engine, consisting of the case, with the chamber D, the disk *c*, with the piston or wing *b*, and the sliding-head E, operated by the elbow-lever J, yoke I, and cam H, all arranged substantially as described.

91,469.—Albert K. McMurray, Utica, N. Y.—*Rocking-Chair.*—June 15, 1869.

Claim.—The combination and arrangement of the reverse rockers A and B, the springs D D, and the part E, when the latter is arranged to turn down for use as a footstool, or to turn up, and form a rest for the front edge of the chair-seat, and prevent the same from rocking, substantially as and for the purposes herein specified.

91,470.—O. H. Melendy, Delhi, Iowa.—*Revolving Show-Case.*—June 15, 1869.

Claim.—The outer case A, which has its top formed with separated glass sections, G G, and a hinged door, C, in combination with the inner revolving-box B, which is divided into separate chambers, and with the spindle E, which extends up through the top of case A, and serves as a means by which to turn box B, all in the manner and for the purpose described.

91,471.—A. D. Michener and J. W. Steigmeyer, Attica, Ohio.—*Corn-Plow.*—June 15, 1869.

Claim.—1. Adjusting the movable side-beams of a plow, by means of the handles, substantially as herein set forth.

2. The combination of the adjustable side-beam D, plate G, ears *b b*, and handle H, all substantially as and for the purposes herein set forth.

3. The arrangement on the under side of the handle H of the pawl *c*, spring *d*, rod *e*, and thumb-piece *f*, all substantially as and for the purposes set forth.

4. The combination of the center-beam A, side-beams D D, plates F and G, and handles H H, all constructed and arranged to operate substantially as and for the purposes herein set forth.

91,472.—William D. Miller, Enon, Ohio.—*Plow.*—June 15, 1869.

Claim.—1. A plow mold-board, constructed upon the principle and in the manner substantially as set forth.

2. The lug M and groove N, in combination with the cutter L′ and post E, as set forth.

91,473.—Fisk Mills, Washington D. C., assignor to himself, Marcus P. Norton, Troy, N. Y., and George H. Penfield, Hartford, Conn.—*Postal-Currency Envelope.*—June 15, 1869.

Claim.—1. A postage-stamp envelope currency, constructed, arranged, and combined in the manner and for the purposes substantially as herein described and set forth.

2. A postage-stamp, folded into an envelope of the requisite size to receive letters for mailing, and having the postage-stamp so printed, and impressed, and arranged thereon, that it shall be canceled in the manner and by the means substantially as herein described and set forth.

91,474.—Henry Moule, Fordington, and Henry John Girdlestone, London, England.—*Deodorizing-Apparatus for Water-Closets.*—June 15, 1869.

Claim.—1. The oscillating hopper A, the chucker C, upon the oscillating shaft D, the shelf C′, pivoted lever F, and handle G, combined to operate within the case, substantially as described, for the purpose specified.

2. The oscillating hopper A, the chucker C, upon the oscillating shaft E, and the weighted levers, in combination with each other, and the hinged seat, substantially as described, for the purpose specified.

91,475.—Anton Müller, Brooklyn, N. Y.—*Construction of Hot-Water Boilers.*—June 15, 1869.

Claim.—The arrangement of an inwardly projecting flange, *a*, and bead *b*, at the ends of the body A, in combination with the head B, substantially as shown and described.

91,476.—John Murphy and Albert H. Hook, New York, N. Y.—*Machine for Making Rubber Hose, &c.*—June 15, 1869.

Claim.—1. A machine for making hose and similar articles, constructed and combined substantially as described.

2. Rolling the mandrel and cloth between two surfaces, one or both of which are covered with elastic material.

91,477.—Henry M. Myers, Allegheny City, Pa.—*Method of Coating Hinges with Tin.*—June 15, 1869.

Claim.—Coating hinges with tin, as herein described, and for the purpose set forth.

91,478.—Isaiah Nutt, New York, N. Y.—*Machine for Refitting Conical Valves.*—June 15, 1869.

Claim.—The combination, with the adjustable center C, and stationary concave B, constructed smooth on its interior, to form a rest and guide for the valve of the sliding-cutter E, arranged to project through a slot, *a*, in the concave, substantially as specified.

91,479.—Anton Ochsner, New Haven, Conn.—*Combined Latch and Lock.*—June 15, 1869.

Claim.—1. The spring-plate Q, pivoted on the bolt A, in combination with the two-armed nut E, substantially as described.

2. The combination of the sliding-bolt A H H with lips G G′, the nut E, with arms F F, on the spindle D, the pivoted spring-tumblers L, with notch T and stops O O′, the stop N, and pivoted spring-plate Q, all constructed and arranged substantially as described, to operate either as a night-lock, a knob-door-latch, or as a positive, or dead-lock, as set forth.

91,480.—John Pickles, Wigan, England.—*Manufacture of Paper.*—June 15, 1869.

Claim.—The manufacture of paper-pulp from the materials and by the process substantially as herein described.

91,481.—Merritt F. Potter, Kaneville, Ill.—*Milk-Cooler.*—June 15, 1869.

Claim.—1. The air-tight spreading-chamber and feeding and discharging pipes F G, the whole operating as a siphon, for conducting the cooling-liquid through and discharging it from the can or other vessel containing the liquid, to be cooled automatically.

2. The spreading-chamber, in combination with the tube B and milk can or vessel, as set forth.

91,482.—George Pye, Boston, Mass.—*Harvester.*—June 15, 1869.

Claim.—1. A mowing-machine, having a cam-wheel, E, attached to one of the driving-wheels, in combination with the rocking-lever I, elbow-lever G, rod H, and lever *l*, all constructed and arranged as herein described.

2, The drag-bar J, hinged to the main frame, and having the lever *l*, that operates the sickle, pivoted thereon, and the finger-bar L hinged thereto, as herein set forth

3. The slotted plate R, set at an angle on the frame A, and held in place by the lug *g* and bolt *h*, for holding and adjusting the rocking-lever I, as herein described.

91,483.—Peter Regitz, Chicago, Ill.—*Hopper-Cock.*—June 15, 1869.

Claim.—The combination of the shell A, ground valve F, stem E, washers G and H, nut J, lever M, weight N, and standard and projection L, when arranged and operating substantially as and for the purposes herein set forth and shown.

91,484.—George Rehfuss, Philadelphia, Pa., assignor to the American Button-Hole Over-Seaming and Sewing-Machine Company, same place.—*Sewing-Machine Work-Plate.*—June 15, 1869.

Claim.—1. The detachable work-plate B, having two ips one catching beneath a projection on the base-plate of the machine, and the other adapted to a projection on a pin, *f*, turning in the base-plate, and provided at the lower end with a handle or its equivalent, substantially as and for the purpose described.

2. The plate B, with its lip *e′*, bent and adapted to a projection on the base-plate, for the purpose specified.

91,485.—Dexter Reynolds, Albany, N. Y.—*Evaporating-Apparatus.*—June 15, 1869.

Claim.—1. The straps *a* and sockets *c*, with their removable pins *i*, for the purpose of joining two boxes together, and of separating them, when desired, substantially in the manner described.

2. The evaporating box or boxes, with their pipes, cases, tubes, or receptacles for steam, when constructed and adjusted as herein described, so as to utilize the heat of the steam from a liquid in a primary vessel or vessels subjected to heat, for the purpose of heating in such box or boxes, or concentrating by evaporation further liquid of the same or similar character, in combination with any suitable mechanical device for raising it or them vertically, or removing it or them horizontally from such primary vessel or vessels, in order to have access to such primary vessel or vessels, or their surroundings, for any purpose whatever.

3. The evaporating box or boxes, with their pipes, cases, tubes, or receptacles for steam, when constructed and adjusted substantially as described, so as to utilize the heat of the steam from liquid in a primary vessel or vessels subjected to heat, for the purpose of heating in such box or boxes, or concentrating by evaporation further liquid of the same or similar character, when such box or boxes are placed vertically over, or under, or diagonally from a primary vessel or vessels subjected to heat, in combination with a cover or covers to such primary vessel or vessels, or such parts thereof not covered by such box or boxes, opening or removable, or both, so as to have access to such primary vessel or vessels, and its or their surroundings, for any purpose whatever, with a communication, by pipes or otherwise, for the passage of steam from under such cover or covers, either through, back, under, or aside from it or them, to one end or any part of the pipes, cases, tubes, or receptacles for steam in such box or boxes, through which heat is to be transmitted to the liquid surrounding it or them, substantially in the manner and for the purposes set forth.

91,486.—Percival Roberts, Philadelphia, Pa.—*Method of Constructing Piles for Forming Axles, &c.*—June 15, 1869.

Claim.—A pile or fagot, (for axles and shafting,) composed of flat bars and layers of square bars, arranged alternately, substantially in the manner and for the purpose herein set forth.

91,487.—James Roberts, White Pigeon, Mich.—*Potato-Digger.*—June 15, 1869.

Claim.—1. The intermittent rotating rim-wheels P, provided with the grated scoops Q, main shaft R, ratchets O, rocker-arms N, and pin M, when arranged and operating substantially as described, for the purpose specified.

2. The oscillating grated drum S, provided with the internal grated drum U, door T, and pallet X, when arranged and operating substantially as described, and for the purposes herein set forth.

3. The standards G, main journals F, adjusting-screws H, and pawls I and J, as and for the purpose set forth.

4. The vibrating grated apron W and cam-lever Y, when arranged and operating substantially as described, and for the purpose specified.

5. The slotted connecting-rods L, cranks K, ratchets E, and pawls D, substantially as and for the purpose set forth.

6. The combination and arrangement of the above-named parts with the frame A, wheels C and B, excavator Z, shaft 2, lever 3, and quadrant 4, when operating and used substantially as herein described and for the purpose described.

91,488.—William S. Ryerson, New York, N. Y., assignor to himself, Amos L. Tripp, and Charles Chambers, same place.—*Boat-Detaching Apparatus.*—June 15, 1869.

Claim.—The slings *a a*, connected together, so as to be hung from the blocks or fall, in combination with the shaft *e*, hooked ends *e'*, and lever *k*, substantially as and for the purposes set forth.

91,489.—Henry C. Shafer, Petersburgh, Ind.—*Corn-Planter.*—June 15, 1869.

Claim.—The arrangement of the frame A, wheels B and C C, seed-boxes D, lever E, spring F, slides G G, and slotted scrapers H, all substantially as specified.

91,490.—Christian Sholl, Mount Joy, Pa.—*Sash-Holder.*—June 15, 1869.

Claim.—A metallic box, D, with or without its side flange, E, having a V-shaped guide, G, at top, and pin H below, that holds the spring J and angular plate K, which has its V-shaped notch at top, working on the guide G and pin-lock C at one end, and button M on the other end, all arranged and operated substantially as described and set forth.

91,491.—De Witt Stevens, Newark, N. J.—*Ash-Sifter.*—June 15, 1869.

Claim.—A reversible inclined sieve, with inclosed spaces above and below the screen, with guide and central dust-proof vent, substantially as constructed, for the purposes set forth.

91,492.—Solomon Stevens, Terre Coupee, Ind.—*Bee-Hive.*—June 15, 1869.

Claim.—1. The base, constructed as described, with an opening for the admission of robbers, in the front, and a passage through; the bottom being closed with a slide, substantially as set forth.

2. The combination and arrangement of the base, constructed as described, with a bee-hive, having openings *u* and chambers *h*, when constructed substantially as specified.

91,493.—Charles H. Swain, Brooklyn, N. Y.—*Smelting-Furnace.*—June 15, 1869.

Claim.—The arrangement of the retorts in the sides of the furnace, with pipes leading from them, and conveying the vaporized fluid to the inside of the furnace, or under the bottom of the same, and mixing it with the oxygen of the air through the openings at G' G', and driving the combined gas and oxygen into and up through the ores to be smelted.

91,494.—Andrew J. Taylor, Manchester, Ind.—*Potato and Corn Planter.*—June 15, 1869.

Claim.—1. The machine described, consisting of the frame A, standards B B', platform C, rock-shaft D, and slides F and H, when combined and arranged as and for the purpose described.

2. The slide F, constructed and arranged as described, in combination with perpendicular knife C^1 and springs C^2, as described.

3. The above-described arrangement, in combination with slides H, and knife H^2, and hopper I, substantially as and for the purpose set forth.

91,495.—Henry H. Tift, Mystic, Conn.—*Baling-Press.*—June 15, 1869.

Claim.—In an upright toggle-lever baling-press, the trunnions or bearings *c*, projecting from the nuts F F of the right and left hand screw G, in combination with the guides I, on which the trunnions or bearings *c* rest, all being arranged to operate in the manner substantially as and for the purpose set forth.

91,496.—L. Trowbridge and W. H. Trowbridge, New York, N. Y.—*Gas-Stove.*—June 15, 1869.

Claim.—1. The combination of the tube or section C and rod *e*, between the point B, or the point A and the point D, at the outside of the frame-work, for the purpose of removing the packing-cap D and thumb-piece E beyond the reach of the heat, substantially as and for the purpose described.

2. The combination and arrangement of burner A, pipe C, packing-cap D, and thumb-piece E, substantially in the manner and for the purpose set forth.

3. The ducts L L, the convexity for ignition *z z*, and escape-opening *o*, in combination with the rim M, substantially in the manner and for the purpose described.

91,497.—Seth G. Tufts, Maineville, Ohio.—*Reversible Cultivator.*—June 15, 1869.

Claim.—1. The provision, in a hand or other cultivator, of the double-ended sheth or standard C, substantially as and for the purposes designated.

2. In combination with a double-ended sheth, the reversible-handle E, substantially as set forth.

3. The cross-bar G, cheeks *g*, and bolt I, or their equivalents, in the described combination with the reversible handle E.

91,498.—JOHN TURNER, Norwich, Conn.—*Machine for Making Covered Cord.*—June 15, 1869

Claim.—1. The combination, in a machine for making covered cord, of two or more strand-carrying devices, which do not twist the strands, covering-devices for each strand, and laying-devices, whereby the strands are covered, and all subsequently laid into cord, substantially as herein described.

2. The strand-carrying bobbins, in combination with the laying-spindle, and with the spindles E E, occupying a fixed relation to the laying-spindle, and arranged in line with the axis of the covering-spindles, substantially as herein specified.

91,499.—JOHN T. TYLER, Pittsburgh, and JAMES J. JOHNSTON, Allegheny City, assignors to JOHN T. TYLER, A. R. HURST, HENRY M. MYERS, and DAVID M. ARMOR, Pittsburgh, Pa.—*Apparatus for Making Gas from Hydrocarbons.*—June 15, 1869; antedated June 12, 1869.

Claim.—1. Making a fixed gas from the lighter products of hydrocarbon-oil, by causing it to flow through a series of layers of charcoal, placed on inclined ways, arranged in a gas-generating chamber, provided with a supply and exit pipe, said chamber being subjected to heat, substantially as herein described, and for the purpose set forth.

2. A series of layers of wood-charcoal, or its equivalent, when used in combination with the inclined ways 2, or their equivalent, arranged within the gas-generating chamber D, as herein described, and for the purpose set forth.

91,500.—ALEXANDER VAIL, Henry, Ill.—*Whiffletree.*—June 15, 1869.

Claim.—The double-tree E′, single-trees F F, pulley E, and chain D, in combination with the pivoted lever B, provided with adjustable hooks *b b*, and single-tree C, all constructed, arranged, and operated in the manner and for the purpose set forth.

91,501.—WILLIAM J. WALLIS and WILLIAM E. HUTTMANN, Chicago, Ill.—*Harvester.*—June 15, 1869.

Claim.—1. The combination of the pivoted rake F, operated by the shaft A and cam G, with the circular incline E and endless belt D, all constructed and arranged to operate substantially as and for the purpose set forth.

2. The hinged platform H, attached to the main platform, and supporting the binding-table K, and binders' seats *s*, as arranged and described.

91,502.—JOSEPH WEIZENECKER, St. Louis, Mo.—*Wine and Cider Press.*—June 15, 1869.

Claim.—The pressure-head E, formed of the parts *e*, e^1, e^2, e^3, e^4, and e^5, when combined with the box D, formed with sides *d*, perforated as shown at d^1, and beveled slats d^2, substantially as set forth.

91,503.—CORNELIUS WHITEHOUSE, Bridgetown, near Cannock, England.—*Process for Making Augers and Boring-Bits.*—June 15, 1869.

Claim.—The manufacture of augers, boring-bits, and other similar tools by the process or combination of processes hereinbefore described, and illustrated in the accompanying drawing; that is to say, making the said augers, boring-bits, and other similar tools, by first casting them of steel or iron, and subsequently softening or annealing the same, bending and shaping into the required form such parts as could not be conveniently cast of the required form, and finally hardening and finishing the said tools, substantially as described and illustrated.

91,504.—HIRAM L. WILCOX, Percival, Iowa.—*Process of Tanning Hides.*—June 15, 1869.

Claim.—The above-described process for tanning hides, substantially as herein set forth.

91,505.—JAMES R. WOOD, Providence, R. I., assignor to CHARLES G. TAFT, Jr., same place.—*Butchers' Steel.*—June 15, 1869.

Claim.—The improved butchers' steel, herein described, with its cross-cut teeth, manufactured in the manner and for the purposes specified.

91,506.—BENJAMIN C. ATKINSON, Newburyport, Mass.—*Steam-Condenser.*—June 22, 1869; antedated June 8, 1869.

Claim.—The arrangement of the hot well B, pipes *b* and *d*, exhaust-pipe E, and pump H, with reference to the condenser A, and pipes C and D, substantially as described and specified.

91,507.—LLOYD E. BALDWIN, Windham, Conn., assignor to the CONNECTICUT RIVER QUARRY COMPANY.—*Stone-Sawing Machine.*—June 22, 1869.

Claim.—1. The adjustable bed or carriage, running upon the tracks *i i*, being a combination of the truck-wheels a^1 a^1, beams b' b', cross-beams e' c', with the duplicate racks *z z′* attached thereto, and gearing into the gear-wheels *y y′*, tracks o^1 o^1, truck-wheels e' e', beams x^1 x^1, fixed top-beams m^1 m^1, and sliding top-beams m^2 m^2, containing one or more leveling-screws, i^3, the whole constructed and operating substantially as described, and applied to a machine for sawing stone or other material.

2. The combination of machinery herein described, for producing an adjustable feed-motion of the adjustable bed, consisting of the cone-pulleys *g* and *j*, with the connecting-belt *f*, shaft *v*, worm *p* upon shaft *n*, the worm-wheel *l*, reversing-clutch *s′*, loose wheel E, shaft *m*, worm *p*, worm-wheel *r*, shaft *n*, pinion *w*, and its duplicate gear-wheels *y* and *y′*, and the racks *z* and *z′*, all constructed and operating substantially as described, for the purposes described.

3. The combination of the parts mentioned in the first and second claims, with the shaft *n*, belt-wheel *o*, belt *e*, belt-pulley *d*, shaft *a*, and a saw, B, composed of an iron or steel plate, with or without teeth, or of copper or other suitable material, with diamonds or other hard precious stones imbedded in the edge, and acting as teeth, the whole constructed and operating substantially as described, and applied to sawing stone or other materials.

4. The leveling-screws i^3, more or less in number, in combination with the adjustable bed, constructed and operating as described, for the purposes described.

5. The combination of the adjustable bed and the several devices for producing feed-motion in a stone-sawing machine, as specified in claim second, substituting, if desirable, a screw and bevel-gear wheel in lieu of the rack and pinion on shaft *n*, substantially as described.

91,508.—J. H. BEAN, Marietta, Ohio, assignor to himself, ABRAM PRATT, and JAMES A. TENNEY.—*Heel-Cutter.*—June 22, 1869.

Claim.—1. The bent lever E, with its slot *b*, in combination with set-screw *b′* and shaft C, as and for the purpose described.

2. The lever E, when provided with the hinged tongue e^2, substantially as described.

91,509.—CHAUNCEY N. BENNETT, Cincinnati, Ohio, assignor to himself and A. T. BENNETT.—*Coal-Stove.*—June 22, 1869.

Claim.—1. The register D′, substantially as and for the purpose described.

2. The register D, substantially as and for the purpose described.

3. The combination of registers B and D′, substantially as and for the purpose described.

4. The combination of register D′ and foot-rest A, substantially as and for the purpose described.

5. The combination of registers B and D′, and foot-rest A, substantially as and for the purpose described.

91,510.—GEORGE BERGNER, Washington, Mo.—*Velocipede.*—June 22, 1869.

Claim.—A velocipede, combining the wheels E, E′, and F, pinions *o o′*, cogs 1, 2, 3, &c., adjustable stirrups *k k′*, concentric wheels A and B, provided with friction-rollers *a* a^1 a^2 a^3, and seat H, all constructed, arranged, and operated substantially as and for the purpose shown and specified.

91,511.—Henry Blundell and John McWilliams, Providence, R. I.—*Screw-Press.*—June 22, 1869.

Claim.—1. Forming an anti-friction female screw or nut of a screw-press, by pouring the melted alloy or anti-friction metal around the screw, and into a chamber inclosing it, formed in the manner described.

2. The combination of the plunger E, slides D D, and frame J, substantially as described.

91,512.—Robert Briggs, Philadelphia, Pa.—*Machine for Shearing Metals.*—June 22, 1869.

Claim.—1. Combining, with the plain and spleened shaft and the cutters, the screw-threaded sleeves, for the purpose of adjusting said cutters, substantially as described.

2. The guard-rollers, or their equivalent, back of the cutters of shears, such as are used for slitting or trimming plates, in combination with elevating-guards, to carry the contiguous strips or shearings above the rollers, for the purpose of causing the plate to pass straight through the shears, substantially as described.

91,513.—Albert Brisbane, New York, N. Y.—*Pneumatic Tube for Transporting Goods.*—June 22, 1869; antedated June 11, 1869.

Claim.—The combination of hollow spheres and cylinders with pneumatic tubes, arranged and operating substantially as and for the purpose herein described.

91,514.—Thomas W. Brown, Reading, Pa.—*Grindstone-Journal Box.*—June 22, 1869.

Claim.—The improved manufacture of grindstone-journal box, as made with the friction-wheel bearings and journals and journal-abutments arranged wholly within the oil-receptacle, and with the bearings projecting inward from its opposite sides, in combination with the cover, arranged and constructed so as, when shut down upon the oil-receptacle, it shall close it, and extend over the wheels, their bearings, journals, and journal-abutments, in manner substantially as above described, and as represented in the accompanying drawings.

91,515.—Henry I. Brunner, Nazareth, Pa.—*Boiler-Feeder.*—June 22, 1869.

Claim.—The arrangement of the transversely perforated valve E, in relation to the supply-pipe F and pipes C and D, respectively communicating with the steam and water spaces of the boiler A, substantially as herein specified.

91,516.—Abner H. Bryant, Philadelphia, Pa.—*Pocket for Egg-Carriers.*—June 22, 1869; antedated June 8, 1869.

Claim.—A pocket, constructed in the manner herein described and shown, to accompany and be used with devices for transporting eggs.

91,517.—William M. Bush and Thomas B. Richards, Cincinnati, Ohio.—*Base-Burning Stove.*—June 22, 1869.

Claim.—1. The register K, passage X, formed by the magazine A and drum D, in combination with the series of holes L, substantially as shown and described.

2. The combination of a perforated door, G, with an outer door, F, containing a mica panel, substantially as shown and described.

3. The passage X, formed by the magazine A and drum D, in combination with the series of holes L and plate V, substantially as shown and described.

4. The combination of the magazine A and the series of holes L, all as shown and described.

5. The exit-flue H, placed in pipe E′, in any position between the chambers S and T, as and for the purpose described.

6. The damper I, arranged in pipe E′ relative to exit-flue H, as and for the purpose described.

91,518.—Joseph Busser, Troy, Ohio.—*Wooden Wall for Buildings.*—June 22, 1869.

Claim.—1. The construction of the inner surface of a plank wall, which has its planks laid flatwise of tenons *b*, and crossing-strips *c*, substantially as and for the purpose described.

2. The beveled and grooved planks A, in combination with the interposed strips B B′ and horizontal chambers C, substantially as and for the purposes described.

91,519.—W. E. Canedy, Wauconda, Ill.—*Stove-Pipe Shelf and Drier.*—June 22, 1869.

Claim.—The combination of a rotating shelf, R, provided with a hinged leaf, B, with the drying-oven D, provided with a grated bottom, J, and the pivoted support K, provided with slots *f*, for supporting arms P, and so cut away on the side *g* as to allow the leaf B to fall down, when the support is turned on its pivot *l*, as set forth.

91,520.—Addis E. Chamberlain and J. B. Crowley, Cincinnati, Ohio, assignors to Addis E. Chamberlain, O. N. Bush, and Franklin V. Chamberlain.—*Cooking-Stove.*—June 22, 1869.

Claim.—1. The combination of the standards V V and pendants C C, as and for the purpose described.

2. The forked pieces G G, with the pins H H, as and for the purpose described.

3. The adjusting of the grates A and B, so that both will be operated, as described, by the same motion.

4. The pan E, containing the grate A, reversible in the stove, as and for the purpose described.

5. The chamber O′ and the series of holes O O, as and for the purpose described.

6. The combination of the plate O and box N, as and for the purpose described.

7. The vertical partition R′, as and for the purpose described.

8. The pan S, as and for the purpose described.

9. The shoulders *f f*, at right angles to each other on the handle D′, as and for the purpose described.

91,521.—Joseph Chisholm, Boston, Mass.—*Ash-Sifter.*—June 22, 1869.

Claim.—1. Controlling the action of the yielding supplementary side I, of the hopper H, by the use of the spring J, arranged and operating substantially as described.

2. The general arrangement and combination of the movable inclined sieve D, receptacles B and C, inclosed in the case A, and the hopper H, provided with the yielding supplementary side I, substantially as described.

91,522.—John F. Collins, New York, N. Y.—*Liquor-Thief.*—June 22, 1869.

Claim.—An instrument for sampling fluids, consisting of the tube A, ring E, rod F, perforated plug G, valve H, combined, constructed, and operated substantially as described and set forth.

91,523.—Patrick H. Coyle, Newark, N. J.—*Steam-Generator Flue-Brushes.*—June 22, 1869.

Claim.—The combination, with the boiler-flue brushes, of a guard to guide the brush back into the flue after having been pushed through, substantially as set forth.

91,524.—Achibald C. Crary, Utica, N. Y.—*Steam Device for Warming Railroad-Cars, and other Purposes.*—June 22, 1869.

Claim.—1. The combination and arrangement of the steam-car, and the enginery pertaining thereto, when constructed substantially as herein set forth.

2. The steam-generator and its mechanical devices, when disconnected from the locomotive, and constructed substantially as herein set forth.

3. The arrangement of the eccentric and its immediate devices, whereby to operate the pump of the steam-generator, substantially as herein described.

91,525.—Isaac Crum, West Chester, Ohio.—*Harrow.*—June 22, 1869; antedated June 8, 1869.

Claim.—The arrangement of the sections A B C, for transportation from place to place, by reversing the position of the harrow upon the ground, and folding the sections, in the manner described.

91,526.—James G. Divoll, Sonora, Cal.—*Meat-Cutting Machine.*—June 22, 1869.

Claim.—1. The eeeentrie ehopping-knives B B, revolving in opposite direetions upon the parallel shafts *a a'*, and operated by gearing eonneeted with the driving-wheel E, substantially as and for the purpose described.

2. The ehopping-ease L, moving from end to end of the frame, and having the eeeeutrie ehopping-knives B B revolving and eutting from side to side, substantially as and for the purpose herein deseribed.

3. The eombination of the endless serew *h*, toothed wheels H and K, and eonneeting-rod *m*, or an equivalent deviee, reeeiving their motion from the driving-wheel E, substantially as and for the purpose above deseribed.

91,527.—Thomas A. Edison, Boston, assignor to Joel H. Hills and William E. Plummer, Newton, Mass.—*Printing-Telegraph.*—June 22, 1869.

Claim.—The two eleetro-magnets B E, plaeed within the same eireuit, one for operating the type-wheel, the other for operating the printing-hammer, in eombination with a "polarized relay," whieh forms an automatie switeh, whereby either one of the eleetro-magnets may be brought into aetion, and the other cut out of the eireuit by the reversal of the current, substantially as and for the purpose deseribed.

91,528.—Stephen Elliott, Richmond, Ind.—*Door-Spring.*—June 22, 1869.

Claim.—The stationary eireular rod E, attaehed at both ends, with its supporter D, when used to eontraet the spring, in eombination with spring D and plates F F, as eonstrueted and shown, for the purpose set forth.

91,529.—William H. Emerson, Dixon, Ill.—*Dish-Washer.*—June 22, 1869.

Claim.—1. The rotating eylinder B F C^2, provided with doors D, in eombination with removable dish-holders L M G H I, and S *b* T, as set forth.

2. The eombination of the eylinder B F C^2, earrying the dish-holders, with the ease A, as and for the purpose deseribed.

3. In eombination with the eylinder B F C, the buekets E, for eonduetiug eurrents of water on to the dishes in the holders, as deseribed.

91,530.—Henry W. Farley, Oswego, Ill.—*Lightning-Rod.*—June 22, 1869.

Claim.—The applieation of one or more wires or strips of eopper or other metal possessing superior qualities as eonduetors of eleetrieity, within the angles or grooves of a eorrugated iron rod, substantially as and for the purpose shown.

91,531.—Michael Feigel, New Utreeht, N. Y.—*Mortising-Chisel.*—June 22, 1869.

Claim.—The mortising-ehisel A, provided with the eutting-blade E, projeeting obliquely from near the middle of the baek thereof, and operating as and for the purpose herein speeified.

91,532.—Henry J. Ferguson, Manehester, N. J.—*Compound Railroad-Rail.*—June 22, 1869; antedated June 7, 1869.

Claim.—1. The eompound rail, eonsisting of the longitudinally divided web A, flanged base-plate B, and flanged and dovetailed head C, the whole eonstructed, arranged, and eombined substantially as herein shown and deseribed.

2. The dovetailed tongue *g*, and flanges *c c*, on the under side of the head C, in eombination with the channel *e* in the web A, serving to unite the head with the web, by filling the eavity around the tongue *g* with molten metal, substantially as shown and deseribed.

3. Combining the head and web of a railroad-rail, by means of molten metal poured in and around a dovetailed tongue and groove, substantially as deseribed.

91,533.—Louis Fiseher, Brooklyn, N. Y.—*Vapor-Burner.*—June 22, 1869.

Claim.—The sereen or perforated guard K, in eombination with the air-passages F F, when employed on vapor-burners, substantially as and for the purpose herein set forth.

91,534.—L. B. Flanders, Philadelphia, Pa.—*Velocipede.*—June 22, 1869.

Claim.—1. In eombination with the said seat or saddle, a spring, *f*, earrying a roller, *h*, adapted to the edge of the opening in the annular wheel, substantially as deseribed.

2. In combination with the said saddle, the elastic straps *i i*, each having a stirrup earrying a roller, as set forth.

91,535.—Allen Greene and Elisha Dyer, Providenee, R. I.—*Velocipede.*—June 22, 1869.

Claim.—1. The spheroidal wheel D, having but one rim, with double set of spokes, with separate hubs for eaeh set, between whieh, within the wheel, is the pendent seat E, in eombination with the erank and treadle movement, arranged aud operating in the manner substantially as shown and deseribed.

2. In eombination with a single wheel of the eharaeter deseribed, the forked lateral support J, arranged and operating substantially as and for the purpose speeified.

91,536.—Joseph C. Henderson, Troy, N. Y.—*Base-Burning Stove.*—June 22, 1869.

Claim.—1. The eontinuous supply eylinder or magazine C, in eombination with the front aperture or opening D, eonstrueted as deseribed, substantially as hereinbefore set forth and speeified.

2. The eontinuous supply-eylinder C, and front opening, D, in eombination with the gas-eombustion chamber A and exit-passage E, substantially as hereinbefore speeified.

3. The eombination of the ehamber A, exit-passage E, flue I, and upper ehamber B, substantially as and for the purposes hereinbefore speeified.

4. The eombination of the ehamber A, exit-passage E, flue I, oven F, and ehamber B, substantially as and for the purposes hereinbefore speeified.

5. The eombination of the ehamber A, exit-passage E, flue I, boiler-seat G, and ehamber B, substantially as and for the purposes hereinbefore speeified.

6. Construeting an oven, F, or boiler-seat, G, in sueh a manner that the oven or boiler may be heated by the passage of the produets of eombustion from the lower to the upper portion of the stove, through an exterior flue or flues, I, substantially as hereinbefore speeified.

7. The damper L, in combination with the lower ehamber A and the upper ehamber B of the stove, substantially as hereinbefore speeified.

8. The annular air-ehamber H, and apertures *a a*, in eombination with the eontinuous supply-eylinder C, substantially as and for the purposes hereinbefore speeified.

91,537.—Edward Heylyn, Roehester, N. Y.—*Cement for Calking Ships, and other Purposes.*—June 22, 1869.

Claim.—The eement or eomposition above deseribed, for the purpose of ealking the seams and bolt-heads and other openings in the deeks of vessels, and for eoating and lining wooden vessels, and other similar purposes.

91,538.—Ephraim C. Hodge, Oneonta, and Delos H. Mann, Delhi, N. Y.—*Carriage-Spring.*—June 22, 1869.

Claim.—In eombination with a wheeled vehiele, the reaehes A, arehed pieees B, springs C, eross-pieees F, and springs D, the whole being eombined, arranged, and operating in the manner and for the purposes set forth in the above speeifieation.

91,539.—Alpheus S. Hunter, Newburgh, N. Y.—*Skate.*—June 22, 1869; antedated June 19, 1869.

Claim.—1. The mode of fastening or unfastening skates to the boot or shoe by the combined aetion of lever H, lever G S *c*, rod T T R, double-aeting wedge K K, with plates P^1 Q^1 and P^2 Q^2, and angle-plate F, as speeified.

2. The manner of adjusting the skate to the boot by means of the rod T T R, nuts L and M, double-aeting wedge K K, and the corresponding grooves

in the angle-plates P^1 Q^1 and P^2Q^2, for the foot-plate, and by means of movable angle-plate F for the heel, as specified.

91,540.—THOMAS C. JENKS, Philadelphia, Pa.—*Raised-Lettered Signs, Show-Cards, and the Like Articles, from Papier-Maché.*—June 22, 1869.

Claim.—1. The manufacture of either block or flat letters or figures from *papier-maché*, substantially as described.

2. The manufacture of a complete sign or show-card, with raised letters or figures, with or without frame, said letters or figures, frame, and ground, being of one and the same piece, made of *papier-maché*, substantially as described.

3. Stamping a frame around the edge of the *papier-maché* show-card, of one and the same piece with the letters or figures and ground, substantially as described.

91,541.—JONATHAN JOHNSON, Lowell, Mass.—*Pad for Horses' Hoofs.*—June 22, 1869.

Claim.—1. The spring A, constructed, applied, and arranged in the manner and for the purpose shown and described.

2. The sandal-pad B, constructed, applied, and arranged in the manner and for the purpose described.

3. The combination of the strap C, spring A, pad B, and absorbent D, all constructed, combined, and arranged as and for the purpose described.

91,542.—D. P. KAYNER, Erie, Pa.—*Cooking-Stove.*—June 22, 1869.

Claim.—1. The construction of a cook-attachment for stoves, when the same is constructed substantially in the manner and form set forth.

2. The construction of a cook-attachment for stoves, with a direct flue.

3. A cook-attachment for parlor or sitting-room stoves, with an oven in combination therewith, when constructed substantially as set forth.

4. The oven-attachment, herein described.

91,543.—JAMES M. KEEP, New York, N. Y.—*Office Indicator and Register.*—June 22, 1869; antedated June 8, 1869.

Claim.—The combination and arrangement of the numbered knob, pointer, dial, and super-indicator, constructed and operating as described.

91,544.—ISAAC KELLER, Randolph, Ohio.—*Wood-Sawing Machine.*—June 22, 1869.

Claim.—1. The combination of the shaft B, loose bevel-gear wheels O O, sliding clutch-collar N, bevel-gear wheel M, shaft R, gear S T, universal joints U and W, rod V, and feed-roller X, the several parts being arranged as and for the purpose herein specified.

2. The arrangement of the connecting-rod L, slides Y Y, (united, by a neck, at their centers, as shown,) saw-bar Z, oscillating guides *q q*, and post *v*, when the several parts are constructed, arranged, and operated in the manner and for the purpose specified.

3. The arrangement of the lever *f* of the third order, provided with brad *g* and ratchet *i*, the connecting and adjusting iron *l*, the working-lever *k*, with catch *z* and the carriage-way A^2, when the several parts are constructed and operated in the manner and for the purpose set forth.

91,545.—IRA C. KELLEY, Monticello, Ind.—*Rosette-Holder.*—June 22, 1869.

Claim.—An improved rosette-holder, consisting of the base A, over which the fabric is stretched, and the clamp *d*, which secures it thereon, and the screw-stud *b*, by which the device is attached, the whole arranged substantially as described.

91,546.—PETER KLINE, Johnsville, Ohio.—*Horse-Power.*—June 22, 1869.

Claim.—The combination of the draught-levers D with the slotted guide-beams C E and brackets B, all the parts being constructed, arranged, and operating substantially as described, for the purpose specified.

91,547.—WILLIAM LEATHE, Woburn, Mass., assignor to himself, STOUGHTON B. HOLDEN, and LUTHER L. HOLDEN.—*Boot and Shoe.*—June 22, 1869.

Claim.—The device A B D *m m*, as shown in Fig. 1, for the leg of a boot, as herein described.

91,548.—WILLIAM A. LEWIS, Joliet, Ill.—*Horse-Rake.*—June 22, 1869.

Claim.—1. The arrangement of the tubular rake-head *a* with the teeth *e*, as shown and described.

2. The arrangement and combination of the tubular rake-head *a*, wheels *b*, and lever *o*, the whole operating substantially as shown and described.

91,549.—WILLIAM A. LEWIS, Joliet Ill.—*Grain-Cleaner.*—June 22, 1869.

Claim.—1. The shield *i*, over the sieves, for the purposes described.

2. The regulator *p* and radial arms *o o*, on the shaft *z*, in combination with the hopper *n*, arranged, operating, and constructed as and for the purposes set forth.

3. A machine, constructed, operating, and arranged substantially as described, for the purpose set forth.

91,550.—JOHN LUND, Milwaukee, Wis.—*Velocipede.*—June 22, 1869.

Claim.—1. Seat I, cranks N N N, foot-rests K K, bands G G, in combination with pulleys F and H, and shafts D D, and wheel A, substantially as described.

2. Wheel A, spokes B, hubs C, and shafts D, in combination with hanger O, and cranks E, constructed and arranged substantially as described.

3. Foot-rests K K and seat I, resting on cranks N, with long feet, substantially as described.

91,551.—BENJAMIN G. LUTHER, Providence, R. I.—*Folding Wagon-Cover Frame.*—June 22, 1869.

Claim.—The combination of the two outer bows with the toggle-levers B′ B′ and B B, secured to the middle bow D by appropriate clasps, substantially as described.

91,552.—AZEL STORRS LYMAN, New York, N. Y., assignor to himself and DAVID LYMAN, Middlefield, Conn.—*Curing and Preserving Meat, &c.*—June 22, 1869.

Claim.—1. The method of preparing meat for preservation, by placing it in a vacuum-chamber while yet warm, and exhausting the air from said chamber, substantially as described, and keeping the meat in such vacuum until properly cooled, all substantially as set forth.

2. The combination, with the meat-chamber and pump, of a condenser or absorbent, located between said pump and chamber, operating substantially as and for the purposes set forth.

3. As a new manufacture, fresh meat, prepared substantially as herein specified—that is to say, fresh meat that has been placed in a vacuum so perfect that water will boil in it below blood-heat, and has there been deprived of its ammonia and some other products of the normal waste, substantially as and for the purposes specified.

4. As a new article of merchandise, fresh meat, treated as herein described, and packed in cans or other suitable receptacles, and then introduced into a vacuum-chamber, the air exhausted, and its place supplied with nitrogen and carbonic oxide, or other innoxious gas, and the receptacle closed while in the vacuum-chamber, in the manner and for the purposes substantially as specified.

5. Removing the products of the normal waste, roasting and drying the meat, as herein specified, grinding or otherwise reducing it, or a part of it, and finally sealing it up in air-tight cans, substantially as and for the purposes described.

6. As a new manufacture, concentrated roast beef, mutton, fish, or other meat, prepared and preserved substantially as specified.

7. Preserving meat by roasting and drying it at one and the same time, such roasting and drying being effected by passing a current of warm air through the meat, substantially as set forth.

91,553.—Charles Mackh, Elgin, Ill.—*Coffee-Roaster.*—June 22, 1869.

Claim.—1. The revolving cylinder E, or its equivalent, mounted upon a balanced frame, composed of the levers C and D, or their equivalents, in combination with a suitable weighing-device, in the manner substantially as described, for the purposes specified.

2. The heat-directors B, when constructed and arranged substantially as described, for the purposes specified.

3. The combination of the rag-wheels, endless chain, and crank-shaft, or its equivalent, with a coffee-roasting apparatus, when arranged and operating substantially as described, for the purposes specified.

91,554.—C. K. Marshall, New Orleans, La.—*Sweet-Potato Flour.*—June 22, 1869; antedated June 8, 1869.

Claim.—As a new article of commerce and manufacture, the reducing of desiccated sweet potatoes or yams to a fine flour or powder, substantially as described.

91,555.—Thomas A. Mitchell, Washington, D. C.—*Device for Converting Motion.*—June 22, 1869.

Claim.—1. The guide-rods, forming a slot, resting on the shaft, for supporting and directing the racks.

2. Introducing a block in the slot, or between the guide-bars, hung on the shaft, to reduce friction and cause a more smooth and even motion of the racks.

3. In combination with the above, the elastic buffers at each end of the rack-frame, for preventing undue strain on the teeth of either racks or pinions, at the end of stroke.

91,556.—Cyrus G. Moore and Levi S. Gambold, Coatesville, Ind.—*Brush-Head.*—June 22, 1869.

Claim.—Construeting the brush-head in two cone-shaped halves, secured together by the clamps C C, and, in combination therewith, the cone-shaped point E, on the end of the screw F, all arranged to operate in the manner substantially as set forth.

91,557.—E. R. Norny, McDonough, Del.—*Process for Preserving Fruit.*—June 22, 1869; antedated June 10, 1869.

Claim.—1. The preparatory process, by which the fruits are preserved in jars, substantially in the manner hereinbefore described.

2. The glazing and finishing process, substantially as and for the purpose above set forth.

91,558.—James H. Northcott, Mechanicsburgh, Ill.—*Steam-Plow.*—June 22, 1869.

Claim.—1. As new in steam-plowing, the working-shaft, and the combination and arrangement by which said shaft is placed in position to receive the power direct from the engine, with the friction of a single axle between the engine and the main work of moving earth.

2. The frame C, and the mode of raising and lowering the working machinery as desired, by said frame and the screw H.

91,559.—Joseph E. Osborn, Chicago, Ill.—*Hat and Coat Rack.*—June 22, 1869.

Claim.—The combination of the bed-piece *a*, the arm *b*, the brace *c*, the shafts *d i j*, the hat and coat hooks described, and the looking-glass *g*, substantially as set forth.

91,560.—John S. Perry, Albany, N. Y.—*Hot-Air Furnace.*—June 22, 1869.

Claim.—So constructing a furnace casing or wall, and the furnace to be fitted thereto, and mounting the latter upon wheels or rollers, that an air-tight hot-air chamber will be secured, and the furnace made capable of being readily removed, without requiring to be taken apart itself, or its casing or wall to be disturbed, substantially as described.

91,561.—C. T. Phillips, Jordan, N. Y.—*Grain-Separator.*—June 22, 1869.

Claim.—1. The blast-fan A, chamber C K, hanging partition *m*, valve-openings *n d*, spouts D D, and chutes *e e*, and vibrating screen F *f*, all constructed and arranged substantially as and for the purpose herein set forth.

2. The series of vertical spouts D D^1 D^2 D^3 D^4, connected together by means of the chutes *e* e^1 e^2 e^3, when said spouts are made to communicate with a common fan-chamber, C, in the manner substantially as herein described, whereby a single fan is rendered sufficient for the entire series of spouts.

3. The combination and arrangement of the vertical spouts D D^1 D^2 D^3, connected together by chutes, the common chamber C, fan A *a*, and the swinging-frame with screens F *f*, all constructed and arranged to operate substantially as described.

91,562.—A. M. Powell, Collinsville, Ill., assignor to himself, William J. Matthews, and Hezekiah R. Johnson, same place.—*Churn.*—June 22, 1869.

Claim.—The combination of the dashers *d d'*, valves *h h'*, and connecting-rods *e e'*, arranged as shown and specified, and constructed substantially as hereinbefore described.

91,563.—S. H. Ransom, Albany, N. Y.—*Cooking-Stove.*—June 22, 1869.

Claim.—1. Such an arrangement in an extension-top cook-stove as will allow all that portion of the chamber formed by the rear extension of the upper part of the stove to receive the heated products before they enter the flues below the top plate of the oven, whether the direct-draught damper be closed or open, substantially as described.

2. In combination with the free space *a*, extending horizontally from the fire-chamber into the chamber formed by a rear extension, E, a damper, *h*, or its equivalent, arranged below said space *a*, but above the escape-passage *b'*, substantially as described.

3. Flue-plates C C, terminating at their upper ends on a level, or nearly so, with the top plate of oven B, in combination with flues *a' a'* and *b*, and a damper, arranged substantially as described.

4. The portable elbow-extension F, arranged below the extension-chamber E, and secured by a hook, *f*, and a screw-fastening, *g*, substantially as described.

5. The relative arrangement of *a*, E, F, *h*, and C, substantially as described.

91,564.—Edmund Rice, United States Army.—*Spade-Bayonet.*—June 22, 1869.

Claim.—1. The spade B, when provided with a socket, A, and shank A', as described, adapted to and combined with the muzzle of a musket, as set forth.

2. The finger-guard F, connected at one end with the shank A' by means of the swivel E, as described.

3. The finger-guard F, connected at one end with the shank A', and at the other end with the spade B, as described.

4. The tompion G, connected with shank A' by swivel E or finger-guard F, substantially as set forth and described.

91,565.—Horace T. Robbins, Boston, Mass.—*Umbrella-Runner.*—June 22, 1869.

Claim.—1. An umbrella-runner, provided with an inner sliding or revolving unlocking-tube, substantially as described.

2. The combination of the runner *a* and sliding-tube *c*, substantially as described and for the purpose specified.

3. The chamber *b*, in combination with the runner *a* and sliding-tube *c*, substantially as described, and for the purpose specified.

91,566.—John Robinson, Plainfield, assignor to Aaron Snell and Arthur T. D. Austin, Will County, Ill.—*Sulky-Cultivator.*—June 22, 1869.

Claim.—1. The combination of the slotted metal seat *s*, post *v*, and swivel-brace *t*, with the shovel-beam *d*, arranged, operating, and constructed as and for the purposes set forth.

2. The general combination of all the parts described and shown, as and for the purposes set forth.

91,567.—GEORGE W. ROTHROCK, Mifflin, Pa.—*Foot-Comforter.*—June 22, 1869; antedated May 25, 1869.

Claim.—A foot-comforter or shoe, having folding soles *b b'*, and insulators *d d'*, one or more on each half sole, substantially as and for the uses above set forth.

91,568.—NEWTON N. RUGG, Geneva, Ill.—*Bag-Holder.*—June 22, 1869.

Claim.—In combination with the spout M, the elbow-levers D E, having jaws K, said levers being hinged to lugs G on the side of the spout, and operated by the pivoted bail A, all arranged as herein shown and described.

91,569.—WATSON SANFORD, Brooklyn, N. Y.—*Hot-Air Furnace.*—June 22, 1869.

Claim.—1. A center feed, arranged relatively to and in connection with a series of side flues, and the horizontal top flues connected to the latter, when such side flues are exterior to and open horizontally into the fire-pot, substantially as described.

2. A horizontal flue or flues, constructed with a division-plate, in combination with side flues, substantially as described.

3. A horizontal flue or flues, constructed with a division-plate, in combination with a valve or valves, substantially as described.

4. The arrangement, in combination with a horizontal flue or flues, constructed with a division-plate, of a valve or valves, substantially as described.

5. The center-feed *b*, attached to the dome by means of the projections *h e f*, and button *g*, in manner shown and described.

6. The arrangement of lugs or projections upon the grate-bar support *o*, in connection with spurs or projections upon either the inner ring of the horizontal grate or upon the collar of the center-pin, or both, when constructed and operating substantially as described.

91,570.—ALFRED L. SEWELL, Chicago, Ill.—*Book-Cover Protector.*—June 22, 1869.

Claim.—A metallic protector for book-corners, constructed substantially as herein described, for the purpose of clasping the opposite corners of the book-covers, and covering the corners of the leaves intervening, and also for the purpose of being attached and removed when desired, as set forth.

91,571.—HARRISON SMITH, Sandyville, and JOHN H. EVANS, Bolivar, Ohio.—*Horseshoe.*—June 22, 1869.

Claim.—A horseshoe, composed of the shoe A, toe-calks B and C, and heel-calks D E, with stems *b c*, and *d e*, having right or left handed threads cut on each, respectively, as herein shown, the several parts being arranged and combined substantially in the manner and for the purpose herein specified.

91,572.—J. P. SMITH, Hummelstown, Pa.—*Corn-Sheller.*—June 22, 1869.

Claim.—1. The combination of the drum C, tube *c*, and concave D, arranged and operating in connection with the long teeth, *h h*, of the shelling-wheel, substantially and for the purpose herein specified.

2. The notches *i*, in the end of the tube *c*, for the purpose set forth.

3. The combination of the projecting bar *d*, on the concave D, and the adjustable guide-standard *f*, substantially as and for the purpose herein set forth.

91,573.—J. V. C. SMITH, New York, N. Y.—*Carpet-Fastener.*—June 22, 1869.

Claim.—The carpet-fastening device, composed of the elastic metallic strip, bent and shaped in the manner described, and furnished with the points or studs *a*, the holding-studs *b*, openings *c*, and nail-holes *f*, all arranged and operating in the manner herein set forth.

91,574.—W. SMITH, San Francisco, Cal.—*Water-Closet Valve.*—June 22, 1869.

Claim.—The sliding-tube D, having ports K K and recess M, in combination with the stem K', having a head, *a*, fitted to slide in the recess M, to form a slip-joint, substantially as described.

91,575.—D. M. SMYTH, Orange, N. J., assignor to D. APPLETON & COMPANY, New York City.—*Envelope-Machine.*—June 22, 1869.

Claim.—1. A swinging-shear, placed diagonally to the feeding-mechanism, and formed with a bend, so as to separate the paper diagonally of the strip, and simultaneously form one of the gores of the envelope-blank, substantially as set forth.

2. The arrangement herein set forth, of a series of swinging-shears, for cutting out the gores of the envelope-blank, in combination with mechanism for feeding in the strip of paper, and for folding the envelope, substantially as set forth.

3 The pusher W, arranged and operating substantially as set forth, in combination with the followers S and T, and folders U, for folding and delivering the envelope, as set forth.

4. The rollers 25 and 30, placed so as to raise the rear portions of the envelopes, as they are delivered from the folder, in combination with the pusher W, that passes the envelope beneath those previously delivered, and the belt Z, that conveys the envelopes away, substantially as set forth.

91,576.—HIRAM G. SOULES, Syracuse, N. Y.—*Roofing-Compound.*—June 22, 1869.

Claim.—A roofing-compound, composed of the within ingredients, in about the proportions mentioned.

91,577.—HIRAM G. SOULES, Syracuse, N. Y.—*Machine for Manufacturing Roofing.*—June 22, 1869.

Claim.—The roofing-machine herein described, consisting of the open frame, with its jointed side *b' g*⁴, and fastening *h*, the detachable roller B, and sand-hopper C, having the shield *i* and the pivoted gate *c*, operated by means of lever *f*, the frame being provided with a suitable handle, and all the parts constructed and arranged to operate substantially as herein described, for the purpose of preparing roofing, as set forth.

91,578.—WILLIAM E. TASCOTT, Cleveland, Ohio.—*Paint-Oil Compound.*—June 22, 1869.

Claim.—The compound for paint-oil, when composed of ingredients substantially as set forth.

91,579.—JAMES W. TEFT, Buffalo, N. Y.—*Slide for Extention-Tables.*—June 22, 1869.

Claim.—The stops *c* and *c'*, in combination with the cross and stop *x*, and the double cross *d*, and the pin *v*, arranged and used substantially as described.

91,580.—THEODORE R. TIMBY, Saratoga, N. Y.—*Turbine Water-Wheel.*—June 22, 1869:

Claim.—1. The buckets, constructed with radial or nearly radial impact faces G, concentric or tangential lips H, to prevent slip, and curved inner walls I, to permit the free passage of the spent water inward to its discharge, substantially as set forth.

2. The segmental checks H J, in combination with the eccentric flume or casing, as explained.

3. The central plate, in connection with the buckets G H I and discharge-apertures K L, arranged as shown.

91,581.—PHINEAS H. TOMPKINS and ELZA DOUGAL, Van Buren, Iowa.—*Ground-Roller and Stock-Cutter.*—June 22, 1869.

Claim.—The combination and arrangement of the roller *a*, wheel B, shaft *x*, with its collars, the dog D, springs Z, wheels C, knives H, guides J, sashes P P, all when constructed and used substantially as and for the purposes above set forth.

91,582.—WILLIAM H. WARD, Auburn, N. Y.—*Harvester-Rake.*—June 22, 1869.

Claim.—1. The combination, as set forth, of the revolving radially-slotted dome with the independently pivoted arms.

2. The combination, as set forth, of the radially-slotted dome, the independently pivoted arms, and the guide-rails E, F, and G.

3. The combination, as set forth, of the revolving dome, the pivoted arms, and the guide-rails, with the switch-latches, operating as described.

91,583.—Frederick Wittram, San Francisco, Cal.—*Letter-Box.*—June 22, 1869.

Claim.—The combination of the lid or cover B, rods C, disk or ledge D, with the box A, in the manner and for the purpose herein described.

91,584.—W. M. Wood, Owing's Mills, Md.—*Boat-Detaching Apparatus.*—June 22, 1869.

Claim.—The projections *c*, the block F, and the hooks *s*, in combination with the bar A and lever I, arranged and operated for the purpose substantially as described.

91,585.—Cyrus Abbott, Iowa City, Iowa.—*Farm-Fence.*—June 22, 1869.

Claim.—An improved fence, formed by the combination of the posts or vertical bars A, boards or longitudinal bars B, ties or cross-bars C, and inclined brace or supporting-bars D, with each other, substantially in the manner herein shown and described, and for the purpose set forth.

91,586.—John S. Alexander, Philadelphia, Pa.—*Spade-Bayonet.*—June 22, 1869.

Claim.—The blade A, constructed as described, and adapted to be attached to a bayonet, in the manner herein set forth, for the purpose specified.

91,587.—Joseph Allonas, Mansfield, Ohio, assignor to Cornelius Aultman and Henry H. Taylor.—*Thrashing-Machine.*—June 22, 1869.

Claim.—1. The through-shaft *p*, provided with cams, or their equivalent, for simultaneously adjusting the two ends or sides of the concave.

2. The adjustable bearing plate or frame, in which the bevel-wheel shaft is mounted, in combination with means for adjusting the same, to compensate for wear.

91,588.—Robert Alsop, Philadelphia, Pa.—*Apparatus for Manufacturing Illuminating-Gas.*—June 22, 1869.

Claim.—1. The closed gas-generator *d*, provided with the circular diaphragms *g*, radiating perforated diaphragms *f*, and pipes *h e i*, all arranged as and for the purpose specified.

2. The within-described arrangement of the gas-generator *d* and *k*, with relation to each other and to the gasometer *a b*, as and for the purpose specified.

91,589.—Samuel Anderson, New Orleans, La.—*Velocipede.*—June 22, 1869.

Claim.—1.—The application to a two-wheel velocipede of the supplemental power-wheel H, when the same is combined with a ratchet-wheel, *c*, pawl *d*, spring *e*, a pulley for the cord *g*, a vibrating saddle-frame, *i*, and a spring, *h*, substantially in the manner herein described.

2. The above combination and arrangement, in combination with pedals M and N, when the latter are constructed and operate substantially as herein described.

3. The combination of a power-wheel, H, and its operating-appliances, with the double straddling connecting-bar C, when all the parts are constructed and operate substantially as herein described.

4. The above combination, in combination with a hand-lever, *y*, pitman *u*, and a crank, *t*, when these latter parts are constructed and arranged substantially as described.

5. The combination of a power-wheel, H, and its operative appliances, with a pulley, P, on the axis of the driving-wheel, and a belt, *p*, substantially as herein described.

91,590.—Lewis J. Atwood, Waterbury, Conn., assignor to himself and Holmes, Booth & Haydens, same place.—*Lamp.*—June 22, 1869.

Claim.—1. A perforated air-distributer, sustained around the wick-tube by the closed cap, containing the wick-raiser, but removable therefrom, in combination with a draught-plate, connected with said air-distributer, and passing up into the glass chimney, substantially as and for the purposes set forth.

2. A draught-plate, supported within the chimney and above the wick-tube, and a chimney-holder, made removable from the burner, in combination with the wick-tube and a closed ratchet-cap, upon which the movable parts are supported, substantially as set forth.

3. The chimney-holder, made removable, with the draught-plate, that is supported within the chimney, in combination with an internal spring or springs, to clamp the chimney, substantially as specified.

4. The closed cap around the wick-tube and over the wick-raiser, in combination with the removable air-distributer, supported by said cap, and with a spring chimney-holder, substantially as specified.

91,591.—J. D. Ayers, East Greensborough, Vt.—*Curtain-Fixture.*—June 22, 1869.

Claim.—The curtain-fixture, consisting of the right-angular brackets C, having the spring *i*, when supported upon the sash by means of the supports D, arranged as described, for the purpose specified.

91,592.—J. N. Ayres, Stamford, Conn., assignor to the Stillwater Company, same place.—*Machine for Bending Wire for Rake-Teeth.*—June 22, 1869.

Claim.—The construction and arrangement of the grooved former A, perforated holding-plate C, and supports B B, in the manner described, and for the purpose set forth.

91,593.—Nathan W. Baker, Lynn, Mass.—*Tying-Up Awl.*—June 22, 1869.

Claim.—The awl A, having recess *c*, searfed at *i*, substantially as set forth.

91,594.—Phineas Ball, Worcester, Mass.—*Clamps for Joining Cement-Lined Water-Pipes.*—June 22, 1869.

Claim.—1. The clamping-pieces C G, made with flanged recesses, to receive and retain the packing, while at the same time properly supporting the cement-filling, substantially as shown and described.

2. The combination, with the ends of the pipes, of the packing-rings *a a* and clamping-pieces C G, substantially as shown and described.

3. The combination, with the ends of the pipe and clamping-pieces, C G, of the rubber packing-rings *a a*, and packing-pieces *c c*, substantially as and for the purposes set forth.

4. The combination, with the clamping-pieces C G, of the auxiliary pieces M N, substantially as and for the purposes set forth.

91,595.—George Banister, Hartford, Vt.—*Seed-Planter.*—June 22, 1869.

Claim.—1. The combination of the shaft *g* and adjustable friction-wheel *h*, with the driving-wheel A, box D, and the adjustable slide within the box, substantially as described, for the purpose specified.

2. The disk-wheel *j*, with its pin *k*, sliding-ring L, with its loose dogs *m m*, in combination with a seed-planter, arranged substantially as and for the purposes described.

3. The plow *p*, with its wings *q q*, and the gauge R, arranged substantially as described, in combination with a seed-planter, and for the purposes set forth.

91,596.—Andrew Bennett, Brooklyn, N. Y.—*Range-Boiler.*—June 22, 1869.

Claim.—Securing the top A and body B of the boiler to each other, by means of the beading *a'*, formed around the lower edge of said top, and the tongues *b'* cut out and struck up from the solid metal of the said body B, to give the solder a firm hold upon both of said parts, substantially as herein shown and described.

91,597.—Leopold Bertsche, Jr., Allegheny City, Pa.—*Fire-Place Grate.*—June 22, 1869.

Claim.—The grate-bars D, constructed with cross-heads *d'*, in combination with the upper bar A, lower bar C, and detachable side-bar B, said parts being constructed, arranged, and operating substantially as herein shown and described, and for the purpose set forth.

91,598.—Elijah W. Bigelow, Worcester, Mass.—*Stove Top and Cover.*—June 22, 1869.

Claim.—1. The combination and relative arrange-

ment, with the top plate A and rim *b*, of the hinged cover C, with outer flange *c*, substantially as shown and described.

2. The combination, with the hinged or swinging cover C, of the hinged ornamental top F, substantially as and for the purposes set forth.

3. The combinatiou, with the hiuged cover C and hinged ornamental top F, of a projeetion, *a*, substantially as and for the purposes set forth.

91,599.—James Brahn, Jersey City, N. J., assignor to himself and G. E. Cutter.—*Low-Water Indicator.*—June 22, 1869.

Claim.—1. The box A, when provided with the small valve on top, to counteraet the pressure on the larger valve in the bottom, substantially as herein shown and described.

2. The water-indieator, consisting of the box A, having the lever F and the valves D E, whieh are kept elosed, by pressure on D, as long as the water is high in the boiler, while they will be opened when there is not enough water in the boiler, substantially as herein shown and deseribed.

3. The lever F, provided with an adjustable pivot, *f*, substantially as herein shown and described.

4. The lever F, when arranged in a box, A, between two valves of different size, substantially as herein shown and described.

91,600.—Henry Bruggeman, Petersburgh, Ind.—*Fanning-Mill.*—June 22, 1869.

Claim.—1. The smut-roller L, constructed as described, and perforated adjustable coucave O, in combination with the shoe E and frame A of a fan-mill, substantially as herein shown and deseribed, and for the purpose set forth.

2. Adjusting the lower sereen of the shoe E, by means of the set-serews J, substantially as herein shown and described.

3. The combination of the flanged plate K with the adjusting-serews J, and lower sereen of the shoe E, of the fan-mill, substantially as herein shown and deseribed, aud for the purpose set forth.

91,601.—Leander Burdick, H. J. Chase, F. P. Isherwood, and W. S. Isherwood, Toledo, Ohio.—*Tobacco-Drier.*—June 22, 1869.

Claim.—1. The method or process of sweating and curing tobaeeo, substantially as described.

2. In the process of sweating and curing tobaeeo, the employment of an apparatus consisting of a chest, B, inclosed by a case, A, so as to leave a steam-spaee, *a*, pipes F G, and eseape-pipe E, substantially as deseribed.

91,602.—Abner L. Butterfield, Brattleborough, Vt.—*Velocipede.*—June 22. 1869.

Claim.—1. The springs A, constituting the outer ends of the spokes, and supportiug the tires, substantially as herein shown and deseribed.

2. The eombination of the axles I I, which carry the loose pulleys *e* and the sliding-elutches *f*, with the pulleys *g* formed on the wheels E, substantially as herein shown and deseribed, to provide a combined driving and steering mechanism, as specified.

3. The brake-levers J J, when arranged in eombination with the springs *j*, chaius K, and vertical pins *l*, substantially as herein shown and described, to operate as set forth.

91,603.—G. E. Clarke and Edwin P. Dickey, Raeine, Wis.—*Lubricating-Journal.*—June 22, 1869.

Claim.—Standard B, bolt C, hollow axle D, nut E, paeking F, holes H and I, and flauge L, construeted and arranged substantially as described.

91,604.—Abiel Codding, Jr., North Attleborough, Mass.—*Manufacture of Enameled Bracelets.*—June 22, 1869.

Claim.—The enameled braeelet, formed by the sheet-metal base-plate *a*, haviug longitudinal flanges *c c*, and the enameled eoneavo-eonvex plate *d*, adapted to fit between, and to be seeured in place by the flanges *c*, substantially as deseribed, for the purpose specified.

91,605.—Loring Coes, Worcester, Mass.—*Wrench-Bar Heading-Machine.*—June 22, 1869.

Claim.—1. The combination, with the stationary bed B and base A, of the auxiliary removable bed D, substantially as and for the purposes set forth.

2. The combination, with the parts D′ D′, constituting the auxiliary bed D, of adjusting-wedges F and G, substantially as and for the purposes set forth.

3. The combination, with the parts D′ D′, constituting the auxiliary bed D, and wedges F, of thin strips *d*, substantially as and for the purposes set forth.

4. The combination, with the bed whieh supports the anvil-bloek, of a clearing hole or holes, *g*, substantially as deseribed.

91,606.—Cornelious Collins, Warren, Ind.—*Machine for Turning Boot-Legs.*—June 22, 1869.

Claim.—1. The wire *g*, arranged in the upper ends of the semi-cylindrieal plates C D, substantially as herein shown and deseribed, for the purpose speeified.

2. The slide *c*, operated by the serew *e*, and carrying the adjustable semi-cylinder C, substantially as herein shown and deseribed, to operate as speeified.

91,607.—William J. Connell,. West Unity, Ohio.—*Flood-Roller.*—Jnne 22, 1869.

Claim.—The above-deseribed oetagon or polygon roller, in combination with the slotted posts, substantially in the manner and for the purposes set forth.

91,608.—Abel D. Cook, New Madrid, Mo.—*Stove-Pipe.*—June 22, 1869.

Claim.—1. The eombination of the angular or elbow part D and plate C with the horizontal part B and vertical part A of the pipe or elbow, substantially as herein shown and deseribed, and for the purpose set forth.

2. The seetion E and bag or receptaele F, when used in conneetion with the plate C and pipes A and B, substantially as herein shown and described, and for the purpose set forth.

91,609.—John J. Crooke, Southfield, and Lewis Crooke and Henry S. Crooke, New York, N. Y.—*Hinge.*—June 22, 1869.

Claim.—1.—A hinge, construeted with a boss, head, or shoulder, F, upon the end of the joint-pin or outside thereof, sunk in a reeess formed in the end of the hinge, and the metal of the joiut swaged down upon or closed over said head, boss, or shoulder, snbstantially as hereinbefore set forth.

2. The combination, with the wings of the hinge and the joint-pin or pintle, of the bosses, shoulders, or heads, F, made separate from the axis of the hinge, or upon parts of a divided pintle, and sceured in plaee by swaging down the metal of the hinge upon the said bosses, shoulders, or heads, substantially as hereinbefore set forth.

91,610.—Addison Crosby, Westfield, N. Y.—*Padlock.*—Jnne 22, 1869.

Claim.—1. The rising and falling bow or shackle B, in connection with the dogs C C, the tumblers E, provided with the slots *e*, and the arms F, having the bars *dx* attached, all arranged to operate in the manuer snbstantially as and for the purpose set forth.

2. The key G, provided with two prongs, *f f*, having lateral bits *g g*, when used in conneetion with the tumblers E and dogs C, all arranged to operate substantially as and for the purpose set forth.

91,611.—Addison Crosby, Westfield, N. Y.—*Burial-Case.*—June 22, 1869.

Claim.—1. A burial-ease, eomposed of a frame construeted of sheet-irou strips, rolled, folded, or swaged in angle-form, and covered with sheet-lead or sheet-lead and tin, or other metal, rolled out, iu contaet with each other, substantially as shown and described.

2. Securing the pieees B C of the frame to the rims A D by slitting the pieces B C longitndinally at their ends, and inserting one part of said pieees formed by the slits in perforations in A D, or in the fold of the same, and the other part lapping over one side of the same, substantially as hercin shown and deseribed.

3. The diagonal, inclined, or oblique stays or brace-rods I I, when applied to or combined with a frame, constructed of sheet-metal strips, folded, rolled, or swaged in angle-form, substantially as shown and described, and for the purpose specified.

4. Joining the edges of the parts of the burial-case, comprising the covering, by stitching the edges with fine wire, and then soldering the same, and either with or without the tubular cap L.

5. The securing of the lining P in the case by means of the rods *h*, fitted in the hems in the lining, and secured in the eyes *j*, substantially as shown and described.

91,612.—HENRY CUTLER, Ashland, Mass., assignor to S. N. CUTLER & COMPANY, same place. —*Flour-Mill.*—June 22, 1869.

Claim.—1. The pipe P, leading to the shoe S, and discharging directly under the opening of the hopper B, all arranged as described, for the purpose of regulating a uniform supply of grain and mailings to the mill, substantially as set forth.

2. The drying-chamber E, in combination with mill A, elevator D, sieve E, box H, pipe P, and draught *c e'*, all arranged and operated substantially as herein described.

91,613.—MEXWORTH D. DRAKE, Scituate, assignor to W. E. BARRETT, Providence, R. I.—*Pitmen.*—June 22, 1869.

Claim.—1. The combination, with the parts C and H, and means for holding said parts together, of the rawhide bearing-pieces E G, substantially as and for the purposes set forth.

2. The combination, with the parts named in the preceding clause, of the metal pieces *a* and *e*, set-screw M, and set-nut O, substantially as and for the purposes set forth.

91,614.—PROSPER ERHARD and AMELIE ERHARD, New York, N. Y.—*Fabric for the Manufacture of Hats, Bonnets, and Various Articles for Use and Ornament.*—June 22, 1869.

Claim.—The use of the bast of the bass-wood, or linden, or other vegetable "basts," in the production of a fabric applied to the manufacture of hats, bonnets, dress-trimmings, and other useful and ornamental articles, substantially in the manner described.

91,615.—JOEL A. H. ELLIS, Springfield, Vt., assignor to ELLIS, BRITTON & EATON, same place. —*Children's Carriage.*—June 22, 1869.

Claim.—The arrangement of the child's carriage upon the four independent springs E, supported upon the two parallel springs C, which form the reach and sole connection between the front and rear axles, as herein described, for the purpose specified.

91,616.—LEWIS T. FAIRBANKS, Worcester, Mass.—*Breech-Loading Fire-Arm.*—June 22, 1869.

Claim.—1. The arrangement, in a break-down breech-loading fire-arm, such as described, of the toothed shell-extractor, held and sliding in the rear end of the hinged barrel, with the stationary cog-projection *g*, to which the barrel is hinged, and by which the extractor is operated, when the barrel is tilted, substantially as shown and set forth.

2. The arrangement, in the rear end of the hinged barrel, and with respect to the recoil or locking-piece, of the catch-piece E, springs S S, and stop *m*, substantially as and for the purposes described.

3. The combination, in the rear end of the hinged barrel, of the shell-extractor, and the sliding catch-piece, arranged underneath, so as to support the rear end of said extractor, substantially as shown and set forth.

4. The construction and arrangement of the hinged piece B, supporting-arm G, shell-extractor D, and piece *h*, provided with cog-projections, substantially as and for the purposes shown and set forth.

91,617.—R. R. FENNER, Urbana, Ill.—*Stubble and Subsoil Plow.*—June 22, 1869.

Claim.—1. The combination of the shaft D', bed-plate E, standard D, eye *e*, with the landside of a plow, for the purpose of raising or lowering the beam, substantially in the manner herein shown and described.

2. The combination of the guide-plate G, threaded rod *g*, and plate H, for the purpose of giving the beam a lateral motion, substantially as and for the purpose herein shown and described.

91,618.—DAVID F. FETTER, New York, N. Y.—*Bush for Barrels, &c.*—June 22, 1869.

Claim.—The bush or lining A *a*, provided at its lower edge with the downward-projecting lugs *b*, which are adapted to be bent outward against the inner surface of the stave, to retain the bushing in place, as herein shown and described.

91,619.—GEORGE WEEDEN FRANCIS, Hartford, Coun., assignor to himself, EDWIN GARFIELD, and JEREMY W. BLISS, assignors to themselves and GEORGE W. WILLIAMS, same place.—*Process and Apparatus for Making Sheet Iron.*—June 22, 1869.

Claim.—1. The process for producing a polished or enameled surface upon sheet-iron, substantially as herein described.

2. A series of automatically operated hammers, acting directly upon the pack of inclosed sheets, substantially as described.

3. A series of automatically operated hammers, having, in addition, a traveling motion over the face of the material to be treated, substantially as set forth.

4. A traveling frame, for supporting the hammers, arranged to be automatically traversed forward or backward, at will, substantially as set forth.

5. As a container for the sheets to be treated, a metal box, with removable bottom, or bottom and top, arranged to be fastened or clamped thereto, substantially as set forth.

6. In combination with the hammers and the sheet-containing box, the slotted cover, arranged to permit the traversing movements during the hammering, substantially as set forth.

91,620.—DAVID GORE, Carlinville, Ill.—*Machine for Plashing Hedges.*—June 22, 1869.

Claim.—1. The arrangement and use of two or more rollers, placed at different heights, and connected to a proper frame, which is moved over the hedge, for depressing and interweaving the plants, substantially as herein set forth.

2. The arrangement and use of two or more inclined lateral rollers, to laterally compress the hedge, operating in the plasher-frame, substantially as set forth.

3. The guide-prong K, roller H, rollers M, and roller I, combined and operating in the frame F, substantially as and for the purpose set forth.

4. The frame F, connected to the timbers E, and hinged to the timbers D, to allow the plasher-frame to be turned back, and rest upon the wagon-frame, substantially as set forth.

91,621.—WILLIAM H. GOSS, Boston, Mass.—*Beverage.*—June 22, 1869.

Claim.—The within-described effervescent beverage, made of the ingredients set forth, mixed and prepared, substantially as described.

91,622.—DE WITT C. HALL, Barnes's Corners, N. Y.—*Curd-Agitator.*—June 22, 1869.

Claim.—1. The combination of the vat A, screen B, and rotary and sliding beating-arms G, substantially as specified.

2. The combination of the sliding and rotating beating-arms G, and scrapers H, substantially as specified.

91,623.—F. W. HARLOW, Hannibal, Mo.—*Hay Raker and Loader.*—June 22, 1869.

Claim.—The arrangement of the truck A and elevator-frame D, supported upon the axle C, bearing the wheels B, the hinged rake F G, the rake-elevator and carrier, the trough M, guards M', and the endless carrier N, as herein described, for the purpose specified.

91,624.—JOHN ADAM HECKENBACH, Mayville, Wis.—*Breech-Loading Fire-Arm.*—June 22, 1869.

Claim.—The spring-catch H, constructed as de-

scribed, and operated by the trigger I, in combination with the breech-projection *a*, for locking the swinging and sliding barrel E, as herein shown and described.

91,625. — ROBERT HENDERSON, Thomaston, Conn.—*Planer-Chuck for Holding Bodies of Different Shape.*—June 22, 1869.

Claim.—The operating-screw D, combined with the parallel B and the adjustable jaw C, substantially as and for the purpose herein set forth.

91,626.—HENRY HENLEY, Shoals Station, Ind.—*Fruit-Drier.*—June 22, 1869.

Claim.—The frame A, provided with plates B C, the upper surface of the latter being made concave, as described, in combination with the pipe D and boiler E, all constructed, arranged, and operated substantially as set forth.

91,627.—WILLIAM G. HESLEP and THOMAS A. COCHRANE, Jamestown, Cal.—*Ore Washer and Concentrator.*—June 22, 1869.

Claim.—1. The inclined troughs D D, having amalgamated bottoms, and having the section *d* moving in ways so as to form an opening, through which the sulphurets may pass to the troughs below, the whole arranged substantially as described.

2. The perpendicular spouts G G, for carrying off the surplus water and refuse matter, substantially as and for the purpose herein described.

3. The tank C, hollow posts E E, and pipes *e e*, for introducing water to the heads of the troughs, substantially as and for the purpose described.

91,628. — MARTIN HEUSY, Burlington, Ohio.—*Device for Cleaning Sausage Cases.*—June 22, 1869.

Claim.—As a new article of manufacture, a device for cleaning sausage-cases, made and operating substantially as herein shown and described.

91,629.—HENRY HICKMAN, Omaha, Nebr.—*Picture-Nail.*—June 22, 1869.

Claim.—Forming the head of picture-nails in two parts, hinged to each other, and so formed that the cord may pass around a groove in the upper part, and be clamped between the two parts in such a way as to project at the outer ends of the two parts, substantially as herein shown and described, and for the purpose set forth.

91,630.—HENRY HICKMAN, Omaha, Nebr.—*Trunk.*—June 22, 1869.

Claim.—The rubber packing-strips, B D, in combination with the inner part A and the outer part C of the trunk, all arranged as described, for the purpose specified.

91,631.—DANIEL H. HILL, Union Springs, Ala.—*Plow.*—June 22, 1869.

Claim.—The curved slotted bar D, constructed and arranged in combination with the beam A, upright B, and standard E, substantially as herein shown and described, and for the purpose set forth.

91,632.—JOHN Q. HILL, Worcester, Mass.—*Confection.*—June 22, 1869.

Claim.—The use of elm-bark in a composition for a confection, substantially as above set forth and described, under whatever name it may be used or sold.

91,633.—J. W. HILL, Jefferson, Iowa.—*Projectile.*—June 22, 1869.

Claim.—The projectile herein described, consisting of the loaded shells A and D, placed one within the other, the inner shell being closed by the cap G, as herein set forth and shown.

91,634.—WILLIAM HOFER, New Haven, Conn.—*Screw-Driver.*—June 22, 1869.

Claim.—The combination, with the handle A, of the ring *a'*, spirally slotted tube B, springs D and E, cap F, and bit C *c*, provided with the pin *c'*, by which said bit is adapted to be rotated, and also to be locked at the respective ends of the tube in the notches b^2, all constructed, arranged, and operating as set forth.

91,635.—THOMAS HOLT, Brooklyn, N. Y., assignor to himself and ABRAM T. MERWIN, same place.—*Grooving-Machine.*—June 22, 1869.

Claim.—1. The oscillating standard L, arms K N, carrying the pulleys I^1 I^2, and the slides F, for carrying the cutter, in combination with the swinging-frame, all arranged and operating as described, for the purpose specified.

2. The adjustable standard and guide-pulleys R R' in combination with the oscillating standard L, pulley I^2, main driving-belt, and the driving-pulley Q, all arranged and operating as described, for the purpose specified.

91,636.—JOHN HORTON, Rochester, N. Y.—*Tuyere-Arch for Blast-Furnaces.*—June 22, 1869.

Claim.—The water-tuyere arch, or its equivalent, surrounding the tuyere of a blast-furnace, when constructed substantially as described, and for the purposes specified.

91,637.—JOHN EDWARD INSLEY, Philadelphia, Pa., assignor to JAMES FALLOWS and JOHN PFEIFER, same place.—*Curry-Comb.*—June 22, 1869; antedated June 11, 1869.

Claim.—The loop C and plate D, in combination with the back A B of a curry-comb, the said parts being constructed and arranged to operate together, substantially as and for the purpose described.

91,638.—ORLANDO JENNINGS, North San Juan, Cal.—*Mining-Sluice for Saving Sulphurets.*—June 22, 1869.

Claim.—1. A sluice, having the channels *b b' b''*, and parallel riffles *e e e*, either diagonal in one direction, or diverging from or converging to the center, and leading into the longitudinal channel or channels *g*, on one or both sides, or in the center of the sluice, substantially as and for the purpose described.

2. Connecting the section of a sluice, B, so that the side *d* will be between the two sides of the sluice A, substantially as and for the purpose described.

91,639.—WILLIAM KELLY, Saranac, Mich.—*Animal-Poke.*—June 22, 1869.

Claim.—1. The bar, constructed with prongs *a a*, and provided with the movable bar *d*, substantially as and for the purpose set forth.

2. The movable staple *f*, arranged to operate substantially for the purpose specified.

3. The staple *f*, attached to the spring *g*, in combination with yoke B, movable bar *d*, and bar A, substantially as set forth.

91,640. — WATSON KING, Springfield, Ill. — *Horse-Rake.*—June 22, 1869.

Claim.—1. The combined axle and rake-head A, provided with a series of transverse mortises, for the reception of the rake-teeth, and with a longitudinal groove intersecting said mortises, for the reception of the ends of said teeth, substantially as and for the purpose specified.

2. The combination of the teeth D, provided with the angular end *d'*, mortise *a*, groove *a'*, and wedge *d*, substantially as and for the purpose shown.

3. The devices for revolving the rake-head, consisting of the ratchet-wheel E, ratchet-bar F, lever G, shaft H, and handle I, and, in combination therewith, the tooth *e* upon the flange of the ratchet-wheel, stops *f* and *f'*, upon the ratchet-bar, and rod *x*, substantially as shown, and for the purpose described.

4. Combining the draught of the machine with the devices F G H, and I, for revolving the rake-head, so that the power applied to move said machine shall operate said rake-head, substantially as and for the purpose shown.

91,641.—S. R. KRONN, New York, N. Y.—*Ore-Crusher.*—June 22, 1869.

Claim.—1. The arrangement of the driving-shaft E, in journals on the vibrating end of one of the jaws A, and operating the other jaw by means of eccentrics H, connecting-rods J, and diagonal links C so as to dispense with the usual fixed pillar-blocks, substantially as shown and described.

2. The braces M, arranged in relation to the hollow or skeleton jaws A A', whereby a reduction of

weight, with increased strength in said jaws, is obtained, substantially as specified.

91,642.—J. M. LENT, Schuyler's Lake, N. Y.—*Pattern for Measuring and Cutting Out Dress-Waists.*—June 22, 1869.

Claim.—The patterns and rule-scales, Figs. 1, 2, 3, 4, 5, shaped and graduated as and for the purposes herein set forth.

91,643.—J. W. LEWIS, Oregon City, Oreg.—*Gang-Plow.*—June 22, 1869.

Claim.—1. The hoisting-lever G of a gang-plow, arranged for operation, in connection with the hand-lever H, for raising the plows, substantially as herein described.

2. The curved extremities or arms *f f'*, in combination with the hand-lever H, and hoisting-lever G, substantially as and for the purpose herein set forth.

3. The swinging-frame, and roller *c'*, in combination with the beams E and lever G, substantially as and for the purpose herein set forth.

91,644.—J. W. LEWIS, Oregon City, Oreg.—*Roller-Cutter for Plows.*—June 22, 1869.

Claim.—A roller-cutter for plows, consisting of a roller, A, arms B B, swivel-joint *b*, and braces C C', substantially as herein described.

91,645.—LANDON LIMERICK and A. H. E. STEIN, Louisville, Ky., assignors to JAMES T. HAIR and O. W. RICHARDSON.—*Advertising-Attachment to Tables, &c.*—June 22, 1869.

Claim.—The combination of a table, A B B', fixed shaft C, and revolving-frame E D D', the latter being provided with grooves or clips F, for the reception of the transparent slides G, and also of the business cards, in the manner described and represented.

91,646.—THOMAS A. LYLE, Pittsburgh, Pa.—*Fan-Attachment for Sewing-Machine.*—June 22, 1869.

Claim.—The combination with the needle-arm of a sewing-machine, of a fan support, detachably connected to the said arm, substantially as specified.

91,647.—NICHOLAS LUMSDEN and FRANK LESSMAN, Oakland, Cal.—*Compound for Salve.*—June 22, 1869.

Claim.—The within-described medicine, made of the ingredients enumerated, mixed, or compounded, in about the proportions herein specified.

91,648.—FRANCIS A. MACK, Niles, Mich.—*Double-Acting Pump.*—June 22, 1869.

Claim.—1. The body B, consisting of a series of wooden layers, *f*, and provided with an internal space, *g*, the metallic chambers D E, wooden platform C, and metallic cylinders A A', combined together in the manner and for the purpose described.

2. The sub-platform K, between which and the platform C is a free space, as arranged in relation to the other parts of the described pump, substantially as and for the purpose described.

91,649.—THOMAS C. MARSHALL and H. W. HAWKINS, Akron, Ohio.—*Wheel-Making Machine.*—June 22, 1869.

Claim.—1. The arrangement of the rim *b*, which supports and guides the chuck-dogs *d*, the hooks *c'*, and top-rim *e*, provided with curved *e'* ribs, and handle *f*, when said parts are constructed and operated substantially as and for the purposes set forth.

2. The combination, with the self-centering chuck, of the spindles C E, with their cutter-heads D *g*, substantially as and for the purpose set forth.

3. The combination, with the spindles C E, of the levers F *a*, treadle G, rod *b'*, spring *k*, and fork *i*, substantially as and for the purpose set forth.

4. The combination, with lever *a* and spindle C, of the step *a'* and bolt 23, substantially as and for the purposes set forth.

5. The combination, with spindle C E, of lever *a* F, treadle G, rod *b'*, and shaft H, provided with pulleys I', said parts being arranged, in relation to each other, substantially as and for the purposes set forth.

6. The combination, with the platform P, of the slotted table M, provided with hub-supporting device or devices, as stated, of the swinging-frame R, with the saw S, substantially as and for the purposes set forth.

7. The combination, with the platform P, of the hub-supporting device, sliding hollow augur T, and swiveled hand-lever P', substantially as and for the purposes set forth.

8. The combination, with the sliding-arbor T', of the swinging-frame R^1 and lever V, provided with a flanged plate, *w*, substantially as and for the purposes set forth.

9. The combination, with the arbor T', hollow augur T, and lever V, of the collars *t v'* and spring 7, arranged and operating as and for the purposes stated.

10. The employment, in connection with the self-centering chuck, of the flanged and concave block D', provided with a base, E^2, as and for the purposes set forth.

11. The combination, with the flange 17, on block D', of the gauges 19, 20, 21, as and for the purposes set forth.

12. The combination, with the arbor K', cutter-head W, and doweling-bit 10, of the gauges 11, 12, and 13, or either, substantially as and for the purposes set forth.

13. The combination, with the swinging-frame R^2 and swing-table L', of the arbor K', cutter-head W, doweling-bit 10, and gauges 11, 12, and 13, arranged and operating substantially as and for the purposes set forth.

14. A machine for facilitating the manufacture of wheels for carriages, and other purposes, the parts of which are constructed and arranged in relation to each other, and operating substantially as shown and described.

91,650.—WILLIAM N. MARTIN, Providence, R. I.—*Self-Clearing Watch-Key.*—June 22, 1869; antedated June 10, 1869.

Claim.—The dirt-excluding key-core *b c e d*, when operated in conjunction with the spring *f*, the core-pin *e*, and the notched or T-headed slit *i k*, substantially in the manner herein set forth.

91,651.—PETER MCCOLLUM, Fayette, Mo.—*Portable Fence.*—June 22, 1869.

Claim.—1. The panels A C, joined by brackets B, and the sliding-key D, substantially as set forth.

2. The bars *a*, battens *b* and b^1, when combined with the bars *c*, and battens *d* and d^1, and the brackets B, substantially as set forth.

91,652.—JAMES MCFARLAND, Louisville, Ky.—*Device for Preventing Radiation of Heat from Steam-Pipes.*—June 22, 1869.

Claim.—The arrangement of the surrounding exhaust-pipe B, elbow C, and tube G, with the steam-pipe A, connecting the boiler and steam-chest, as herein shown and described.

91,653.—JAMES MCINTIRE, Hopewell Cotton Works, assignor to W. C. DICKEY, Oxford, Pa.—*Machine for Making Twine, &c.*—June 22, 1869.

Claim.—1. The arrangement of the series of posts *o o o* around the path of the wheels M M M, when said posts are employed to support the flexible adjustable belt O, and hold it in relation to the said wheels, as herein shown and described.

2. The guides N N, when constructed with the two loops and the bent arm, and arranged in relation to the bobbins, in the manner described and shown, and for the purpose specified.

3. The arrangement of the belt O, wheels M M M and K, bobbins C C C, shafts D D D and I, guides N N, and arms P P P, substantially as described.

91,654.—THOMAS E. MERRICK, Cleveland, Ohio.—*Lubricating-Oil from Petroleum.*—June 22, 1869.

Claim.—1. The process of first removing by distillation the lighter products of crude petroleum oil, until the gravity is reduced to any gravity between thirty-five (35) and twenty-five (25) Baumé, and then treating it with sulphuric acid, hot water, alkali of caustic-soda or soda-ash, and water, in the proportions and manner substantially as described.

2. The oil produced by said process, as a new article of manufacture.

91,655.—JOHN B. MINER, Groton, Conn.—*Seed-Planter.*—June 22, 1869.

Claim.—1. In combination with a seed-planter, the wings J, constructed and arranged substantially as and for the purposes described.

2. The combination of the pivoted lever *m*, connecting-rod O, and pivoted roller-arms N with the tongue K, platform C, belt F, and seed-droppers G, all arranged as described, whereby the seed-droppers are thrown in or out of operation, and the plows raised or lowered simultaneously, substantially as described, for the purpose specified.

91,656.—JAMES MONTGOMERY, New York, N. Y.—*Machine-Belting.*—June 22, 1869; antedated June 18, 1869.

Claim.—1. Constructing leather-belting for machinery with folded edges, substantially as and for the purposes set forth.

2. Thickening the ends of the belting, to compensate for material punched out to receive the lacings, or other fastenings.

91,657.—JAMES W. MURFEE, Havanna, Ala.—*Subsoil-Plow.*—June 22, 1869.

Claim.—1. The wedge-shaped share herein described, the upper surface being composed of two or three inclined planes, the under surface being hollowed out (arched) and beveled, so as to form wedge-edges below, upon the sides and front, substantially as specified.

2. The reversed truncated wedge-shaped heel, elevated toward the rear, substantially as specified.

3. The arrangement of the coulter-shank, in rear of the greatest transverse diameter of the wedge, and acutely thereto, so that the power is applied, as near as practicable, in the direction of the axis of the point, substantially as specified.

4. The arrangement of the standard of the frame in a line with the coulter-shank and the handles, parallel to a line, which, in direction, is a mean between the line of the shank and point, or nearly so, substantially as specified.

91,658.—JOHN NICHOLS, Battle Creek, Mich.—*Thrashing-Machine Concave.*—June 22, 1869.

Claim.—1. A concave, composed of removable sections, for the purpose set forth.

2. The removable blank section of the concave, adapted to be transposed relative to the toothed sections, supported at their ends in grooved or flanged side pieces, substantially as and for the purpose set forth.

3. A concave, composed of the removable sections adapted to be transposed, as set forth, in combination with a removable apron.

91,659.—PATRICK O'HALLORAN, New York, N. Y.—*Liniment for Horses, &c.*—June 22, 1869.

Claim.—The improved compound, substantially as herein described.

91,660.—JAMES S. OSTRANDER, Albany, N. Y.—*Apparatus for Winding Maps, Songs, Curtains, &c.*—June 22, 1869.

Claim.—1. The revolving wrench or key D, in combination with the pulley C, substantially as described, for the purpose set forth.

2. The pulleys B and C, and cord F, in combination with the staff A, substantially as described.

91,661.—R. B. PARKS and J. R. PARKS, Neponset, Ill.—*Cultivator.*—June 22, 1869.

Claim.—1. The suspended beams I I, with plow or share standards J attached, in combination with the levers K, connected by the rack N and lever O, all arranged and combined to operate in the manner substantially as and for the purpose set forth.

2. Securing the frame A to the axle-bar B, by means of the clamps C, constructed and arranged as shown, so as to admit of the ready adjustment of the frame A, in a more forward or backward direction, as may be required.

3. The sector-rack N and lever O, in combination with a cultivator, substantially as and for the purposes described.

91,662.—GEORGE M. PHELPS, Brooklyn, N. Y.—*Printing-Telegraph.*—June 22, 1869.

Claim.—1. The combination of a magnet, double wedge-acting pallets, pallet-wheel, type-wheel, and printing-mechanism, substantially as and for the purposes described.

2. The combination of two electro-magnets, *f*, *g*, with the armatures 10, 11, lever *h*, pallets, wheel *l*, and type-wheel *k*, substantially as set forth.

3. The pneumatic circuit-changer, constructed substantially as specified, and combined with a magnet or magnets, for giving or allowing a gradual movement when the vibration of the magnet ceases, substantially as set forth.

4. The combination of the spring 18 with the impression-roller *m*, swinging-arm *n'*, and electro-magnet operating the same, in the manner and for the purposes substantially as set forth.

5. A double-acting relay magnet, in combination with the magnets *f* and *g*, and type-wheel *k*, the parts being connected and operating substantially in the manner and for the purposes set forth.

91,663.—DANIEL PIKE, New Orleans, La., assignor to himself, JOSHUA E. VOSE, and W. J. MCCULLOH, same place.—*Railway-Switching Apparatus.*—June 22, 1869.

Claim.—The bracket A, when supported by the cross-braces B B', in combination with the rod C, when constructed as herein described, and provided with the flanched wheel D, and sustained at its highest point of elevation by the spring E, substantially as and for the purpose herein set forth.

91,664.—C. L. PROUTY, Worcester, Mass.—*Wire Broiler and Toaster.*—June 22, 1869.

Claim.—1. The main or skeleton frame, made of V-shaped wire, as and for the purposes set forth.

2. The combination, with the main frame, made of grooved V-shaped wire, as shown, of the filling-bars B, substantially as and for the purposes set forth.

91,665.—JOHN H. RAUCH, New York, N. Y.—*Pencil-Case.*—June 22. 1869.

Claim.—The tube B, having the right and left spiral slots C D, in combination with the tube E, having the straight groove G and fixed stud H, the rotating stock F, and the pencil A, having the stud I, all arranged to operate in the manner described, for the purpose specified.

91,666.—JAMES L. REBER, Philadelphia, Pa.—*Paper Box.*—June 22, 1869.

Claim.—Paper boxes, formed of blanks, consisting of one piece, shaped and folded substantially as herein specified.

91,667.—F. C. RENNER, Ladiesburgh, Md.—*Fertilizer.*—June 22, 1869.

Claim.—The compound, substantially as and for the purpose above described.

91,668.—WESTLEY RICHARDS, Birmingham, England.—*Breech-Loading Fire-Arm.*—June 22, 1869; patented in England June 12, 1868.

Claim.—1. As respects this part of my invention in fire-arms, in which the breech is closed by a block turning on a horizontal axis at its breech-end, the combination of the vibrating tumbler and reciprocating striker, the combination being and operating substantially as set forth.

2. The combination of the vibrating breech-block, vibrating tumbler, and reciprocating striker, the combination being and operating substantially as set forth.

3. In such fire-arms, the mounting the tumbler within the body or frame on the same axis with the breech-block, and the arranging the hand-lever which actuates the breech-block so as also, in opening the breech, to draw down the tumbler, and cause the striker to recede.

4. The connection of the stock with the barrel of the fire arm, by means of the frame, trigger-guard, screws, and lug, as described.

91,669. — FRANCIS B. RICHARDSON, Boston, Mass.—*Casting Jug-Tops.*—June 22, 1869.

Claim.—In jug-tops, in which one portion of the hinge which holds the cover is located upon a shelf, projecting from the rim of the tubular neck, and forming the prolongation of the hinged cover, casting said shelf and hinge in one and the same piece with the tubular neck, substantially as and for the purposes herein shown and specified.

91,670.—L. ROBINSON, L. CONINE, N. F. HYATT, and D. W. HYATT, Matteawan, N. Y.—*Felting-Machine.*—June 22, 1869.

Claim.—The arrangement in a felting-machine, of the formers A C, of the shape shown and described, with the jiggers E, for the purpose of felting the tips and bodies of hats at separate successive operations, substantially as herein shown and described.

91,671.—SAMUEL D. ROGERS and FRANCIS C. SELBY, Allegan, Mich.—*Fruit-Drier.*—June 22, 1869.

Claim.—The combination of an apparatus for drying fruit, consisting of a number of shelves, which are combined to a system, in such a way that they always remain in a horizontal position, although they may change their relative position to each other.

91,672.—CHARLES C. SCAIFE, Pittsburgh, Pa.—*Metallic Roofing.*—June 22, 1869; antedated June 10, 1869.

Claim.—Sheet-metal, lined with felting, or its equivalent, substantially as herein described, and for the purpose set forth.

91,673.—GEORGES SCHNEIDER, Buffalo, N. Y.—*Picture-Frame.*—June 22, 1869.

Claim.—A gilt beading or molding, B, or C, or F, either around the inner edge of the wooden frame A, or of the paper mat *h*, or around the outside, as shown in Figs. IV and V, when spun thereon from a flat metal band, for the purpose substantially as herein described.

91,674.—F. LE ROY SENOUR and H. L. TRAPHAGAN, Eaton, Ohio; said TRAPHAGAN assigns his right to said SENOUR.—*Fastening Together the Soles and Uppers of Boots and Shoes.*—June 22, 1869.

Claim.—The combination of a leather sole with metal plate, when the uppers are secured by means of screws, substantially as and for the purpose described.

91,675.—HENRY C. SERGEANT, New York, N. Y.—*Water-Meter.*—June 22, 1869.

Claim.—1. A reciprocating piston and independent reciprocating valve, having passages connecting their respective cylinders or cases and water-ways in the piston, in connection with suitable inlet and outlet passages, so arranged that the valve and piston are made to control each other by the direct action of the fluid passing through the meter, without the aid of valve-gear or other intervening mechanical devices, substantially as set forth.

2. The combination of the piston C, cylinder A, and hollow heads or caps B B′, with the valve J, having heads *e d d′*, and cylinder F, provided with passages H H′, connecting the valve cylinder with the main cylinder, and main inlet and outlet passages I and E, essentially as shown and described.

3. The valve J, so constructed and arranged relatively to the exhaust-port *b′*, which it controls, and inlet-passages *c c′*, as that while said valve overlaps the exhaust-port in passing it, ingress is established for the impelling-fluid through the passages *c c′* to the valve and opposite ends of the main cylinder, substantially as described.

4. The combination, with the piston C, of one or more eyes or loops, *h*, and guide-rods *i*, arranged within the main cylinder or its heads, substantially as shown and described, for the purpose set forth.

91,676.—HENRY C. SERGEANT, New York, N. Y.—*Steam-Pump.*—June 22, 1869; antedated June 17, 1869.

Claim.—1. The cylinders A A′, in combination with the condensers G G′ and outlets J J′, substantially as described.

2. The arrangement of the pipe D, valves F F′, steam-passages *e e′* and *f f′*, with reference to the pistons B B′, substantially as specified.

91,677.—L. W. SIBLEY, Ames, Iowa.—*Gate.*—June 22, 1869.

Claim.—1. The curved tilting-track F G, constructed and operating substantially as herein shown and described, and for the purpose set forth.

2. The combination of the grooved wheel H, tilting-track F G, ropes or chains I, pulleys or wheels J, eccentric wheels K, and cranks M, with each other and with the gate A, substantially as herein shown and described, and for the purposes set forth.

91,678.—WILLIAM H. SILBERHORN, New York, N. Y.—*Curing Meat.*—June 22, 1869.

Claim.—The herein-described process for curing or preserving meat, by depositing within the same solid saltpeter, salt, or other preservative substances, substantially in the manner specified.

91,679.—LUCIUS A. SINCLAIR, Bellevue, Ohio.—*Velocipede.*—June 22, 1869.

Claim.—1. The rear axle D of a three-wheeled velocipede, when provided with a projecting tongue, *a*, which is in front pivoted by a pin, *b*, and when supported in the slotted frame A, substantially as herein shown and described.

2. The steering-post F, when connected by the jointed levers *e g*, with the pivoted rear axle D, to operate the same on the frame A, substantially as herein shown and described.

91,680.—C. B. SKIFF, Jersey City, N. J.—*Compound for Extracting Oils, Paint, Grease, and the Like, from Clothes.*—June 22, 1869.

Claim.—The chemical composition, formed of the ingredients, in the proportions and manner substantially as herein set forth and described.

91,681. — ANDREW SMITH, Dayton, Oreg.—*Ellipsograph.*—June 22, 1869.

Claim.—In connection with the standards A A and arm B, the combination and arrangement of the staff C, block E, arm F, pattern D, guide H, springs *t s*, slide I, screw J, and pencil-holder, all constructed to operate substantially as and for the purposes specified.

91,682.—CHARLES H. SMITH and GEORGE D. WALKER, Brooklyn, N. Y.—*Velocipede.*—June 22, 1869.

Claim.—1. The spring *m*, around the rod *k*, in combination with said rod *k*, formed at its upper end so as to receive the handle *c*, and the steering-post, fitted to receive said rod *k*, as set forth.

2. A spring, placed between the steering-arm of a velocipede and the steering-post, for the purposes and substantially as set forth.

3. The perch *h*, formed with the flange *o*, forks *e*, formed with the flange *o′*, spring *q*, and steering-post *g*, combined and arranged substantially as set forth.

4. The perch *h*, sockets *s*, and springs 7, all combined and arranged substantially as set forth.

91,683.—GEORGE W. SPAULDING and GEORGE R. SMITH, Syracuse, N. Y.—*Bracket-Clamp.*—June 22, 1869.

Claim.—The jaws A A, hinged at B, the lower jaw being serrated and wedge-shaped at one extremity, and projecting beyond the upper jaw, in combination with the cam-lever D, all constructed, arranged, and operated in the manner and for the purpose set forth.

91,684.—GREENLEAF STACKPOLE, New York, N. Y., assignor to STACKPOLE SEWING-MACHINE COMPANY, Boston, Mass.—*Method of Attaching Needles in Sewing-Machines.*—June 22, 1869; antedated June 19, 1869.

Claim.—The within-described mode of securing the needle N to the needle-bar A, by means of pin B, nuts E H, and spring F, all as described, and so that the needle can be thrown out of work without detaching it from the needle-bar, for the purposes above set forth.

91,685.—Stephen G. Sturges and William E. Sturges, Newark, N. J.—*Combined Buckle and Snap.*—June 22, 1869.

Claim.—The spring-hook A, constructed as described, in combination with a buckle, when hinged to the cross-bar of the same, as shown, and for the purpose set forth.

91,686.—Simeon Taylor, Worcester, Mass.—*Organ and Melodeon.*—June 22, 1869.

Claim.—1. The arrangement of the arms, by which the volume of tone-regulating mechanism is operated, between the rear parts of the keys, substantially as and for the purposes set forth.

2. The combination, with one or more valves, E, of a bell-crank lever, J, stands *h*, and connections *f m* and *e*, substantially as and for the purposes set forth.

3. The combination and relative arrangement, with the valves E E, bell-cranks J J, stands H *h*, and arms I, of the pieces *f f*, and connections *m m* and *c c*, substantially as and for the purposes set forth.

4. The arrangement of the mechanism for opening and closing the valves or stops, by which the volume and power of the organ or melodeon is regulated, under the keys and above the reed-frame, substantially as shown and described.

91,687.—Simeon Taylor, Worcester, Mass.—*Combination Organ and Book-Case.*—June 22, 1869.

Claim.—1. A combined organ and library or book-case, made substantially as herein described.

2. The arrangement, with respect to the organ-case A and book-case E, of the sliding-cover B C D and stand *c*, substantially as shown and described.

91,688.—David Trefry, Boston, Mass.—*Bureau-Bedstead.*—June 22, 1869.

Claim.—The wing D and doors F F′, in combination with retaining-pieces *b c c′* and bureau-bedstead, in the manner and for the purpose substantially as specified.

91,689.—Charles Truesdale, Cincinnati, Ohio, assignor to William Resor & Co., same place.—*Lining for Fire-Places.*—June 22, 1869.

Claim.—1. Providing the fire-chambers of grates, stoves, &c.. with a lining, consisting of a metallic frame, which is adapted to receive removable blocks of soapstone, fire-clay, or other refractory substances.

2. Providing the fire-chambers of grates, stoves, &c., with a lining consisting of a metallic frame, which is adapted to receive removable blocks of soapstone, fire-clay, or other refractory substances, said frame or blocks, or both, being either perforated, slotted, or otherwise arranged, so as to admit air into the fire-chamber proper, substantially as herein described and set forth.

3. The metallic frame A B C, having openings D and protuberances *b*, when used in connection with the removable blocks E, for the purpose of admitting air, as above explained.

4. The combination, substantially as described, of the metallic frame A B C, rearwardly flaring openings D, protuberances *b*, tapering blocks E, and one or more binders, F, or its equivalents, for the object stated.

5. Projecting the blocks E in front of the exposed face of the metallic frame A B C, as herein set forth.

91,690.—Silvester J. Tucker, Philadelphia, Pa., assignor to J. Adam Rush, same place, for one-half his right.—*Writing-Desk Calendar.*—June 22, 1869.

Claim.—In combination with the fastening-device of a writing-desk, the calendar-mechanism herein described, consisting of the pivoted lever *e* and pawls *f g*, operated by means of an arm on the "square" *c*, whereby the unlocking of the desk will move the pointers of the calendar, in the manner and for the purpose set forth.

91,691.—J. W. Upham, Worcester, Mass.—*Turbine Water-Wheel.*—June 22, 1869.

Claim.—The adjustable inner water-guide pieces G, in combination with the stationary water-guide pieces F, substantially as and for the purposes set forth.

91,692.—William Vogel, Norwich, Conn.—*Ash-Sifter.*—June 22, 1869.

Claim.—1. The rod D, when arranged and operated in the manner and for the purpose set forth.

2. In addition to the above, the eccentric G, springs F and I, in combination with the sifter B and rod D, arranged and operated substantially in the manner and for the purpose set forth.

91,693.—Addison G. Waterhouse, San Francisco, Cal.—*Pocket-Knife.*—June 22, 1869.

Claim.—The forming of two blades on one piece of steel or metal, with their edges upon opposite sides, so that the back of one will form a leverage for the other, and the mode of sliding the said blades out of the ends of the handle, in the manner and for the purpose substantially as above set forth.

91,694.—Arthur McNutt Wier and Marshall Arthur Wier, Elm Lodge, Newton Road, Bayswater, Great Britain.—*Pneumatic Telegraph.*—June 22, 1869; patented in England August 29, 1867.

Claim.—The application and arrangement of the air-chambers, in combination with the racks, pinions, and other mechanical parts, as described and illustrated, whereby the expansive and contractive action of the said air-chambers is made to impart motion to an index or dial, either to the right or left, as described.

91,695.—William E. Wilcox. Peoria, assignor to himself and T. H. Willis, Beardstown, Ill.—*Anti-Friction Roller for Shafting.*—June 22, 1869.

Claim.—The four sectional endless plates E, at each end, with their respective rollers C and journals G, operating in the oblong slots H of each section, when arranged as herein described, and for the purposes set forth.

91,696.—Ira Yeamans, Brooklyn, N. Y.—*Coffee-Pot.*—June 22, 1869.

Claim.—Coffee-pots and other similar vessels, suspended on horizontal turn-tables and vertically oscillating trunnions, substantially as specified.

91,697.—Henri Zachgo, South Brooklyn, N. Y.—*Culinary Vessel.*—June 22, 1869.

Claim.—The culinary vessel, constructed as described, of the double walls A B, of different lengths, separate at their lower edges and connected together at their upper edges, the lower part of the annular space between said walls opening directly into the fire, and the upper part communicating with the upper part of the interior vessel, by means of the openings a^1, formed in the inner wall A, between the covers C D, all arranged as herein shown and described, for the purpose specified.

91,698.—John H. Adams, Martinsville, Ind.—*Fruit-Picker.*—June 22, 1869.

Claim.—The curved shears D, arranged to be operated by means of the toggle-bars E, wire or cord F, and spiral spring H, in combination with the circular ring forming the mouth of the flexible basket or hose, abutment-piece J, and hand-hold K, all attached to the pole A, and arranged substantially as and for the purpose set forth.

91,699.—Reuben Adams and J. David Sheetz, Heidelberg Township, Pa.—*Hay-Spreader.*—June 22, 1869; antedated December 22, 1868.

Claim.—1. The arrangement of the beam K with metal bars *e e*, arms *f* and *h*, shank *i*, and spring *m*, all as shown and described.

2. The arrangement of the levers J and pins *x*, collars *c*, and pinions *b*, with the two crank-shafts G H, and their forks or spreaders L, all constructed and operated substantially as set forth.

91,700.—James Armstrong, Bucyrus, Ohio.—*Feed-Water Heaters for Steam-Engine.*—June 22, 1869.

Claim.—1. The chamber A and receiver F, when

constructed and arranged substantially as shown and described.

2. The pans B B′, when constructed and arranged substantially as shown and described.

91,701.—James D. Bacon, New York, N. Y.—*Shell-Fuse.*—June 22, 1869.

Claim.—In combination with the central tube of a paper-case fuse-stock, that is covered or surrounded by plaster or other non-conductor, an exterior paper covering for said tube, substantially as described.

91,702.—John C. Beaumont, Wilkesbarre, Pa.—*Velocipede.*—June 22, 1869.

Claim.—The swivel-axle, furnished with friction-plates, for the purpose of uniting or disconnecting the motions of the two parts of said axle, and so as to both guide and propel said improved velocipede at the same time by means of the two cranks, as hereinbefore set forth.

91,703.—L. W. Beecher, Westville, Conn.—*Match-Box.*—June 22, 1869.

Claim.—The herein-described box, as an article of manufacture, consisting of the bottom B, two sides A and C, in one and the same piece, with the two ends E, in which the grooves *a* are formed so as to receive and secure the two sides, as set forth.

91,704.—Amelia S. Bird, Buffalo, N. Y., assignor to herself and Peter Peugeot, same place.—*Steam and other Whistles.*—June 22, 1869.

Claim.—1. The whistle, consisting of stem A, sounding-box B, reed *f*, and side-pieces *g h*, combined and operating substantially as specified.

2. The whistle, consisting of stem A, reed *f*, and open-ended sounding-box B, combined and operating substantially as specified.

91,705.—William Boate, Philadelphia, Pa.—*Hose-Carriage.*—June 22, 1869.

Claim.—The arrangement of hose-carriage as constructed, in combination with the horizontal reel, with perpendicular shaft, substantially as and for the purpose set forth.

91,706.—Charles Edvard Boman, San Francisco, Cal.—*Step-Ladder.*—June 22, 1869.

Claim.—The bar *e*, having the joint *e′*, when used in connection with the catch *e* and spring *g*, and the hook *h*, in manner described, for the purpose set forth.

91,707.—C. F. Bowman and Stephen Slyker, Wilkesbarre, Pa.—*Pneumatic Device for Forcing Liquids.*—June 22, 1869.

Claim.—The acrometer A, in combination with the chamber B, air-valve *e*, escape *e*, tubes C, *h*, and *s*, constructed and operating substantially as described.

91,708.—Amos H. Boyd, Rockville, Mass.—*Braiding-Attachment for Sewing-Machines.*—June 22, 1869.

Claim.—The combination of the slide B, actuated by the needle-mechanism, the spring-latches J J, the spring-guides L L, the rocking-lever I, the connecting-rods F^2 G^2, with the arms F and G, constructed and operating substantially as described.

91,709.—Z. Breed, Weare, N. H.—*Fire-Extinguisher.*—June 22, 1869.

Claim.—1. Igniting the charge in a fire-extinguisher after the can or vessel has been closed, substantially as set forth.

2. The dart D, or its equivalent, operated from the outside, yet acting upon the inside of the fire-extinguisher, for igniting the charge or fulminate, substantially as described.

3. Supporting or holding the charge by means of the charge-holder A, or its equivalent, and dropping the same after the can or vessel is closed, substantially as set forth.

91,710.—John Brightbill, Lebanon, Pa.—*Grain-Separator.*—June 22, 1869.

Claim.—The combination, in one machine, of the toothed cylinder C, rakes G G, board or screen E, fan T, board N, and screen O, all constructed, connected, and operating in the manner and for the purposes herein set forth.

91,711.—James R. Burville, Springfield, Ohio.—*Hydrostatic Scale for Weighing Cargoes.*—June 22, 1869.

Claim.—The apparatus for weighing or indicating the loads of vessels, consisting of a case or tube, A, open at its bottom or side, for the entry of the water, the float F, and spiral rod B, with the index and dial, arranged to operate as described.

91,712.—George Calvert, Upperville, Va.—*Bee-Hive.*—June 22, 1869.

Claim.—1. The entrances or cut-offs O, constructed substantially as described, in combination with two or more alternating hives, substantially as and for the purpose set forth.

2. The hives D, E, alternating and connecting with each other, as described, constructed and arranged substantially as and for the purposes set forth.

3. The combination of the front and rear hives D H, each with the other, and both with the other parts of the bee-house, all constructed and arranged substantially as and for the purposes set forth.

4. The store or supply boxes H, constructed and arranged substantially as and for the purposes set forth.

5. The combined arrangement, in a bee-house, of the hives D E H I, and honey-boxes I′ I″, provided with connecting-passages G K H′ H″ I‴ I⁗ I⁗′, and adapted to be isolated, when desired, by means of slides S S′, substantially as herein represented and described, for the purposes set forth.

6. In combination with the hives D E H I, constructed and arranged substantially as herein described, the ventilator W, arranged relatively to said hives, as represented and described, for the purpose set forth.

7. The slides Q, constructed with inwardly flaring passages *q q*, and employed and operating substantially in the manner described, for the purposes set forth.

91,713.—Lewis G. Carr, Philadelphia, Pa., assignor to himself and A. M. Walker, same place.—*Pipe and Tobacco-Box.*—June 22, 1869.

Claim.—1. The box A, with its lid B, covering *a*, compartment *b*, open at the top, and compartment *b′*, provided with a lid, *f*, all as set forth.

2. The arrangement of the hinged serrated plate *h*, in the lid of the box, as described.

91,714.—Isaac H. Chappell, Decatur, Ill.—*Wagon-Seat.*—June 22, 1869.

Claim.—The combination of the springs C C D D, with tapering ends, cross-pieces B B, and hooks E, when constructed and arranged to operate as herein described and shown.

91,715.—James W. Cheney and Brown Ingalls, Shelbyville, Ill.—*Churn-Dasher.*—June 22, 1869.

Claim.—The combination of the vertical shaft A, circular perforated plates B B′ B″, and movable perpendicular dashers C C, all constructed and arranged substantially as and for the purposes herein set forth.

91,716.—William Clemson, Middletown, N. Y.—*Handle for Cross-cut Saws.*—June 22, 1869.

Claim.—The combination of the slotted screw-shank E, inclined slotted block D, ferrule C, handle B, when constructed and arranged to operate together, in the manner and for the purpose described.

91,717.—Adrian Cornell, Newtown, Pa.—*Combined Thrasher, Separator, and Clover-Huller.*—June 22, 1869.

Claim.—1. The combination of the thrashing-cylinder D, screens E, hulling-cylinder F, fan H, and shaking-shoe G, the combination being and operating substantially as set forth.

2. The combination, with the hulling-cylinder D and screens E, of the reversible cant-board f^1, substantially as set forth.

3. The combination with the screens E, of the ra-

dius-bars e^1 and adjustable eye-bolts e^2, as and for the purpose described.

4. The combination, with the elevator K, of the vertically slotted post, and adjustable bag-holder L, constructed and operating substantially as set forth.

91,718.—ROBERT D. CRAFT, La Porte, Ind.—*Cultivator.*—June 22, 1869.

Claim.—The side-rails A A, cross-pieces B B, C C, tongue D, shovels E E E E, rods *b*, braces *c c*, brace G, and adjuster *e*, respectively constructed and arranged, substantially as set forth.

91,719.—JAMES F. CRANSTON, Springfield, Mass., assignor to himself, T. A. CURTIS, and J. W. LABUREE, same place.—*Rail for Railway.*—June 22, 1869.

Claim.—1. A compound continuous rail for railways, consisting of longitudinal portions or halves of a rail or rails, secured together, and having a longitudinal groove or channel in the upper part, in which are placed blocks of wood, substantially as herein described.

2. The connecting-rail A′, having the wood B therein, and with the sockets or chairs D thereon, the whole operating in connection with the main rail, and constructed substantially as herein described.

91,720.—C. O. CROSBY, New Haven, Conn.—*Last.*—June 22, 1869.

Claim.—In a last for the making of boots and shoes, forming the edge or bottom of the sole of equal width, or broader than that portion directly above, substantially as shown and described.

91,721.—WILLIAM H. CUMMINGS and HORACE L. CHILDS, Barnsborough, Iowa.—*Plow.*—June 22, 1869.

Claim.—1. The arrangement of the bar F, braces E E, rods C C, beams D D, and rods L L, all substantially as set forth.

2. The shields or guards G, when used to protect the plow-beams, substantially as set forth and described.

3. The combination of the plow-beams D, rods C and L, shields G, braces E, and plate I, when all are used in the manner and for the purpose set forth.

91,722.—ANTHONY G. DAVIS, Watertown, Conn., *Mouse-Trap.*—June 22, 1869.

Claim.—In a mouse-trap, of essentially the described construction, the partitions C, secured by the grooved center-post A and flanges *c*, substantially as described.

91,723.—LEVI S. DEMING, Newington, Conn.—*Gate.*—June 22, 1869.

Claim.—1. In a self-acting gate, the vibratory shaft *a*, swinging-weight *j*, arranged and operating substantially as and for the purpose described.

2. The arm or notch-wheel *l*, eccentric lever *o*, connection *o′*, gate-fastening *p*, arranged and operating substantially as and for the purpose described.

91,724.—LEVI L. DEWEESE, Canton, Ohio.—*Nut-Lock.*—June 22, 1869.

Claim.—The arrangement of the longitudinally grooved bolt A, washer B, tongue *b*, and nut *c*, all substantially as shown and described.

91,725.—S. B. DOUGHERTY, South Bergen, N. J.—*Safety-Valve.*—June 22, 1869.

Claim.—The hollow tapering valve C, having its outer bearing-surfaces in line, as described, in combination with the cylinders A and B, arranged as specified, and having the valve-seats *a* and *b* disposed to lie in the same conical line or figure, substantially as herein set forth.

91,726.—HENRY S. DRAPER, Rochester, N. Y., assignor to himself and JOHN A. JORDON, same place.—*Fruit-Jar.*—June 22, 1869.

Claim.—A fruit-jar, having its neck and cover so constructed as to be held together by a rubber band, and having its cover provided with a vent, *c*, and depression, *g*, all as herein shown and described.

91,727.—WILLIAM A. DRYDEN, Monmouth, Ill., assignor to himself and J. M. TURNBULL.—*Cultivator-Joint.*—June 22, 1869.

Claim.—The combination and arrangement of the plates E and K, with their respective projections H and *s*, and tongue *e*, with the eye-bolt C, nut D, grooved journal-spindle A, and beam-plate J, substantially as described, and for the purpose set forth.

91,728.—WILLIAM E. EASTMAN, Derby Line, Vt.—*Photographic Card-Holder.*—June 22, 1869.

Claim.—1. A holder for cards, photographic and other pictures, &c., provided with two or more openings, for the reception of two or more cards or pictures, and made in one and the same sheet, folded in its middle, substantially as and for the purpose set forth.

2. In combination with the above, the slit *b*, as and for the purpose set forth.

91,729.—RUDOLPH EICKEMEYER, Yonkers, N.Y. —*Felting-Machine.*—June 22, 1869.

Claim.—1. In jiggering-machines, wherein the fabric is carried, by a carrying cloth or conductor, between a platen and a flat-surfaced jigger, which operates upon the fabric during uniform periods of time, regulated by the machine, and is then released from it, giving the carrying-cloth an intermittent progressive motion for a short distance at a time, as compared with the width of the jiggering-surface, by mechanism combined with the mechanism for regulating the periods of action of the jigger, substantially as described, so that the jigger progressively repeats its action upon portions of the fabric previously acted upon, in order to insure regular and uniform felting of the fabric, substantially as described.

2. In combination with the platen, carrying-cloth, and flat-surfaced jigger, a system of rotating cams and weighted levers, connected with the jigger, substantially as hereinbefore described, whereby the jiggering-surface is pressed upon the fabric with a determinate pressure during regular periods of time, and released from the fabric at regular intervals, in order to permit of the intermittent progressive movement of the carrying-cloth.

91,730.—RUDOLPH EICKEMEYER, Yonkers, N. Y., assignor to EICKEMEYER HAT-BLOCKING MACHINE COMPANY, same place.—*Hat-Stretching Machine.*—June 22, 1869.

Claim.—1. Making the two series of supporting-ribs, which respectively support the tip and brim of the hat-body, adjustable relatively to each other, so as to conform to different heights of crowns of hat-bodies to be stretched, substantially as described.

2. Making the ribs of the lower series of supporting-ribs which support the brim conically adjustable at different angles of inclination, to conform to the variations of conical forms of hat-bodies, by hinging them to a central support, and providing them with a means of expansion and support beneath, substantially as described.

3. Making the supporting-ribs which support the tip and brim of the hat-body adjustable, so as to conform both to variations of heights of crowns and variations of conical forms of hat-bodies, substantially as described.

4. In combination with the series of stretching-devices which act upon the exterior of the brim of the hat-body, the adjustable hinged supporting-ribs, which support the brim of the hat-body, in contradistinction to fixed supporting-ribs, for supporting the brim of the hat-body, substantially as described.

5. In combination with a series of supporting-ribs and a series of stretching-devices, operating to stretch a hat-body between them, substantially as described, a steam-pipe or conduit within the limits of the supporting-ribs, whereby steam is applied directly to the hat-body placed thereon, substantially as described.

6. In combination with the supporting-ribs and stretching-devices, the steam-chest, the reciprocating-pipe, and hollow lifting-rod, with its discharge-apertures, whereby steam is applied to the hat-bodies during the operation of stretching, and cut

off when the hat-bodies are put on or taken off the supporting-ribs.

91,731.—Calvin H. Farnham, Canterbury, Conn.—*Feather-Renovator.*—June 22, 1869.

Claim.—1. The arrangement of the arms *a a a*, with flanges *c c c*, in a spiral around the main cylinder H, substantially as shown and described.

2. In combination with the drying-cylinder, constructed as described, the jacket A, with sitter O at the bottom, when used in connection with the pipes E and E′, with branch-pipes F F, &c.

3. The construction of the traps J and K, with hooks *p p*, &c., around their openings, substantially as and for the purpose shown.

91,732.—Daniel Fitzgerald, New York, N.Y.—*Signal and Switch for Railways.*—June 22, 1869.

Claim.—1. In combination with telegraph wires and conductors, arranged as above described, an electro-magnet, to close a switch by an electric current, communicated to said magnet from an approaching train, substantially as herein set forth.

2. The arrangement of the switch-rails B B, bar C, arm D, weight E, and levers F F and G, all substantially as and for the purposes herein set forth.

3. The arrangement of the hollow posts K and L, plunger *d*, connecting-cord *e*, and weight N, constructed and combined with a switch, as described, so as to signal to an approaching train whether the switch is open or not, all substantially as herein set forth.

4. In combination with the switch-rails B B, bar C, arm D, weight E, and levers F F and G, the alarm M, so constructed and connected with the bar C, that it will be sounded or set in motion when the switch is misplaced, substantially as herein set forth.

5. The arrangement of the telegraph-wires *a a* and adjustable conductors *b b*, provided with friction-rollers, all substantially as and for the purposes herein set forth.

91,733.—Edwin P. Fowler, Brooklyn, and Charles J. Clements, Mott Haven, N. Y.—*Door-Lock.*—June 22, 1869.

Claim.—The box *f*, fitted to swing upon the hubs *k*, in combination with the tumblers *g*, fitted to be acted upon directly by the key, at opposite sides of the fulcrum, when the key is introduced from either side of the lock through either key-hole *l*, in the respective hubs, substantially as set forth.

91,734.—J. Fraser and Jonathan Austin, New York, N. Y.—*Velocipede.*—June 22, 1869.

Claim.—1. A unicycle, formed by the combination of a single narrow tread and a broad rim, the latter being supported on the former, through the medium of diverging spokes, constituting a triangular frame, to bear the double track, substantially as set forth.

2. The unicycle, constructed with double tracks, supported on a closed winged apartment, forming an annular trunk, which terminates in a keel, substantially as and for the purpose described.

3. The guiding-device, consisting of the adjustable weight or ball, operating substantially as set forth.

4. A unicycle, consisting of an annular wheel, having a double bearing-rim, B, propelling-car, with hand and foot levers, and a guiding-device, when constructed and operating as described.

91,735.—David Frazeur and William D. Cocklin, Sidonsburgh, Pa.—*Farm-Gate.*—June 22, 1869.

Claim.—The arrangement, herein shown and described, of the rails D, the upper rail only being pivoted in the central gate-bar, and the lower rail having pin-holes *s* adapted to the pin-hole *y* and pin, as described, when constructed and operating substantially as and for the purposes specified.

91,736.—John Fritz and Robert H. Sayre, Bethlehem, Pa.—*Railway-Rail Joint.*—June 22, 1869.

Claim.—1. The splicing-bar B′, having a flat surface, *y*, and projecting rib *m*, for the purpose described.

2. The within-described waves, made in one or both of the splicing-bars of a rail-joint, where the bolts occur, as and for the purpose set forth.

91,737.—Edward F. Gilbert, Lyons, N. Y.—*Alphabetical Instruction-Puzzle.*—June 22, 1869.

Claim.—The case A, divided into parallel grooves, by the partitions *a a*, the latter being provided with caps *b b* on their upper edges, and in connection with the caps *b b* on the sides of the case, and the strips *c c′ c″*, secured to its bottom, and fitting into corresponding grooves in the bases of the lettered blocks, prevent said blocks from falling out of the case, or becoming inverted therein, substantially as set forth.

91,738.—Robert A. Goodyear, Binghamton, N. Y.—*Spring Bed-Bottom.*—June 22, 1869.

Claim.—The parallel links *c c*, hinged at their ends to the top slat *b* and bottom slat *a*, in combination with the spring or springs, intervening between said slats, as and for the purpose set forth.

91,739.—David Henry Gould, Troy, N. Y.—*Water-Wheel.*—June 22, 1869.

Claim.—1. The guide or chute A A, constructed, arranged, and combined in a water-wheel, in the manner and for the purposes substantially as herein described and set forth.

2. The bucket B B, constructed, arranged, and combined in a water-wheel, and with water-guides or chutes A A, in the manner and for the purposes substantially as herein described and set forth.

3. The guide or chute A and the bucket B for water-wheels, each being constructed hollow, or with a suitable chamber in the same, at or near the upper end thereof, whereby additional strength is given thereto, as well as economy in the use of the water when applied to the wheel, and thus and thereby rendering the application of the water more effective, and giving greater power to the water-wheel, in the manner substantially as herein described and set forth.

91,740.—George Halstead, Buffalo, N. Y.—*Iron-Roof Purlin.*—June 22, 1869.

Claim.—1. An iron purlin for roofs, having its flange oblique to the web, and arranged, in relation to the rafter, as and for the purpose set forth.

2. The iron purlin B, constructed as described, with an overlapping flange, C, tenon *f*, and fitted to the rafter, substantially as described.

91,741.—Frederic I. Hart, New Haven, Conn.—*Hand-Stamp.*—June 22, 1869.

Claim.—The combination of one or more wheels, A, upon a fixed axis, and one or more wheels, D, upon an axis movable, so that the two may be brought into proper relative position, the one wheel having upon its periphery a projection or relief-figure, the other a corresponding impression in *intaglio*, to constitute an embossing-stamp, substantially in the manner herein set forth.

91,742.—Jonathan Hatch, South Windham, Conn.—*Paper-Cutting Machinery.*—June 22, 1869.

Claim.—1. The combination of the bed-knife J, arranged to reciprocate in direction of the feed or run of the paper, with the revolving-knife S, having, in addition to rotation around its axis, a like reciprocating movement, and so that, in effecting the cut, both knives travel with the paper at the speed of the latter, substantially as specified.

2. The revolving knife-cylinder or stock C, hung in swinging bearings or arms D D, and driven by pinions H and I, the one of which has a fixed axis of rotation concentric with that of the swinging-bearings, while the other is free to move around the first, that operates as a driver, in combination with a counter-knife or bed, essentially as shown and described.

3. The combination of the bed-knife J and revolving-knife S, with the swinging-arms D D and pinions H and I, arranged relatively to the shaft E, substantially as specified.

4. The combination with the feeding-in rolls A and B and knives S and J, hung to operate as described, of the cams N N and levers O O, connected

in an adjustable manner, with the swinging-arms D D, to regulate the fall of the knives to the speed of the paper, essentially as herein set forth.

91,743.—Lewis Hayner, Clifton Park, N. Y.—*Coal-Bucket.*—June 22, 1869.

Claim.—A coal pail or bucket for filling self-feeding coal-burners, having its bottom D hinged, and arranged to be supported by a spring-catch, F, and to be operated by a chain, or other suitable device, G, all constructed substantially as herein described.

91,744.—Charles Henert, Washington, D. C.—*Animal-Trap.*—June 22, 1869.

Claim.—The perforated cage A, the shell B, and bait-hook C, in combination with the weapon D E, or its equivalent, substantially as described.

91,745.—Joseph G. Henszey, Philadelphia, Pa.—*Bridge.*—June 22, 1869.

Claim.—1. The upper chord, consisting of the flanged bars *a* and *a'*, with or without the bar *d*, and transverse rods *e*, arranged and secured together, substantially in the manner and for the purpose described.

2. In combination with the above, the suspension-rods D, and longitudinal bars E E of the lower chord.

91,746.—Charles Washington Hill, New York, N. Y.—*Cornice for Window-Curtains.*—June 22, 1869.

Claim.—A cornice, composed of a backing, *a*, and a facing of flexible material, *b'*, with the interposed ribs *b*, as herein set forth.

91,747.—John Hughes, Newark, N. J.—*Harness-Pad.*—June 22, 1869.

Claim.—1. The plate B, formed with an aperture for the passage of the shank of hook *a*, and having an extension, D, which enters a recess in the plate E, whereby, in connection with screw F and nut *e*, the hook *a* is secured to the plate B, and the latter is secured to plate E, substantially as and for the purpose herein set forth.

2. The construction of plate E, with depressions in its upper and under sides, for the reception of the plate B and nut G, and the provision of apertures L L in said plate E, substantially as and for the purpose herein set forth.

3. The removable plate K, constructed and arranged substantially as and for the purpose herein set forth and shown.

91,748.—Abiezer Jameson, Trenton, N. J.—*Paper Bag and Material Therefor.*—June 22, 1869.

Claim.—A bag consisting of the material made by imbedding fibrous strands in paper while the latter is in a pulpy condition, as described.

91,749.—D. H. Jennings and James Bounds, Bridgeport, Conn.—*Bedstead.*—June 22, 1869.

Claim.—The combination of shafts *m g*, wheel N, pinion *h*, arm F, cords *e e*, and lever D, when all are arranged to operate as described.

91,750.—Walter F. Jones, Syracuse, N. Y.—*Pump.*—June 22, 1869.

Claim.—The piston or plunger B, provided with a wedge or cone-shaped point, and used in combination with a force-pump, substantially as shown and described.

91,751.—William Nayson Jordan, Cambridge, assignor to John A. Baldwin and George R. Waterman, Boston, Mass.—*Medical Compound.*—June 22, 1869.

Claim.—The compound or medicine composed of the above ingredients, in the proportions above indicated.

91,752.—J. C. Jordon, Watertown, and Ellis Doty, Janesville, assignors to Doty Manufacturing Company, Janesville, Wis.—*Machine for Upsetting, Punching, and Cutting Tires.*—June 22, 1869.

Claim.—1. The machine, consisting of the frame or body A, cast hollow or slotted, to receive the cam-lever E and pinion F, with the stationary heads B C, and the sliding-head D, with the shear-blades and punch applied thereto, and all constructed and arranged to operate substantially as described.

2. The detachable wedge-shaped blocks S, recessed to receive the detachable jaws I, and provided with lugs, to hold them in place upon the heads B and D, substantially as and for the purpose set forth.

3. The adjustable rest *v*, secured to the head B, substantially as and for the purpose herein set forth.

91,753.—John H. La Bau, Brooklyn, N. Y.—*Striking-Movement for Clocks.*—June 22, 1869.

Claim.—1. The combination of the lever *m* and latch *l*, with each other, and with the pins *o* of the wheel A, substantially as and for the purpose herein set forth.

2. The combination of the latch *l*, lever W, and toothed disk 3, substantially as and for the purpose herein specified.

3. The ribbon-spring *i* and gearing *j j'*, in combination with the wheels A A', for the transmission of motion from the one to the other, substantially as specified.

91,754.—Nathan Lawrence, Taunton, Mass., assignor to Reed & Barton, same place.—*Coffee-Pot.*—June 22, 1869.

Claim.—1. In a coffee or tea pot made of the ordinary soft metal, fusible at low temperatures, the application of the ring *r*, of refractory material, when constructed in the form and attached in the manner described, and for the purpose set forth.

2. In a coffee or tea pot, making the bottom concave on the under side, and providing it with a series of circular concentric corrugations, *a a*, as described, and for the purpose specified.

91,755.—Eric Lindholm, Brooklyn, N. Y.—*Guide-Rolling Hoop.*—June 22, 1869.

Claim.—The construction of the guide B, with curved spring-clasp D, having free openings *d d* at the ends, while the elastic middle portion thereof retains the hoop in the guide, substantially as herein specified.

91,756.—Cyrus Lomax, Paoli, Ind.—*Boot-Crimp.*—June 22, 1869.

Claim.—The cap B, provided with ribs *a a*, in combination with the adjustable springs C C C, arranged to operate in connection with the crimping-board A, substantially in the manner and for the purpose set forth.

91,757.—George G. Lyman, Independence, Iowa, assignor to himself and John F. Lyman, same place.—*Harvester.*—June 22, 1869.

Claim.—1. The arrangement of the vibrating levers G G' and pivoted connecting link or bar M, having a circular projection, *n*, with a recess on each side, in which the levers operate, substantially as shown and described.

2. The arrangement and combination of the vibrating levers G G', lever *f*, carriage I, forked lever *g*, and arm *h*, all substantially as and for the purposes herein set forth.

3. The arrangement of two wheels on the axle of the machine, with rollers on the inside of said wheels, to operate the vibrating levers, substantially as and for the purposes set forth.

4. The arrangement of the eccentric lever *d*, lever *c*, and chain *a*, working on the main frame A, for the purpose of raising the sickle-bars, substantially as herein set forth.

91,758.—Philander Macy, Rochester, N. Y.—*Toy Steam-Engine.*—June 22, 1869.

Claim.—1. The construction and arrangement of the boiler A and steam-cylinder B, with reference to the induction and eduction passages, valve, and valve-box, as herein set forth.

2. The arrangement of the boiler A, passages *x y z*, valve *a*, channel *a'*, cylinder B, support *d*, beam D, and connecting valve-rod *b'*, all constructed substantially as herein set forth.

91,759.—John McCollum and Joseph Parr, New York, N. Y.—*Machine for Making Ginger-Snaps and Crackers.*—June 22, 1869.

Claim.—1. The intermittent progressive motion

of the follower, in combination with the intermittent reciprocating motion of the knives, and the intermittent progressive motion of the apron, when said motions are derived from and are timed by a rotating shaft or first mover, connected with the follower, the frame of knives, and the carrying-apron by mechanical devices, substantially in the manner described.

2. The intermittent progressive motion of the follower, in combination with the intermitteut progressive motion of the carrying-apron, when said motions are derived from and are timed by a rotating shaft or first mover, connected with the follower and carrying-apron by mechanical devices, substantially as described.

3. In combination with the main driving-shaft or first mover, and the frame of knives, the eccentric, with its strap and rod, the four-toothed ratchet-wheel and its pawl, and the short crank-shaft and crank-connections, whereby the knives are made to move forward and back during one-half a revolution of the machine, and to remain at rest during the other half revolution, substantially as and for the purposes described.

4. The regulating mechanism, substantially as hereinbefore described, in combination with the mechanism for moving the follower downward in the dough-box, whereby the pressure of the follower upon the dough is regulated, substantially as hereinbefore described.

5. The mechanism for preventing breakage, substantially as herein described, in combination with the follower and its actuating mechanism, whereby the follower is relieved from the action of its actuating mechanism when it has descended to near the bottom of the dough-box, substantially as described.

91,760.—Loring Moody, Malden, Mass.—*Propelling-Apparatus.*—June 22, 1869.

Claim.—The described arrangement of paddles, and their levers or shanks, with cranks operating downward through openings in the deck, which serve as fulcra, in the manner set forth.

91,761.—George R. Moore, Philadelphia, Pa.—*Lever for Operating Water-Closet Pans and Valves.*—June 22, 1869.

Claim.—1. The valve-barrel A, cast in one with its head and projection E, the cap I, fitting over said projection E, the packing P inclosed by the projection E and cap I, when used in combination with the valve-stem B, to both guide and pack the same, in the manner and for the purposes set forth.

2. The pivoted nut E, combined with the lever A A and the pull-rod C, substantially in the manner and for the purposes herein set forth.

91,762.—Hiram W. Moore, Jersey City, N. J.—*Car-Wheel.*—June 22, 1869.

Claim.—In combination with a car-wheel, with wood interposed between its web and rim, the dovetailed groove in the perimeter of the web, filled with solid dovetailed sections of wood, through an opening in the side of the groove, and keyed and bound therein, substantially as herein described and represented.

91,763.—Andrew J. Morse, Boston, Mass.—*Draught-Cock.*—June 22, 1869.

Claim.—A soda-water draught-cock, having a main valve, *d*, and an auxiliary valve, *o*, controlling fine-stream and main-stream orifices, both operated by one screw-spindle, when the parts are so constructed and arranged that, rotation of the screw-spindle having opened communication with the fine-stream orifice, continued rotation thereof shuts off such communication, and opens communication with the large-stream orifices *y y*, substantially as described.

91,764.—Asa Newell, Jordan, N. Y.—*Shingle-Machine.*—June 22, 1869.

Claim.—1. The froes B *b'*, acting in concert with each other, and upon opposite ends of the bolt, when operated by the means and in the manner described.

2. The arrangement herein described of the froe B, shaving-knives *c c*, and feed-rollers D D', when all the parts are constructed to operate as herein set forth.

3. In a shingle-machine, the arrangement of the table A, with the fixed wedges *a*, and the connected sliding wedges I *i* I *i*, when operated automatically by means of the reciprocating carrier J, all operating substantially as herein set forth.

4. The arrangment of the fixed stop H, constructed as described, with relation to the froes B *b'*, and automatically adjustable table A, all as herein set forth.

5. The arrangement of the arms *g g* G G, gear-wheels N F R S *t*, connections *f r*, and shaft E, with relation to the froes B *b*, feed-rollers, and shaving-knives, substantially as herein described.

91,765.—John North, New York, N. Y., assignor to himself and William T. Holt, same place.—*Rock-Drilling Apparatus.*—June 22, 1869.

Claim.—1. The drill-frame D, adjustable at any point upon the upright frame A A, by means of the nut *g*, when said frame is used in combination with the swivel-head E, substantially as and for the purposes set forth.

2. The swivel drill-head E, supporting a sleeve-gear and drill-rod, when used in combination with a drill-frame, whether adjustable or otherwise, and secured thereto by the hollow shaft I and the nut K, substantially as and for the purposes set forth.

3. The hollow screw-shaft R, when used in combination with the swivel drill-head, sleeve gear, and feed-nut, or their equivalents, substantially as and for the purposes described.

4. The release-gear X, when used in combination with the driving and sleeve gear, substantially as and for the purposes described.

5. The adjustable steady-guide, when used in combination with the drill-head, screw-shaft, and boring-bar, substantially as and for the purposes specified.

6 The straight and continuous driving-shaft L, passing through the crank-arm W, clamp H, hollow shaft J, nuts *g* and K, and drill-head E, substantially as and for the purposes specified.

91,766.—James S. Ostrander, Albany, N. Y.—*Roller-Case for Maps and Charts.*—June 22, 1869.

Claim.—In combination with the rollers B, the feathered spindles *c*, stops *e*, and slotted bearings S, substantially as and for the purposes set forth.

91,767.—Darius Parkhurst, St. Louis, Mo.—*Head-Block for Saw-Mills.*—June 22, 1869.

Claim.—1. The pawl I, arranged on the pivot *i*, having the bearing-surfaces i^1 i^2 i^3, (or either thereof,) and combined with the spring K, substantially as and for the purposes set forth.

2. The method of controlling the movement of the shaft E and its dial N, by the spring-lever *n*, stop *p*, and guard P, said guard being arranged with division-marks, substantially as and for the purposes set forth.

3. The gear-wheel G, cam L, and weighted lever L^1, when operating substantially as set forth.

4. The coupling C', formed of ridged disk *c* c^1, connected by a set-screw c^3, to allow for adjustment of the parts of the shaft thereby connected, substantially as set forth.

91,768.—Hugh Pool, Montgomery County, Tenn.—*Medical Compound.*—June 22, 1869.

Claim.—The combination of the ingredients aforesaid, in the quantities aforesaid, and to be used in the treatment of said disease known as "hog cholera."

91,769.—Edward D. Pritchard, New York, N. Y.—*Low-Water Indicator.*—June 22, 1869.

Claim.—1. The plunger *a* and valve *m*, connected together by rods *p*, in combination with the spherical float *v*, and gauge-tube A, substantially as shown and described.

2. The stop-cock *c*, provided with channels *e f*, as described, in combination with the plunger *a*, float *v*, valve *m*, and gauge-tube A, substantially as set forth.

3. The combination of the steam-gauge C, to the upper part of the gauge-tube or the upper bracket B', as described.

4. The valve *s*, in combination with the tubular spindle of the steam-whistle D, and with a rod, *u*, substantially as set forth.

91,770.—Franklin Ransom, Buffalo, N. Y.—*Steam-Engine Condenser.*—June 22, 1869.

Claim.—The combination of a siphon and pump with a condensing-chamber, substantially as herein described.

91,771.—Wycoff Robbins, Hancock County, Ill.—*Ditcher.*—June 22, 1869.

Claim.—1. The frame A A, when constructed with flanges B and C, and secured by a hinge, *f f*, all operating substantially as and for the purpose set forth.

2. The combination of the frame A A, flanges B C, connecting-bars D D, hinge *f f*, clevis-holes *l l*, hitching-holes *i i*, when the same are constructed and arranged substantially as and for the purpose described.

91,772.—Herman Royer, San Francisco, Cal.—*Device for Treating Hides.*—June 22, 1869.

Claim.—1. Converting raw hides into leather, by twisting them spirally in either direction alternately, substantially as described.

2. The device, consisting of a reversing-apparatus, the reversible shaft I, and the weighted sliding-bar L, with the stationary shaft I′, the whole constructed substantially as herein described.

91,773.—Robert Ruston, Rockville, Ind.—*Gauge for Dressing Millstones.*—June 22, 1869.

Claim.—1. A gauge for use in dressing millstones, combining in its construction a bed or principal portion, A, a movable or adjustable portion, B, and adjusting-screws E E and F F, substantially as and for the purpose set forth.

2. The adjustable square, consisting of the parts G, H, and I, constructed and arranged for use, substantially as and for the purpose set forth.

91,774.—Isaac N. C. Saville, Worcester, Mass.—*Last.*—June 22, 1869; antedated March 3, 1869.

Claim.—The guard A, firmly embedded in and secured to the last by the prongs, or their equivalents, embracing a portion of the wood, to prevent splitting, when constructed and operating as set forth and described.

91,775.—George Scott, Louisville, Ky.—*Elevator.*—June 22, 1869.

Claim.—1. The clamping-levers F, and their combination with the uprights C^1, and the upright portions of the frame A, constructed substantially as shown and described.

2. The combination of the lever E and the clamping-lever F, substantially as shown and described.

3. The combination of the lever E, cord or chain E^1, and balance-weight E^2, substantially as shown and described.

4. The arrangement of the band D and strap D^2, with reference to the clamping-levers F, substantially as shown and described.

91,776.—Frederick S. Sears, Charlestown, Mass.—*Butter-Chest.*—June 22, 1869.

Claim.—The combination of the chest *a*, constructed substantially as described, with the ice-containing chamber *e*, series of dripping-shelves *i*, and trough *j*.

91,777.—George Seeger, James W. Loveless, and Joseph W. Throp, Clark's Hill, Ind.—*Clod-Fender.*—June 22, 1869.

Claim.—1. The frame A, with cross-bars *a a*, and lugs a^1 a^2, forming the fender, substantially as shown and described.

2. The combination of the frame A, bar B, with arms b^1 and b^2, and clip C, substantially as and for the purpose set forth.

91,778.—Frederick Shaller, Hudson, N. Y., assignor to himself and John B. Longley, same place.—*Lamp-Burner.*—June 22, 1869.

Claim.—1. The curved elastic bearing-straps *f f*, in combination with the double feed-rollers *m m*, substantially as and for the purpose herein set forth.

2. The elastic chimney-holder D, constructed as described, for the purpose herein set forth.

91,779.—Samuel S. Simmons, Watsonville, Cal.—*Seat for Vehicle.*—June 22, 1869.

Claim.—1. In combination with a seat for vehicles, the oscillating-frame E, upright standards D D′, springs *c c* and *i i*, together with the rods *e e*, the whole arranged substantially as described, for the purpose set forth.

2. In combination with the frame E, arranged as described, the device, consisting of the dog K and link *k*, for holding the same when required, substantially as described.

91,780.—Richard Smith, Sherbrook, Canada.—*Machine for Finishing Paper Boxes.*—June 22, 1869.

Claim.—1. A machine for imparting a finishing-pressure to boxes and hollow articles made from paper-pulp, by receiving them on a form, and subjecting them to lateral and vertical compression, applied by means of jaws and a plunger, substantially in the manner described.

2. The jaws A B C D, with their respective toggles and levers, arranged and operating as specified.

3. The slide L, with its spring-plunger *w*, constructed, arranged, and operating as described.

4. The form E, arranged for conjoint operation with the jaws A B C D and the plunger *w*, in the manner set forth.

5. The clearer *v*, constructed, arranged, and operating in the manner and for the purpose set forth.

91,781.—A. J. Smith, Canal Dover, Ohio.—*Lasting-Iron.*—June 22, 1869.

Claim.—1. The main jaws A A, pivoted together, and held apart by the spring C, in combination with the smaller jaws B B, pivoted in slots on the main jaws, substantially as shown and described.

2. In combination with the jaws A A, B B, and spring C, the screw-rod D, ferrule E, connecting-rods *a a*, and handle G, all constructed and arranged substantially as and for the purposes herein set forth.

91,782.—Henry E. Smyser, Philadelphia, Pa., assignor to Weikel & Smith Spice Company.—*Spice-Box.*—June 22, 1869.

Claim.—The flange *b*, arranged on the perforated disk C, when the latter is adapted to an internal rib, *a′*, in the box A, as specified.

91,783.—Jeremiah Snell, Evans's Mills, N. Y.—*Gate.*—June 22, 1869.

Claim.—The grooved rail *i* of the gate, in combination with the rollers G G′, the latter being arranged on a swinging-frame, D E F, substantially as and for the purposes set forth.

91,784.—Greenleaf Stackpole, New York, N. Y., assignor to himself and H. C. Covert, same place.—*Machine for Sewing Brooms.*—June 22, 1869.

Claim.—1. The pressing-jaws C C, in combination with the shuttle B and needle *a*, for sewing brooms, substantially as set forth.

2. The arrangement of the pressing-jaws C C, in such manner that each revolution of the cam N, or its equivalent, will cause them to rise and fall alternately with the motion of the needle and the shuttle, substantially as and for the purpose set forth.

91,785.—M. A. Stevens, Hartford, Conn.—*Bath-Tub.*—June 22, 1869.

Claim.—The rim *b*, sacking-bottom *d*, with the tub *a*, substantially as described, as an improved article of manufacture.

91,786.—Jacob M. Stoner, Greenville Lodge, Pa.—*Corn Fertilizer and Planter.*—June 22, 1869.

Claim.—1. The box F, divided, by means of partitions *a a*, into three chambers, a corn-receptacle, *b*, fertilizer-receptacle *c*, and depositing-chamber *d*, having a tube or spout, *e*, leading downward into the ground, substantially as shown and described.

2. The arrangement within the box F, constructed as described, of the rollers H and J on the respective shafts G and I, so as to deposit the corn and fertilizer at the same time, substantially as herein set forth.

3. The arrangement of the shafts G and I, cog-wheels K and L, and cog-wheel M, on the hub of the driving-wheel, substantially as shown and described.

4. The arrangement of the frame E, boxes F F, with their appurtenances, and the lever N, substantially as and for the purposes herein set forth.

91,787.—Thomas B. Stout and Joseph Stout, Keyport, N. J.—*Coffee and Tea Pot.*—June 22, 1869.

Claim.—The oblique receptacle B, arranged in the pot A, in relation to its spout, and secured therein, substantially as and for the purposes herein specified.

91,788.—Henry D. Stover, New York, N. Y.—*Lathe for Finishing the Driving-Wheels of Locomotives.*—June 22, 1869.

Claim.—1. The combination of the boring-mandrel H with the double-face plate-lathe, as described, in the manner substantially as shown.

2. The combination of the tool-rests K and O with the double face-plate lathe, substantially in the manner described.

3. In combination with such lathes, the tool-rest N, mandrel X, and screw *n*, substantially as described, and for the purposes set forth.

4. The arrangement of the tool-rest O, between the face-plate G and the wheel to be operated on, in the manner and for the purpose substantially as described.

5. In combination with the double-face plate-lathe, the brackets *l l'* and stud or stops *t t'*, substantially as described.

6. In combination with the double-face plate-lathe, the rests K and N and the slotting and boring device thereon, substantially as described.

7. The adjustable stud or bolt *i* and the adjustable bracket R, when combined with the double-face plate-lathe, substantially as described, and for the purposes set forth.

8. The adjustable sleeve *g* and the boring-tool H, in combination with the tail face-plate of the lathe, substantially as described, and for the purposes set forth.

91,789.—Otto Tackmann, Yonkers, N. Y.—*Thill-Coupling.*—June 22, 1869.

Claim.—A shaft-coupling, composed of a hook, A, and looped goose-neck D, in combination with the envelope C, stuffing E, and straps F F', all constructed and operating substantially as shown and described.

91,790.—Joseph A. Talpey, Somerville, Mass.—*Hay-Spreader.*—June 22, 1869.

Claim.—1. The combination, with the revolving fork-head and the series of pivoted or swinging forks which it carries, of a corresponding series of tilting-pins, or their equivalent, under the arrangement described, so that the tines of each fork shall, as they take up the hay, be elevated by said tilting-device, and after having tossed the hay, shall, by the disengagement of the fork from the tilting-device, be free to drop, substantially as and for the purposes set forth.

2. The construction of the forks in the form herein shown and specified.

3. The combination, with the revolving axle and fork-head, and pinions which it carries, of wheels mounted on said axle, and eccentric gears pivoted to said wheels, under the arrangement, and for operation, as set forth.

4. The combination, with the driving-gear, mounted eccentrically on the face of the wheel, and ratchet connected with the same, of the pivoted pawl, and its supporting-rod, fitting upon the axis of the gear, and supported in the frame of the machine, as and for the purposes specified.

5. The combination of the combined axle and fork-head, the frame with which it is connected, the pivoted forks and their tilting-pins, and the mechanism for rotating said axle, under the arrangement and for operation as set forth.

91,791.—Stephen P. M. Tasker, Philadelphia, Pa.—*Method of Manufacturing Welded Wrought-Metal Tubing.*—June 22, 1869.

Claim.—The method of manufacturing wrought-metal welded tubing from skelps, previously prepared by bending, as hereinbefore described.

91,792.—Samuel Teachout, Troy, N. Y.—*Water-Wheel.*—June 22, 1869.

Claim.—1. The intermediate stationary guide A, between the guides B B, its terminations being in line therewith, as arranged in relation to the water-wheel, in the manner substantially as and for the purposes herein described and set forth.

2. The combination of the intermediate guides A, as specified in the foregoing claim, with the water-gate C, when the same are arranged between the guides B B, in the manner and for the purposes substantially as herein described and set forth.

91,793.—Robert Themar, Sheboygan, Wis.—*Mosquito-Guard.*—June 22, 1869.

Claim.—As an article of manufacture, the above-described device, consisting substantially of the parts *a c e i m n*, covered as described, and constructed and arranged in the manner and for the purposes set forth.

91,794.—Bjarne O. Thompson, Chicago, Ill.—*Clothes Wringer and Mangle.*—June 22, 1869.

Claim.—The construction of the rollers, a portion of each being constructed of India rubber, for a wringer, and a portion of wood or other hard material, for a mangle, in combination with the frame and other devices, as arranged and shown.

91,795.—Frederick M. Untiedt, East Orange, assignor to himself and William Martin, Newark, N. J.—*Hand-Chopping Knife.*—June 22, 1869.

Claim.—As a new article of manufacture, the chopping-knife, Fig. 1, when its parts are formed and combined, substantially in the manner and for the purpose shown and described.

91,796.—William W. Vanderbilt, New York N. Y.—*Ventilator for Ships.*—June 22, 1869.

Claim.—The partitioned passages H H, open at their ends, and situated between the ceilings of the upper state-rooms and the hurricane-deck, in combination with the registers C and conduits E, all constructed, arranged, and operated in the manner and for the purpose set forth.

91,797.—W. T. Vann, Macomb, Ill.—*Horseshoe-Nail Pointer.*—June 22, 1869.

Claim.—The machine described, consisting essentially of the swage A, with projection *a*, swage E, with face *e* and head *e'*, and the adjustable lever B, the whole being constructed in the manner described, for the purpose set forth.

91,798.—Lansing Van Wie, Bethlehem, N. Y.—*Potato-Planter.*—June 22, 1869.

Claim.—The machine above described, for dropping, cutting, covering, and rolling potatoes, at one continuous operation, constructed substantially as described.

91,799.—Teunis Vreeland, Wataga, Ill.—*Seed-Sower.*—June 22, 1869.

Claim.—The combination and arrangement of the platform A, hopper W, distributer P, hooks B, pinion O, shaft E, bearings D D, and pulleys F and J, substantially as described, and for the purpose set forth.

91,800.—A. J. Warren and D. W. Wilson, West Eau Claire, Wis.—*Steam-Generator for Combustion.*—June 22, 1869.

Claim.—The apparatus for consuming sawdust herein described, having gas-tube C, boiler A, dome *d*, fire-places B, spouts E, and valves Y, constructed and arranged substantially as specified.

91,801.—JOHN WEBSTER, Chelsea, England.—*Device for Preventing Inerustation in Steam-Generators.*—June 22, 1869.

Claim.—The perforated pipe I, filled with fibrous material, in combination with the tube E, connected with a steam-boiler, A, substantially in the manner herein set forth.

91,802.—W. J. WELLS, Sidney, assignor to himself and H. W. NEAL, Toledo, Ohio.—*Cultivator.*—June 22, 1869.

Claim.—1. The construction of the shovels or blades R R′, substantially as and for the purposes set forth.

2. The arrangement of the shovels E and E′ and R and R′, substantially in the manner and for the purpose set forth.

3. The combination of the plows R R′ and E E′, levers I I and L, and ratchet-bar *g′*, all arranged substantially in the manner set forth.

91,803.—HIRAM WHITNEY, Chicago, Ill.—*Detachable Stove-Pipe Clothes-Drier.*—June 22, 1869.

Claim.—In the construction of detachable stove-pipe clothes-drier, the two-part clamp A B, provided with an interlocking joint or hinge, F G, a rim, C, slots J I, in combination with rod K and arms P, as and for the purpose specified.

91,804.—WILLIAM E. WILCOX, Peoria, assignor to himself and T. H. WILLS, Beardstown, Ill.—*Railway-Car Axle-Box.*—June 22, 1869.

Claim.—The construction of the anti-friction rollers D, operating in links E, that revolve in the grooves G of the concave box F, with the wedge-plate H at top, when arranged and operating as herein described, and for the purposes set forth.

91,805.—S. M. WIRTS and L. SWIFT, Hudson, Mich.—*Grain-Separator.*—June 22, 1869.

Claim.—1. The combination of the slotted arm or lever H, having its fulcrum in the center of the stationary bar I, and obtaining its motion from the crank *b* in the center of the fan-shaft C, with the arms *e e′*, and connecting-rods *d*, *d′*, and *e*, whereby motion is contributed to the shoe E, screen F, and rocking spout and screen J, directly in the center of the machine, substantially as and for the purposes herein set forth.

2. The semicircular rocking screen and spout J, constructed as described, and operating substantially as and for the purposes herein set forth.

3. The arrangement of the adjustable bar I and wind-board K, substantially as and for the purposes herein set forth.

91,806.—NATHAN WOODBURY, Woodstock, Vt.—*Centering-Awl.*—June 22, 1869; antedated May 28, 1869.

Claim.—1. The reversible centering and beveled nut I, when constructed as described, and used upon the extremity of a centering-awl, substantially as set forth.

2. In combination with the nut I, the sliding-tube C, with flange *b*, fixed tube B, with shoulder *a*, awl E, spring *d*, flanged screw F D, and handle A, all the parts being constructed, arranged, and operating substantially as specified.

91,807.—ALVAH WORSTER, Hannibal, N. Y.—*Trace-Buckle.*—June 22, 1869.

Claim.—The combination of the frame C, swinging-link E, and plate or bar F *f*, constructed and operating substantially as and for the purpose described.

91,808.—ALVAH WORSTER, Syracuse, N. Y.—*Trace-Buckle.*—June 22, 1869.

Claim.—A buckle having a central bar or body, C *c*, in connection with the swinging-loop D, as and for the purpose herein set forth.

91,809.—ALVAH WORSTER, Hannibal, N. Y.—*Harness-Loop.*—June 22, 1869.

Claim.—As a new article of manufacture, the harness-loop *g c e f*, when arranged and constructed as described, and adapted to be fastened to the strap at one point only, by a single rivet, passing through the opening *o*, said rivet also securing the buckle, as herein shown and described.

91,810.—JEREMIAH QUINLAN, New York, N. Y.—*Combined Drawer-Pull and Label.*—June 22, 1869.

Claim.—The drawer-pull and label-holder A, having an opening, C, to receive the label D, ears E, to form its rear and end supports, a bead, to sustain it vertically, and an arched flange or boss, B, the whole constructed, arranged, and cast in one piece, substantially as before described.

91,811.—JOHN P. ALLENSWORTH, Mackinaw, Ill.—*Extension Wagon-Coupling.*—June 29, 1869.

Claim.—1. The inclosing-staple F, with its bolt *a* and nut or equivalent fastening, whether attached to either the forward or rear reach, but embracing both within it.

2. In combination with the above, and working together, the revolving or swivel staple or eye E, attached to the rear reach, within the recess *g*, the rear reach B, with the claw-plate *e*, for adjustment in either of the recesses *f*, in the surface of the contiguous reach, the forward reach A, with its grooves or recesses *f*, for the reception of the claw-plate *e*, and the socket *i*, cut in the rear axle, substantially as described, and for the purposes set forth; and the above devices for coupling wagons, whether the staples (fixed and rotary) and clamp or hook *e* are fastened to the forward or to the rear reach, or the staples respectively on a separate reach.

91,812.—J. M. AUBREY, Portage City, Wis.—*Lamp-Light Extinguisher.*—June 29, 1869.

Claim.—The application of an apparatus or extension, made of metal, or anything substantially the same, as before described, which, by blowing against, or forcing air against, will turn it (the air) down the chimney, producing the desired effect.

91,813.—HERMAN BAEUERLE, New York, N. Y.—*Mode of Construeting Architectural Ornaments of Sheet Metal.*—June 29, 1869.

Claim.—The manner of making metallic ornaments in one pair of molds, by first striking three or four metal plates into a shape approximating that which is desired, by dint of repeated heavy blows of the drop upon the combined mass of plates, and then, by separating the plates and striking each again separately, substantially in the manner and for the purpose described.

91,814.—HARRY J. BAILEY, Pittsburgh, Pa.—*Machine for Preparing Bar Lead.*—June 29, 1869.

Claim.—1 The cutter *i* and guide *e*, in combination with a pair of cylindrical metallic rolls, one of which is mortised for the insertion of removable type, die or dies, and at least one of which is grooved, substantially as above described.

2. The subject-matter of the above claim, in combination with the removable die or type *g*, for the purpose specified.

3. The subject-matter of the first foregoing claim, in combination with the straightening-guide *m*, as set forth.

4. The subject-matter of the last foregoing claim, in combination with the feed-rolls *f f′*, all arranged in the manner substantially as shown and described.

91,815.—HARRY J. BAILEY, Pittsburgh, Pa.—*Machine for Making Tin-Lined Lead Pipe.*—June 29, 1869.

Claim.—1. An adjustable double core, *a a′*, with or without a stem, *a″*, arranged in and along the axial line of the machine, substantially as and for the uses set forth.

2. The cylinder A, piston C, ingot-mold D, and double core *a a′*, with or without a stem *a″*, in combination with keys *g g′*, or the mechanical equivalents thereof, all arranged and operated substantially in the manner and for the purposes set forth.

91,816.—JAMES BAUGHMAN, Suffield Township, Ohio.—*Farm-Gate.*—June 29, 1869.

Claim.—The special arrangement of the vibratory standards B and C, attached to each side of the gate, at the top, whereas the lower ends are pivoted near the ground independently of the fence or posts, in

combination with the counterbalance D, substantially as and for the purpose set forth.

91,817.—William E. Beman, Portland, Me.—*Oar-Lock.*—June 29, 1869.

Claim.—The combination, with the oar-lock, of the pivoted collar *e*, slide *m n l*, slotted piece *j*, and recess or mortise *b*, as herein set forth.

91,818.—Edward Mounier Boxer, Royal Arsenal, Woolwich, England.—*Metallic Cartridge.*—June 29, 1869; patented in England October 13, 1866.

Claim.—1. Constructing the anvil to cartridges for breech-loading fire-arms with shoulders or projections, so formed as to abut against the edge of the percussion-cap, and thus to prevent its entering the cap to such an extent as to cause the ignition of the fulminate, except when the cap is acted upon by the striker of the gun, substantially as hereinbefore described with reference to Fig. 1 on the accompanying drawing.

2. The separate flanged cap-chamber E, so made as to inclose the cap and anvil, or other means of ignition, and, at the same time, by compression of a wad, G, around the same, to secure the body of the cartridge-case to a solid metallic disk, C, with or without the intervention of the base cup D, substantially as hereinbefore set forth.

3. Interposing one or more pieces of coiled metal or cups between the base cup and the cartridge-case, which coiled metal or cups extend beyond the edge of the base cup, substantially as and for the purposes hereinbefore described with reference to Figs. 10 to 13 on the accompanying drawing.

91,819.—William Bradbury, Newton, Mass.—*Machinery for Raising and Lowering Goods.*—June 29, 1869.

Claim.—1. The machine for lowering goods, constructed and operating substantially as described.

2. An apparatus for lowering goods, operated by the descending load, raising the empty carriage again, after its load has been discharged, by accumulated power generated by the descent of the load, by means of a fly-wheel, or an equivalent device connected therewith, substantially as described.

3. The combination of the carriage with the inclined ways H′, which supply the load to the same, substantially as described.

4. In combination with the carriage and inclined ways H′, which supply the goods to the carriage, the stop-bars or detents K and K′, for releasing the load to the carriage, and arresting the supply, substantially as described.

5. The method of releasing the brake from the fly-wheel, which permits the load to descend, by operating the releasing mechanism by the weight of the load, substantially as described.

6. The method of applying the brake to the fly-wheel by the ascent of the empty carriage, so as to bring the carriage to a stand-still at the proper place to receive another load, substantially as described.

7. The within-described device for applying the brake to the fly-wheel during a portion of the descent of the load, to retard its motion, and to release it again at the proper time, substantially as described.

8. The combination of the hoisting-carriage, the loading-ways A^3, and the devices shown, or their equivalents, for releasing and retaining the goods to be loaded, all constituting a self-loading apparatus to be used in hoisting goods, substantially as described.

9. The combination of the hoisting-carriage, and the yielding-stop, and inclined ways, for discharging the load from the carriage in hoisting, substantially as described.

91,820.—William G. Brady, Lowell, Mass.—*Door-Plate and Bell-Alarm.*—June 29, 1869.

Claim.—The alarm-device, constructed as herein described, the pivoted door-plate, arranged to cover or uncover a letter-chute made through the door, each part arranged to operate in connection with the other, as described and shown.

91,821.—Moses Breen, Troy, N. Y.—*Coal-Stove.*—June 29, 1869.

Claim.—1. The outer cylinder or heating-chamber B, in combination with the inner cylinder *c* and *c′*, chamber of combustion F, and the fire-pot K, all arranged, combined, and operating substantially in the manner and for the purposes herein described and set forth.

2. The pipes or tubes E E′, or their equivalents, in combination with the fire-pot K and chamber of combustion F, substantially in the manner and for the purposes herein described and specified.

3. The fire-pot K, constructed substantially as herein described, in combination with the inner cylinder C C′, in the manner and for the purposes substantially as herein described and set forth.

4. The outer chamber B, inner combustion-chamber F, pipes or tubes E E′, and fire-pot K, all arranged, combined, and operating substantially in the manner and for the purposes herein fully described and set forth.

91,822.—William H. Brown, Lowell, Mass.—*Machine-Indicator for Cloth-Manufacturing, &c.*—June 29, 1869.

Claim.—The replacable dial-gear *f*, in combination with the elongated pinion *k*, when arranged for the purposes herein described and specified.

91,823.—Francis M. Buckles, Altona, Ill., assignor to himself and John A. Stuckey, same place.—*Eaves-Trough Attachment.*—June 29, 1869.

Claim.—The combination and arrangement of the band B with the tongues S and V, pin E, and gutter A, in the manner and for the purposes herein set forth and described.

91,824.—De Witt C. Chipman, Noblesville, Ind.—*Railroad-Car Heater.*—June 29, 1869.

Claim.—The construction of the funnel-mouths D, with wide flanges at their extremities, in combination with the detachable connecting-pipe F, all arranged to operate substantially as and for the purposes set forth.

91,825.—Henry Churchman, Horsham, England.—*Boot-Blacking Apparatus.*—June 29, 1869; patented in England August 6, 1868.

Claim.—Constructing and using rotary concave brushes, wherein the bottom surface is formed rounded and widens out up to a certain point, from which point the concave brush-surface is contracted toward the rim of the brush, so as to overhang the lower part, substantially as and for the purposes set forth.

2. Combining with such concave rotary brush, constructed as aforesaid, a brush for applying the blacking, arranged and operating substantially as hereinbefore described, with reference to Figs. 1 to 3, on the accompanying drawings.

91,826.—Walter R. Close, Bangor, Me., assignor to himself and Thomas N. Egery, same place.—*Shingle-Machine.*—June 29, 1869.

Claim.—1. The combination of the adjustable gear-wheels *d g i h*, slotted crank *k*, pitman J, lever G, and weighted lever I, substantially as shown and described.

2. The above, in combination with the jointing-saw *b*, placed upon the same shaft with the shingle-saw, and driven by the same pulley, all substantially as and for the purpose set forth.

91,827.—James R. Creighton, Boston, Mass.—*Speaking-Tube Signal.*—June 29, 1869.

Claim.—The construction and arrangement of the tilting-arm *g*, with its knob *i*, the rocker-shaft *b*, with its tipper *d* and finger *k*, and the oscillating lever *e*, the latter being actuated by the spring, and disposed in connection with the rocker-shaft and an alarm mechanism, and the whole being arranged and operating substantially as hereinbefore explained.

91,828.—Thomas Dark, Buffalo, N. Y.—*Sewer.*—June 29, 1869.

Claim.—1. The reservoir A, pivoted to the uprights H, and provided with the space *m* at its closed end, as and for the purposes set forth.

2. The reservoir A, flushing-pipe C, provided with an enlarged mouth, B, vault D, and drain E, all con-

structed, arranged, and operated in the manner and for the purpose set forth.

91,829.—J. G. Dillaha, Waco, Texas.—*Velocipede.*—June 29, 1869.

Claim.—The combination of rim A, crank-wheel E, rims B B′, and C, and sheave-wheels *d d d*, the whole arranged to operate together, substantially in the manner and for the purposes set forth.

91,830.—Henry W. Eastman, Baltimore, Md.—*Dressing-Case.*—June 29, 1869.

Claim.—The "dressing-case," combining the cabinet, wash-stand, and blacking-case, substantially as herein described, the whole operating together in the manner and for the purposes specified.

91,831.—J. B. Eaton, Fryeburgh, Me.—*Holdback for Thill.*—June 29, 1869.

Claim.—The arrangement of the whole contrivance, the plate A, spring B, and catch D, as constructed and combined, as and for the purpose herein specified.

91,832.—Jacob Edson, Boston, Mass.—*Rocking and Reclining Chair.*—June 29, 1869.

Claim.—1. Connecting the rockers *d d* to the frame *a a*, by means of bolts *e e*, springs *h h*, and nuts *g g*, as and for the purpose herein described.

2. In combination with the above, the adjustable screws *k k* and the corners *c c*, for the purpose set forth.

91,833.—John Erpelding and William E. Huttmann, Chicago, Ill.—*Pocket-Lamp.*—June 29, 1869; antedated June 15, 1869.

Claim.—A pocket-lamp, consisting of a lamp-case, *l*, and an outer case, *a*, united, as shown, so as to leave an annular chamber, *i*, between them, for the reception of matches, substantially as herein described.

2. The reflector *c*, located in the top of the cover *b*, and arranged to operate as described.

91,834.—Hampton W. Evans, Philadelphia, Pa.—*Steam-Radiator.*—June 29, 1869.

Claim.—1. The construction of the radiator in one or more sections, whose steam-passages are formed of inclined zigzag surfaces across the sections, substantially as set forth.

2. The combination and arrangement of the spring D, plate F, and cap G, with the bolt B and nut E, substantially in the manner above specified.

91,835.—Andrew J. Forbes and William G. Fletcher, Boston, Mass.—*Wall or Bracket Caster.*—June 29, 1869.

Claim.—As a new article of manufacture, a caster-frame for restaurants, &c., constructed substantially as and for the purposes set forth.

91,836.—James M. Ford, Brooklyn, N. Y.—*Window-Pulley.*—June 29, 1869.

Claim.—The combination of the tubular case A, and the pulley-wheels *c c*, inserted therein, the same being constructed substantially as and for the purpose described.

91,837.—Alfred Freeman, Peoria, Ill.—*Pushing-Jack.*—June 29, 1869.

Claim.—1. The V shaped jaw *h*, having the arms thereof file-faced, substantially as described.

2. In a pushing and hoisting jack for cars, consisting of two levers, A and B, the combination of the jaw *k*, adjustable joint *a b*, depression *g*, with hooked ledge or serrated claw *n*, and chain *i*, the whole constructed substantially as described and shown.

91,838.—Thomas Garrick, Providence, R. I.—*Wrench.*—June 29, 1869.

Claim.—A swivel, or self-adjusting jaw, operating laterally in a curved socket, substantially as described.

91,839.—Thomas Garrick, Providence, R. I.—*Household-Implement.*—June 29, 1869.

Claim.—A combination adjustable wrench, nut-cracker, scraper, hammer, screw-driver, stove-cover, lifter, tack-puller, and gas-burner tongs; and also the combination of a rack or teeth upon one leg, with a slot in the other, for the purpose of holding the wrench-jaws at any point where they may be set, substantially as described.

91,840.—George Goewey, Philadelphia, Pa.—*Apparatus for Treating and Ageing Spirituous Liquors.*—June 29, 1869.

Claim.—1. The process of bringing alcoholic liquors into thorough and intimate contact with atmospheric air, by causing the liquors, at a temperature of from 115° to 165° Fahrenheit, to come into confluence with a forced current of air, at a temperature not exceeding 100° Fahrenheit; or *vice versa*, by causing the liquors, at a temperature not exceeding 100° Fahrenheit, to come into confluence with a forced current of air, at a temperature of from 115° to 165° Fahrenheit, the air carrying the liquors into a finely perforated pipe or other vessel, and forcing the liquors to pass, together with the air, through the perforations of the pipe or vessel, in the form of fine spray or vapor, into a receiver, substantially as set forth.

2. The combination of the pans $a\ a^1\ a^2\ a^3\ a^4$, pipes j, $j^1\ j^2\ j^3$, perforated air-pipes $i\ i^1\ i^2\ i^3$, air-chest h, and fan-blower g, substantially as shown and described, for the purpose specified.

91,841.—George A. Gray, Jr., Cincinnati, Ohio, assignor by mesne assignment to himself and Alexander Gordon.—*Nut-Mandrel.*—June 29, 1869.

Claim.—The construction and arrangement, with reference to each other, in the tool herein described, of the threaded portion *a*, spherical shoulder *a″*, and washer B, as and for the purpose specified.

91,842.—Richard C. Harris, Harrisville, N. J.—*Machine for Making Paper.*—June 29, 1869.

Claim.—1. The arrangement of the roller E with the coucher *a*, Fig. 1, when the periphery of the roller E is made of wire cloth, or its equivalent, substantially as and for the purpose specified.

2. The combination of the roller E, roller F, gutter G, and spouts G′ G′, with the apron *f*, and coucher *a*, substantially as and for the purpose specified.

3. The combination of the vertical agitators *p p*, with a "double-cylinder machine," Fig. 1, substantially as and for the purpose set forth in this specification.

91,843.—Henry M. Hartshorn, Malden, Mass.—*Instrument for Testing the Inflammability of Illuminating-Oils.*—June 29, 1869.

Claim.—1. The tight vessel, filled with water or other fluid.

2. The cavity or depression, Fig. 1, B, holding the oil, forming the top of the vessel.

3. The mass of metal, forming the top of the vessel, and the bottom of the cavity holding the oil.

4. The combination of the stem of the thermometer with the tube, for the purpose of forming the handle.

91,844.—Gilbert Hawkes, Lynn, Mass.—*Manufacture of Boots and Shoes.*—June 29, 1869.

Claim.—As an article of manufacture, a shoe, the sole and heel of which is of a textile fabric, when stiffened and applied in the manner and for the purpose herein described.

91,845.—James O. Heyworth, Chicago, Ill.—*Propeller.*—June 29, 1869.

Claim.—The propeller-wheel A B C, with similar blades C, of the general shape of the outline of a frustum of a right cone, with their inner sides secured, in a line with the shaft A, to the conical hub B its entire length, the apex of which hub is toward the vessel, as and for the purpose above set forth.

91,846.—Levi S. Hicks, Peoria County, Ill.—*Tenoning-Machine.*—June 29, 1869.

Claim.—In a tenoning-machine, the movable bed-plate A′, carrying the presser-box H, the chain-feed G, provided with adjustable lugs *a*, in combination with the stationary bed-plate C, having like devices,

when all the parts are constructed, arranged, and operated substantially in the manner described and for the purpose set forth.

91,847.—E. S. HUFF, Zanesville, Ohio.—*Plow-Cultivator.*—June 29, 1869.

Claim.—The employment of the metal plate A, constructed with the bars or projections *c c*, supplied with the pivoted arms *b b*, in combination with the handles of a cultivator, and arranged substantially as and for the purpose set forth.

91,848.—DAVID W. HUNT, San Francisco, Cal.—*Machine for Kyanizing Wood.*—June 29, 1869; antedated June 22, 1869.

Claim.—1. The base or bed-plate A, with the dish or depression B, flange *a a*, and the whole or opening C in the bottom of the bed-plate, for forcing the substance into the wood, substantially as described.

2. The upper plate E, screw F, corrugated and grooved cup C, for pressing the timber down upon the flange, and allowing the air and sap to escape as it is forced upward, substantially as described.

91,849.—EDWARD A. HYDE, Ann Arbor, Mich.—*Pneumatic Dental Plugger.*—June 29, 1869.

Claim.—1. The tool handle or cylinder carrying the piston or hammer, connected by means of a flexible pipe with the condensing and rarefying cylinder and its piston, the said last cylinder and piston operating a column of air, without the use of a valve or spring, to produce reciprocation of the hammer, substantially as described.

2. The plugging-tool, provided with a lug for securing it in the socket, and to prevent its rotation, substantially as described.

3. The elastic cushion G, by which an elastic blow is secured, and the tool carried back to its normal position, substantially as described, and for the purpose set forth.

4. In combination with the cylinder A and the flexible pipe U, the swivel-joint K, substantially as described, and for the purpose set forth.

5. The recessed socket C and the slotted cap D, the latter provided with the groove X, the said parts being adapted to secure the tool B within the handle, and lock the same in fixed position, substantially as described.

6. In combination with the subject-matter of the first claim, the pedal-apparatus, arranged as shown, whereby a rapid and regular reciprocation is given to the piston or hammer, all substantially as herein-before set forth.

91,850.—GUSTAVUS A. JASPER, Charlestown, Mass.—*Sugar-Sifter.*—June 29, 1869.

Claim.—A succession of sieves, combined with channels, set up at such angles, with respect to each other, that sugar or similar articles will slide freely from one end to the other of each sieve and channel, and be sifted and discharged, substantially as herein described.

91,851.—WILLIAM H. JOHNSON, Troy, N. Y.—*Reservoir Cooking-Stove.*—June 29, 1869.

Claim.—1. A cooking-stove, having a water-reservoir, G, in rear of descending and ascending fire-flues D E, back of the oven, when the rear side *k* of the reservoir is naked, and heating-chambers L L extend along the ends *j j* of the reservoir, and have communication with the fire-flues of the stove by apertures *m m*, substantially as shown and described.

2. In a cooking-stove, a water-reservoir, arranged with its front side *h* directly against the rear casing *i*, of descending and ascending fire-flues, along the upright rear side *f* of the oven, when heating-pockets or chambers L L, having communication by passages *m m*, with the fire-flues of the stove, extend along the ends of the reservoir, as herein shown and described.

3. In a cooking-stove, a water-reservoir, arranged with its front side against the rear casing *i* of descending and ascending fire-flues, along the rear side of the oven, when the back side *k* of the reservoir is naked, and heating-pockets or chambers L L, having communication with the fire-flue or fire-flues of the stove, extend along the ends *j j* of the reservoir, as herein set forth.

4. In a cooking-stove having a water-reservoir arranged back of descending and ascending fire-flues, along the rear side of the oven, the heating-pockets or chamber L L, extending along the ends of the reservoir, and bagging out or projecting laterally beyond the sides of the oven, and having communication with the fire-flues of the stove, by passages through or in laterally projecting parts *n n* of the side-plates *o o* of the stove, substantially as herein described and shown by Figs. 1, 2, 4, 6, and 7.

91,852.—SAMUEL H. JONES, Boston, Mass., assignor to S. D. & H. W. SMITH, same place.—*Bellows for Reed-Organs.*—June 29, 1869.

Claim.—1. In combination with an organ-bellows, as represented, a mechanism for latching or estopping the movement of the bottom board, at one end thereof, while the upper or exhausting board of the bellows may be in operation the same being to produce an effect or effects, as set forth.

2. The combination of the springs *f f*, and the cammed lever F, with the bellows A, and its latching apparatus, consisting of the stud B, the lever-latch C, the connecting-bar D, and the lever E, the whole being substantially as described.

91,853.—WILLIAM P. KILGORE, Hampden, Me.—*Cant-Hook.*—June 29, 1869.

Claim.—A cant-hook, with a bill, concave on its inner side, and straight on its outer side, substantially as described.

91,854.—JOHN L. KREIDER, Drumore Township, Pa.—*Mode of Hitching Horses.*—June 29, 1869.

Claim.—1. The stiff pad *d*, attached to the hames, with its central pin in combination with the vibrating-bar *j*, or their equivalents, and the projections *h*, in combination with the vibrating-arms *b* and connections and hooks *f*, or their equivalents, as set forth and described.

2. A lock-hook, *f*, with its lever *m*, catch *n*, spring *o*, and cords *g*, attached to the vibrating-arms *b* or elbowed levers *l*, substantially as described.

91,855.—PETER S. LUTHER, Hartford, Conn., assignor to the EARTH-CLOSET COMPANY, same place.—*Deodorizing-Apparatus for Water-Closets.*—June 29, 1869.

Claim.—1. The sliding and tilting platform F, as arranged in relation to the pipe or other receptacle for receiving the excrement, the whole constructed, arranged, and operating as and for the purposes described.

2. The combination of the sliding and tilting platform F, with the platform E and hopper D, for the purpose of an earth-closet, substantially as herein described.

91,856.—HENRY MAURER, New York, N. Y.—*Machine for Re-Pressing Bricks.*—June 29, 1869.

Claim.—1. The perforations *x*, through the stationary side or sides of the mold-box B, provided with pistons *n*, acted upon by suitable springs *v*, and operating in conjunction with the solid plungers C D, in the manner and for the purpose herein set forth.

2. The combination of the mold-box B, platens C and E, block or table K, provided with cavity *w*, and slide N, when arranged and operated in the manner and for the purpose substantially as described.

91,857.—OSCAR F. MAYHEW, Indianapolis, Ind.—*Coal-Stove.*—June 29, 1869; antedated June 17, 1869.

Claim.—1. Supplying fresh air in a manner to be commingled and concentrated with the carbon and gases while in the condition of hot flame, as they escape from the fuel and pass through the throat *d*, when said throat is situated, in relation to the incandescent fuel, substantially as and for the purpose set forth.

2. The damper I, for shutting off or regulating the supply of air to the flame and gases between the fuel and throat *d*, substantially as and for the purpose set forth.

3. The deflecting-plate E, with its opening *g*, either with or without the damper F, in combination with the throat *d*, substantially as and for the purposes set forth.

91,858.—Robert W. McClelland, Springfield, Ill.—*Horse-Rake.*—June 29, 1869.

Claim.—1. The combination and arrangement of the rake-head *f* and wooden pieces *g g* with the spring-bars *h h* and adjusting-screw *i i*, in the manner and for the purposes described.

2. The combination of the rake-head *f*, with the foot-lock Q, substantially as and for the purposes set forth.

3. The construction and arrangement of the four pieces 1, 2, 3, 4, either of wood or metal, forming the hub and spokes of the wheel *b*, substantially as herein described and for the purposes set forth.

4. These four pieces, 1, 2, 3, 4, constructed and joined together, as described, with the flanges S S, as and for the purposes set forth.

91,859.—Robert W. McClelland, Springfield, Ill.—*Carriage-Wheel.*—June 29, 1869.

Claim.—1. The butt-disk B, provided with the inside flange E, pressing against the wooden center A, substantially as shown and for the purpose described.

2. The within-described hub, consisting of the wooden center A, butt-disk B, with its inside flange E, face-disk B′, and point-band D, all constructed and arranged substantially as and for the purpose shown.

91,860.—J. M. McMaster, Rochester, N. Y.—*Grain-Binder.*—June 29, 1869.

Claim.—1. The two twisting automatic hands, operating conjointly, for the purpose of making the band out of two lengths of straw.

2. The collecting-arms 17 and 22, in combination with the twisting automatic hands, as and for the purpose set forth.

3. The springs 34, in combination with the jaws of the hands 33, for the purpose set forth.

4. The rods 37 and levers 35, in combination with hands 33, for the purpose herein shown and described.

5. The inclined planes 38, 84, 40, and 85, in combination with rods 37 and levers 35, for the purpose set forth.

6. Spring 91, notch 36, rod 37, in combination with catch 90, for the purpose of holding the hands 33 closed.

7. The cam 6, arms 56 and 53, shaft 55, rod 54, segment and pinion 49 and 48, wings 43, and hand-rods 27, substantially as shown.

8. The movable catches 46 and springs *a*, in combination with the disks 41, as and for the purpose set forth.

9. The movable catches 46, springs *a*, and disks 41, in combination with plates 50 and rods 47.

10. Providing levers 25 with an independent axis, on hub 31, as and for the purpose set forth.

11. The spur-wheel 66, pinion 65, cam 3, arm 64, shaft 32, hub 31, in combination with levers 25 and attachments, for the purpose set forth.

12. The arm 60 and connecting-rod 62, in combination with arm 82, hub 31, and levers 25, for the purpose of giving the oscillating motion to the twisting-devices on the front of the machine.

13. The cam 4, crank 12, shaft 11, arm 24, and connecting-rod 26, in combination with the levers 25, as and for the purpose set forth.

14. The arm 19, connecting-rod 29, in combination with arm 20, shaft 21, and its arm 24, connecting-rod 26, to give motion to levers 25, on the front side of the binder.

15. The cam 5, crank 68, shaft 67, arm 70, and connecting-rod *c*, in combination with arm 71 and twisting-pinions 69, constructed as herein shown, and for the purpose set forth.

16. The cam 4, crank 12, shaft 11, and arm 14, in combination with lever 15 and collecting-arm 17, as and for the purpose set forth.

17. The cam 6, crank 56, rear shaft 55, arm 57, and connecting-rod 79, in combination with frame 92 and receiving-arms 59, as herein shown, and for the purpose set forth.

18. The arm 80, front shaft 55, and arms 53, in combination with cam 6, crank 56, rear shaft 55, arm 57, connecting-rod 79, frame 92, and receiving-arms 59, acting conjointly, for twisting the band.

19. The spiral rod 105 and pin 110, in combination with the tying twisting-pinions 69, for the purpose set forth.

20. The spring 117, in combination with the jaws of the tying-pincers 69, as and for the purposes set forth.

21. The movable pin 108, in combination with the pivoted jaw of the tying-pinions 69, as and for the purpose set forth.

22. The slide 74, bar 112, spring 104, and pins 115 and 116, in combination with the movable pin 108 and pivoted jaw of the tying-pinions 69, as and for the purposes set forth.

23. The arm 113, in combination with the pivoted jaw of the tying-pincers, for the purpose set forth.

24. The pivoted receiving-arms 59, guides 101 and 102, and springs 106, constructed and operating as herein shown, and for the purpose set forth.

25. The pivoted discharging-arm 104, rod 103, in combination with the bearing 97, of the receiving-arms 59, as and for the purposes set forth.

26. The chain-wheels 138 and 136, and chain-band 137, in combination with the rake 7, cam 1, segment 124, and pinion 123, arranged and operating as and for the purposes set forth.

27. The cam 2, in combination with the segment 131 and pinion 134, for the purpose described.

28. The cam 1, segment 124, and pinion 123, in combination with the arm 119, arranged and operating conjointly, as and for the purposes set forth.

29. In combination with the binder, the receiving-box 142, when provided with a self-adjusting trip-bottom, arranged and operated as and for the purposes shown and described.

91,861.—Alexander Miller, Chicago, Ill.—*Wood-Pavement.*—June 29, 1869.

Claim.—The combination of all these, in manner and form as hereinbefore specified, and for the purpose indicated.

91,862.—Charles W. Moore, San Francisco, Cal.—*Flux for Smelting Ores of Gold, Silver, and other Metals.*—June 29, 1869.

Claim.—The application and use of fluor-spar, black oxide of manganese, chloride of sodium, and limestone, or dolomite, in combination, as a flux, using for that purpose the combination of said ingredients above set forth, and any other substantially the same, and substantially in the manner and for the purposes above set forth.

91,863.—William Owen, Hubbard, assignor to himself, Daniel B. Stambaugh, same place, and Daniel Smith, Girard, Ohio.—*Self-Oiling Car-Wheel.*—June 29, 1869.

Claim.—A car or other wheel, running loosely on its axle, provided with one or more chambers, A, with concave ends B, diaphragms C, with passages to spaces D, and passages E, all arranged substantially as specified.

91,864.—William Palliser, Pall Mall, England.—*Ordnance.*—June 29, 1869; patented in England September 10, 1867.

Claim.—1. Constructing the barrels introduced at the muzzles of converted cast-iron guns, of two tubes at the breech-end, of which the inner or A tube is made comparatively thin, substantially as and for the purposes hereinbefore set forth.

2. Combining, with the inner tube of a double-tubular lining, of a converted cast-iron gun, a chamber-lining, A′, substantially as described.

3. Constructing the barrels of converted cast-iron guns with an outer or B tube at the breech-end, of larger external diameter than the muzzle-end of the inner or A tube, and placing upon such muzzle-end of the A tube, cylinders of equal diameter with the B tube, substantially as and for the purposes hereinbefore set forth with reference to Figs. 2 and 3 on the accompanying drawings.

4. Forming a helical chamber between the inner and outer tubes, at the breech-end of the barrel of converted guns, in communication with an indicator passing through the breech of the gun, substantially as and for the purposes described.

5. In combination with a bush extending along the entire length of the vent, and held in place by a

screw-thread, a platinum lining on the inside of its inner or lower end, substantially as described.

6. The improved system of rifling guns, hereinbefore set forth, in which the groove commences at a distance from the breech-end of the bore, proceeds with a very slow, uniform, or unaccelerated twist, to within about two feet, more or less, of the muzzle of the gun, from which point it becomes accelerated, substantially as above described.

91,865.—HERMAN G. PEIN, Peoria, Ill.—*Combined Latch and Lock.*—June 29, 1869.

Claim.—The combination and arrangement of the hook C, latch D, bolt E, and revolving button F, substantially in the manner and for the purpose as herein shown and set forth.

91,866.—WILLIAM F. PRATT, East Bridgewater, Mass., assignor to E. CARVER COMPANY, same place.—*Machine for Removing Lint from Cotton-Seed.*—June 29, 1869.

Claim.—The combination of the roller H, constructed as described, with the saws and hopper working substantially as described, and for the purpose set forth.

91,867.—GEORGE H. REISTER, Washington, Iowa.—*Seed-Sower.*—June 29, 1869; antedated June 15, 1869.

Claim.—1. The arrangement of the seed-box, toothed cylinder, clearing-fingers, and divided rollers, as herein set forth.

2. The arrangement of the levers q, bars d, and arms c, in their relation to each other, and to the toothed cylinder, as herein recited.

3. The forming of the joint of the ends of the arm e and bar d, and supporting the fulcrum-plate p by the shaft of the toothed cylinder, as described.

91,868.—GEORGE H. REISTER, Washington, Iowa.—*Wind-Wheel.*—June 29, 1869.

Claim.—The system of movable guides, as described, when arranged to cover only a segment of a circle.

91,869.—WILLIAM K. RHODES, Portland, Me.—*Steam-Generator.*—June 29, 1869.

Claim.—The arrangement of the diaphragms $e\ e\ e$, in relation to the tubes and the steam and water spaces of the boiler, constructed substantially as described.

91,870.—EDWARD E. RINEHART, Pittsburgh, Pa.—*Manufacture of Roasted Coffee.*—June 29, 1869.

Claim.—The mode of coating or glazing roasted coffee, hereinbefore described, by intermixing therewith, before cooling, a mucilaginous or other suitable substance, substantially as described.

91,871.—DANIEL C. RIPLEY, Pittsburgh, Pa.—*Means for Attaching Covers to Glass Jars.*—June 29, 1869.

Claim.—1. Fitting a metallic jar-cover tightly to the neck of a glass jar, and securing a close and firm union between the two by pressing the metal of the cover into close contact with the uneven glass surface of the jar-neck, substantially as described.

2. In the manufacture of ewer-mouthed metallic-capped glass jars, making the glass neck of the jar with a groove or grooves, a', and with or without a projection, c, into which or against which to press the metal of the jar-cover, so as to make a tight joint, substantially as described.

3. An oval-mouthed glass jar, with grooved neck, made substantially as described, and for the purposes set forth.

91,872.—ADAM G. RITZ, Elizabethtown, and JOHN B. CARTER, Heartsville, Ind.—*Shingle-Machine.*—June 29, 1869.

Claim.—1. The adjustable stirrups W X Y, and adjustable spring-stirrup Z, herein described, when constructed and operated substantially as and for the purpose set forth.

2. The inclined planes I I′, &c., when constructed as described, and operated in combination with the spring-stirrup Z, substantially as set forth.

91,873.—T. L. RIVERS, St. Louis, Mo.—*Caster.*—June 29, 1869; antedated June 22, 1869.

Claim.—The combination of the plates B E A, with the center D and shoulders E E, with the caster, as constructed and described.

91,874.—REZIN ROBINS and ALBERT S. ROBINS, Dundas, Ill.—*Sulky Corn Planter and Plow Combined.*—June 29, 1869.

Claim.—1. The combination of the axle B, constructed in two overlapping or scarfed parts, of the grooves $b\ b$, bolt a, supporting-plate U, and tongue C, arranged substantially as represented and described, for the purpose set forth.

2. The combination of the rods or levers T T, the connecting-bar T′, the bent lever T″, provided with the pedals t'''^{*} and the catch $T^4\ t^4$, all constructed, arranged, and operating as described, to dodge the inner plows, or hold the same in their proper normal position, as set forth.

3. In combination with the shovels or plows O O′, and devices R R′, for operating said plows separately, the levers S‴, rock-shaft S″ S, and catch s^4, for raising said plows simultaneously, and holding them in an elevated position, substantially as described.

4. The combination, with the dropping-slide I, of the spring K, the rock-lever M, chain or rod M′, lever or treadle M″, and catch n, all arranged to operate substantially in the manner described, for the purpose specified.

5. In combination with the dropping-slide I, operating substantially as herein described, the thimble i^5, as and for the purpose set forth.

6. The combination and arrangement of the plows O O′, adapted to be separately and simultaneously elevated, and the former to be dodged; the seed-boxes G G, the dropping-slide I, adapted to drop the seed in variable quantity, and to be operated from the ground-wheels of the machine, or by the foot of the driver, or locked from movement; the valves P P, arranged in the knees of the furrowing-plows and operated by the dropping-slide, and the covering rollers Q Q, adapted to be elevated when desired, all substantially as and for the purposes herein shown and described.

91,875.—J. J. SAVAGE, Troy, N. Y.—*Cooking-Stove.*—June 29, 1869.

Claim.—1. The air-draught passage-way a, in combination with the movable door or cover G F of the fuel-aperture or door-way P, of extended fire-box B, located substantially as described, for the purpose set forth.

2. The arrangement of the air-draught passage-way a, directly over the extended fire-box B, substantially as described.

3. In combination with the extended fire-box B, located as described, the front plate N and fire-box A, the combined sliding and lifting doors G F and G′ F′ thereof, substantially as and operating for the purpose set forth.

4. In combination with the extended fire-box B, the air-draught passage-way a, thereover, and cover-plate G, the perforated air-draught plate F, arranged to operate at or over the top of said fire-box, substantially as described.

5. The arrangement of the hot-air draught passage-way K $b\ b'$, under the extended fire-box B, in combination therewith, and with the fire-grate D, and ash-space E, substantially as and for the purpose described.

6. The combination with each other of the extended fire-box B, the hot-air draught passage-way a thereover, and the hot-air draught passage-way K $b\ b'$ thereunder, when respectively and relatively arranged with the fire-grate D, ash-space E, fire-box A, and flame-chamber C, substantially as and for the purpose described.

7. The combination of the series of herein-described break-joint-arranged ribs or flanges $h\ h\ h$, with the series of apertures or slots $g\ g$, arranged in alternate succession, and combined with the fire-box lining-plates of stoves, substantially as described.

8. The arrangement of the shelf-plates L L, above and forward of the fire-grate D, in combination with the fuel-doorway P, its door or cover F, and thereunder-extended fire-box B, substantially as described.

9. The combination of the close ungrated bottom fire-box B, and air-draught chamber *a* thereover, or its equivalent, with the grated-bottom fire-box A, substantially as and operating for the purpose described.

91,876.—ALEXANDER SHAW, Monmouth, Ill.—*Cultivator.*—June 29, 1869.

Claim.—1. The construction, arrangement, and combination of the frame-piece B, spindle H, pivot V, pivot-joint M, and brace W, as shown and for the purpose described.

2. In combination with the above devices, the braces C D, tongue A, plates L L, and plows K K, arranged as shown and for the purpose described.

91,877.—W. S. SHOEMAKER, Towsontown, Md., and E. H. SHOEMAKER, Lancaster, Ohio.—*Railway-Rail Splice.*—June 29, 1869.

Claim.—1. The construction of the cheek-piece C, in the manner substantially as described.

2. The manner of securing the splice-bar B and cheek-piece C to the rail-sections, by means of transverse bolts, and one or more oblique bolts, substantially as described.

91,878.—GEORGE STEVENS, San Francisco, Cal.—*Amalgamator.*—June 29, 1869.

Claim.—1. The use of rubber, leather, or other pliable material, as shoes, or rubbers, or strips, running on copper, for the purposes of amalgamating with mercury, and for precipitating and gathering the same and metals.

2. The use of a tub or other vessel, arranged so as to make a galvanic battery, by the introduction of copper and zinc plates, with frictional mullers acting upon the copper plates, and by the pulp, containing the mercury and ores, acting as the exciting liquid, for purposes specified.

91,879.—W. H. STEWART and J. H. TILLEY, Orion, Wis.—*Coffee-Boiler.*—June 29, 1869.

Claim.—The construction of a coffee-boiler, with the parts A, B, C, D, E, F, G, H, and I, arranged substantially as described, and operating for the purposes set forth.

91,880.—JOHN D. STILLMAN, Memphis, Tenn.—*Cotton-Seed Huller.*—June 29, 1869.

Claim.—The cotton-seed huller, as shown, composed of the cylinder A, with its bars D and grooves C, drum B, with bars E and grooves G, and the bolt J, and propeller-shaped fan K, all constructed, arranged, and operating substantially as and for the purpose herein set forth.

91,881.—NATHAN STOCKWELL, Windsor, N. Y.—*Device for Feeding Swine.*—June 29, 1869.

Claim.—The combination and arrangement of the shaft E, lever F, and cams G G, swinging-gate C, wedge H, trough A, projections D D, all being constructed and operating as herein described and represented, for the purpose set forth.

91,882.—PETER SWEENY, New York, N. Y.—*Tuyere.*—June 29, 1869.

Claim.—1. The combination and arrangement of the annular receiving-chamber C, the circulating-pipes E H, and foot-box F, the valve-plate K, tube I, and discharging-pipe D, substantially as described.

2. The removable packing-ring or case P, fitted to the top of the tube B, and combined with the hearth, substantially as described.

3. The arrangement of the tubes B D I and removable diaphragm K, substantially as described.

91,883.—ELI THAYER, New York, N. Y., assignor to PAUL P. TODD, Boston, Mass.—*Compound for Extinguishing Fires.*—June 29, 1869; antedated June 11, 1869.

Claim.—1. A solution of muriate of ammonia, in combination with carbonate or bicarbonate of soda, or their equivalent, for the extinguishing of fire, substantially as set forth.

2. A solution of sal ammoniac, in combination with nitrate or phosphate of soda, for extinguishing fire, substantially as set forth.

3. A mixture of water, carbonate of lime, and muriate of soda, for extinguishing fire, substantially as set forth.

91,884.—WILLIAM THOMPSON, Dublin, Ireland.—*Packing-Case for Bottles and Jars.*—June 29, 1869; patented in England November 19, 1869.

Claim.—In a bottle and jar packing-case, a series of springs, C, two or more, in combination with one or more partitions or diaphragms, E E′, and lid F, arranged substantially as described, so as to secure the bottles or jars from both lateral or longitudinal motion in the case.

91,885.—DAVID G. WATT, Lawrence, Kans.—*Bee-Hive.*—June 29, 1869.

Claim.—The hive A, honey-boxes C C, comb-frames D D, openings F, caps or stops G G, and tube I, all constructed and combined in the manner and for the purpose set forth.

91,886.—WILLIAM WEBER, Cincinnati, Ohio.—*Medical Compound.*—June 29, 1869.

Claim.—1. The essence of celery, when compounded of the ingredients and in the proportions substantially as described.

2. The celery-cordial, when compounded of the ingredients and in the proportions substantially as described.

3. The celery-bitters, when compounded of the ingredients and in the proportions substantially as described.

91,887.—CHARLES B. WEEKS, Galesburgh Ill., assignor to himself and F. H. FERRIS, same place.—*Hog-Trap.*—June 29, 1869.

Claim.—A hog-trap, consisting of the panels A A and Y, shade-board B, lever C, and curved neck-block D, when constructed, combined, and arranged as shown, and operating in the manner and for the purpose herein set forth and described.

91,888.—BENJAMIN F. WHITCOMB, Claremont, N. H.—*Reed for Looms.*—June 29, 1869.

Claim.—A weaver's reed, with metallic darts, having oval faces meeting at the opposite edges, and with bosses on one or both sides of the dart, with shoulders as indicated, all constructed and arranged as and for the purposes specified.

91,889.—JAMES B. WILLIAMS, Glastenbury, assignor to the HARTFORD SORGHUM-MACHINE COMPANY, Hartford, Conn.—*Metal-Corrugating Machine.*—June 29, 1869.

Claim.—The crimping-bar *d*, arranged between the guide-ways *b*, in combination with the oscillating compressing-bars *i*, arranged and operating substantially as described.

91,890.—JAMES B. WILLIAMS, Glastenbury, assignor to the HARTFORD SORGHUM-MACHINE COMPANY, Hartford, Conn.—*Evaporation-Pan.*—June 29, 1869.

Claim.—1. Forming grooves *k*, formed in the sides *d*, in combination with a corrugated bottom, constructed and arranged substantially as described.

2. The set-off bolts *h*, in combination with a corrugated bottom *b′*, and sides *d*, substantially as and for the purpose described.

3. The caps *e*, constructed as described, in combination with the corrugated bottom *d′* and sides *d*, substantially as and for the purpose described.

4. Forming a union of the faucet with the corrugated pan through the side *d*, substantially in the manner and for the purpose described.

91,891.—HENRY WILLIS and GEORGE RICE, Worcester, England.—*Machine for Winding Thread, &c.*—June 29, 1869.

Claim.—1. The combination, with the guide and tension plate, and the frame or arm to which the same is attached, of the elliptical and 8-shaped gear-wheels, as described, connected with said slotted frame or arm by a crank-pin, so as to communicate to the frame a reciprocating movement and receiving motion from the shaft of the winder, substantially in the manner and by the means herein specified.

2. The device for arresting automatically the rotation of the spool, in combination with the winder-spindle and its driving-pulley, arranged and connected together, substantially as and for the purposes specified.

91,892.—CHARLES WINTERBOTTOM, Philadelphia, Pa., assignor to W. S. WINTERBOTTOM, same place.—*Combined Try-Square and Bevel.*—June 29, 1869.

Claim.—A square, with the stock A cut at an angle, *x*, at the top, near the left side, down toward the right side *a*, for the purpose specified.

91,893.—E. H. WOODSUM and F. H. WHITMAN, Harrison, Me.; said WOODSUM assigns his right to said WHITMAN.—*Railway-Sleeper.*—June 29, 1869.

Claim.—The improved railway-sleeper, constructed as described, to wit, with the transverse cuts therein, and the blocks of hard wood inserted therein, as herein described.

91,894.—J. A. WOODWARD, S. S. WOODWARD, and THOMAS MASON, Sandwich, Ill.—*Cultivator.*—June 29, 1869.

Claim.—1. The combination of the clamps Z Z, pins V, frame S T U, and beams J, as and for the purpose set forth.

2. The combination of the sockets *f f*, handles *d*, plates *p*, and beams J, said plates being arranged to clamp the handles to the beams, as set forth.

3. The inclined standards D, in combination with segments F, ratchets E, levers and springs G H, beams J, chains *t*, clamps Z, and frame S T U, as shown and specified.

91,895.—WILLIAM ZIERATH and CHARLES J. SMITH, Sheboygan, Wis.—*Scrubbing and Mopping Machine.*—June 29, 1869.

Claim.—1. The brushes G and the mop-jaw I, when constructed, arranged, and operating substantially as set forth.

2. In combination with the above-named parts, the frame A, gear-wheels D and F, the frame H, the water-tank L, mounted upon suitable traction-wheels, when operating substantially as and for the purposes herein set forth and shown.

91,896.—ARTHUR M. ALLEN, New York, N. Y.—*Veloeipede.*—June 29, 1869.

Claim.—1. A veloeipede-wheel, having its bearing-surface or tread of bristles, as a new article of manufacture, substantially as and for the purpose described.

2. The strap *f*, bent at both ends, in combination with pivots *e e* and standards *d d*, substantially as and for the purpose described.

3. The roller-brace F, in combination with the mortise of the reach, and capable of being turned out in either direction, and of being raised and suspended in a central position, or in line with the driving-wheel, substantially as set forth.

91,897.—WILLIAM ANDREWS, Watson, N. Y.—*Potato-Digger.*—June 29, 1869.

Claim.—1. The shafts F, for holding the vine-pulling blocks G, when supported in rear by a pivoted plate, *f*, and in front by laterally adjustable plates *g g*, substantially as herein shown and described.

2. The plates *g g*, for supporting the front ends of the shafts F, when arranged laterally adjustable on a vertically adjustable plate, *i*, and held forced together by springs *k*, substantially as herein shown and described.

3. The plate *i*, for supporting the laterally adjustable rotating cones G, when working in the grooved pendants *h*, and suspended from the shafts H, substantially as herein shown and described.

4. The vine-guides M, when arranged in combination with the rotating adjustable vine-pulling cones G, substantially as herein shown and described.

5. The shaft H, carrying the loose sleeve *w*, when connected with the levers I and L, and with the frame J and shafts F, so that either the frame or shafts, or both, can be elevated to a suitable height, substantially as herein shown and described.

6. The pawls *q* and *z*, when arranged in combination with the shaft H and sleeve *w* respectively, to operate substantially as herein shown and described, so as to automatically lock the vine-pullers or the potato-gatherer at a desired height, as specified.

91,898.—W. B. BARTRAM, Danbury, Conn.—*Embroidering-Attachment for Sewing-Machines.*—June 29, 1869; antedated June 17, 1869.

Claim.—1. In combination with the foot A, the swinging braid-carrier C, constructed substantially as described, and for the purpose set forth.

2. In combination with the braid carrier C, operated by the needle-arm in its reciprocation, and the plate F, provided with the slot G, and notches H H′, the looped-wire I, substantially as and for the purpose set forth.

91,899.—JOSEPH I. BEAUMONT, St. Paul, Minn.—*Funnel.*—June 29, 1869.

Claim.—The funnel, having the outer surface of the neck B, and the lower part of the body A, provided with a series of wires or strips, C, arranged as described, for the purpose specified.

91,900.—JAMES M. BLACKSTOCK, Tarentum, Pa.—*Scroll-Sawing Machine.*—June 29, 1869.

Claim.—The combination of the saw D, saw-frame C, and its driving mechanism, with the frame A and the braces E, when all the parts are constructed substantially as set forth, and for the purpose described.

91,901.—THOMAS S. BLAIR, Pittsburgh, Pa.—*Apparatus for the Manufacture of Pig-Bloom.*—June 29, 1869.

Claim.—1. The moving table, with or without partitions and side-pieces, in combination with a spout for delivering the molten metal, and a spout for delivering the pulverized oxide or oxides simultaneously upon the surface, or into the trough of the moving table, for the manufacture of pig-bloom or pig-scrap, substantially as described.

2. A circular table, having removable outer pieces, or curb and partitions, constructed substantially as described, for the purpose set forth.

3. The combination of the moving table with one or more regulators, *p*, for receiving and delivering the molten iron on the moving table, in a regular and uniform stream, substantially as and for the purpose hereinbefore described.

4. In combination with the moving table and regulator or regulators, the reservoir *r*, for receiving the molten metal from the blast-furnace or cupola, and pouring it into the regulator, so as more easily to control its flow upon the moving table, substantially as hereinbefore described.

91,902.—WILLIAM M. BLEAKLEY, Verplank, N. Y.—*Can-Opener.*—June 29, 1869.

Claim.—The can-opener, consisting of the bar D, swiveled in the end of the slotted lever A, and provided with the handle *d*, and the head E, having the points *a b*, all arranged as described, for the purpose specified.

91,903.—A. C. BROWNELL, Brooklyn, N. Y.—*Construction of Sheet-Metal Boilers.*—June 29, 1869.

Claim.—1. The improved water-boiler, with both heads dome-shaped, double-seamed, brazed or riveted to the ends of its body, either with or without beading, substantially as herein shown and described, for the purpose specified.

2. The body of a hot-water boiler, made in two parts, double-seamed to each other, and double-seamed, brazed or riveted to the dome-heads, substantially as herein shown and described, for the purpose specified.

3. The heavy wheel or band C, whether made with or without spokes or cross-bars, in combination with the body A of the boiler, at the points where the parts of said body are seamed to each other, substantially as herein shown and described, and for the purpose set forth.

4. Beading sheet-metal boilers, and other articles, longitudinally with the double seams, including the same, by which the parts of said articles are secured to each other, substantially in the manner herein shown and described, and for the purpose set forth

91,904.—George W. Bunker, St. Anthony, Minn., assignor to himself and David Thayer, Boston, Mass.—*Corn-Planter.*—June 29, 1869.

Claim.—1. The adjustable pivoted bars P, when provided with the conductor-spouts F, rakes B′, and pivoted rollers C′, all arranged as described, for the purpose specified.

2. The combination of the sliding-plates H, levers I, constructed as described, arms K, rock-shaft L, broad arm M, and radial pins N, with each other, and with the conductor-spouts F, axle A, and frame C, substantially as herein shown and described, and for the purposes set forth.

3. The rakes B′ and rollers C′, when both are arranged upon the pivoted arms P, as herein described, for the purpose specified.

91,905.—Christopher Brunschwiler, New York, N. Y.—*Commercial-Account Indicator.*—June 29, 1869.

Claim.—The indicating frame or tablet A, provided with receiving-grooves B, and with appropriate columns for the names of mercantile firms or correspondents, for the several kinds of property or values involved, and for balances, separated by the partitions D, in combination with replaceable blocks bearing names, words, letters, and figures, to give the indications or accounts desired, the whole being arranged in the manner and for the purpose herein shown and described.

91,906.—Levi L. Burdon, Providence, R. I.—*Button.*—June 29, 1869.

Claim.—The improved shirt stud or button, herein described, consisting of the front, with its post A tapered inwardly from its outer end, with or without the spring-slot described, in combination with the back, having its hollow spring-socket B inversely tapered, substantially as described, for the purposes specified.

91,907.—Marshall Burnett, Boston, Mass.—*Broom.*—June 29, 1869.

Claim.—1. The arrangement and combination of the expansive holder B, as described, with the stock A and its binding-wire *m*, or the equivalent thereof, and with the handle C and its screw D, to operate with such holder, as described.

2. The expansive broom-stock holder, substantially as specified.

3. The combination of the expansive broom-stock holder with the handle and its screw, arranged to operate with such holder, as set forth.

91,908.—Peter H. Carman, Brooklyn, N. Y.—*Air-Heating Furnace.*—June 29, 1869.

Claim.—1. The combination of the sockets or thimbles *n*, with the grate-bars and gear-wheels *g*, arranged and operated substantially as herein shown and described, for the purpose specified.

2. The drum E, provided with the vertical tapered tubes F, and arranged within the oven I, with reference to the hot-air chamber A, flues G and K, and apertures J, as and for the purpose herein shown and described.

91,909.—R. D. Chandler, Fairhaven, N. J.—*Anvil and Vise Combined.*—June 29, 1869.

Claim.—The anvil and vise, constructed, combined, and arranged as herein described and shown.

91,910.—Charles S. Clark, Providence, R. I.—*Lathe.*—June 29, 1869.

Claim.—The combination of the poppet-block A, tool-rest B, wedges C C, and screw D, or their equivalents, as set forth, all constructed, arranged, and fitted together substantially in the manner described.

91,911.—John Cody, New York, N. Y.—*Platform for Submarine Drilling.*—June 29, 1869.

Claim.—The combination of the exterior tube G, interior tube H, ring-packing piston I, piston-rods J, adjustable collars M, cross-bar K, bolts L, and nuts N, with each other, said parts being constructed and arranged substantially as herein shown and described, and for the purposes set forth.

91,912.—John Cody, New York, N. Y.—*Rock-Drilling Apparatus.*—June 29, 1869.

Claim.—1. The combination and arrangement of the pawls G′, sliding cross-bar a^2, spring H, with the vertical shaft or stock E, to which the drill C is attached, and with the racks F′ attached to the frame A, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the pulley J, screw K, combined gear-wheel and screw-nut A′, shaft C′, and cone-pulley D′, with the hoisting-strap I, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the driving-shaft N, crank-shaft L M, fly-wheel O, pawl P, and ratchet-wheel Q, with each other, and with the hoisting-strap I, substantially as herein shown and described, and for the purpose set forth.

91,913.—James Collins, Grand Rapids, Mich.—*Spring Bed-Bottom.*—June 29, 1869.

Claim.—An improved spring bed-bottom, formed by the combination of the cross-bars A, longitudinal bars B, inclined or flaring end boards or bars C, angle-block D, hoop-iron strap E, cross-bars F, and coiled springs G, with each other, substantially as herein shown and described, and for the purpose set forth.

91,914.—Thomas B. Collins, Noank, Conn.—*Harrow.*—June 29, 1869.

Claim.—1. An improved harrow, formed by hinging two or more diamond-shaped parts B to the diamond-shaped central or forward part A, said parts being constructed, connected, and operating substantially as herein shown and described, and for the purpose set forth.

2. The combination of the lever H and wheel or wheels J, with the forward or central part A of the harrow, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the detachable wheels and axles D E with the forward or central part A of the harrow, substantially in the manner herein shown and described, and for the purpose set forth.

91,915.—Charles A. Condé, Indianapolis, Ind.—*Steam-Engine Governor.*—June 29, 1869.

Claim.—1. In combination with a governor, the adjustable sleeve B, constructed and arranged, in relation to the stand A and head C, substantially as shown and described, and for the purposes set forth.

2. The adjustable head C, with the cross G, and bars H, and ball-arms, arranged in connection therewith, substantially as shown and described.

91,916.—A. J. Culver, White Hall, Ill.—*Hanging Sliding-Door.*—June 29, 1869.

Claim.—The door-bracket E, formed with two arms, each having a grooved wheel, F, adapted to run on the double rails D, suspended from the brackets C, which are bolted between said rails, all arranged to operate as herein set forth and shown, for the purpose specified.

91,917.—W. R. Cummings, McCutchanville, Ind.—*Harrow and Cultivator Combined.*—June 29, 1869.

Claim.—1. The combination with the harrow-beams A, united by the elevated beams B, of the cultivators C, all arranged substantially as specified.

2. The arrangement of the beams A and E, as specified.

91,918.—P. Davis, Newport News, Va.—*Fence.*—June 29, 1869.

Claim.—The fence, constructed as described, of the palings B, inserted at their upper ends between the wires *a a*, which are stretched between the posts E E, their lower ends being coated with tar, and driven into the ground, as herein set forth, for the purpose specified.

91,919.—Willis Davis, Elizabethport, and Crowell Macan, Rahway, N. J.—*Railway-Car Axle-Box.*—June 29, 1869.

Claim.—1. In combination with a car-axle box-cap,

the finger C, substantially as and for the purposes herein shown and described.

2. In combination with a car-axle box-cap, the key E, substantially as and for the purposes specified.

91,920.—JONATHAN L. DEVOL, Parkersburgh, W. Va.—*Boot and Shoe Stretcher.*—June 29, 1869.

Claim.—The combination of the wedge B with the screw-bolt D, the hinged portions A and A′, and nut C, substantially as and for the purpose set forth.

91,921.—JONATHAN L. DEVOL, Parkersburgh, W. Va.—*Ironing-Table and Clothes-Drier.*—June 29, 1869.

Claim.—1. In combination with a table having a movable top, the racks C C′, attached to the table, substantially in the manner set forth.

2. In combination with the first section of the side rack D, the second rack D′, constructed with slotted end pieces, and arranged in relation to the first rack, substantially as and for the purpose set forth.

91,922.—A. S. DINSMORE, New York, N. Y.—*Tucking-Attachment for Sewing-Machines.* — June 29, 1869.

Claim.—The tucking-attachment secured to the presser-foot, when constructed as described, of the rectangular plate C, having the narrow rib formed upon its inner side, along its inner edge, through which the needle passes, whereby the rib is adapted to press upon and hold the fold of the cloth, while the remaining portion moves over the folds already formed, without bearing on it, as herein described, for the purpose specified.

91,923.—LE GRAND DODGE, Syracuse, N. Y.—*Curtain-Fixture.*—June 29, 1869.

Claim.—As a new article of manufacture, the spring loop or clasp D, constructed as herein described, to receive and hold the window cord or tape, by a side movement thereof, for the purpose specified.

91,924.—ANDREW T. DUNSHEE, Pittsburgh, Pa.—*Water-Filter.*—June 29, 1869.

Claim.—The arrangement of the air-tight space D, and the single opening *x*, when used in combination with a water-filter, provided with disks *e* and *f*, and filtering media, the whole being constructed, arranged, and operating substantially as hereinbefore described, and for the purpose set forth.

91,925.—DAVID EVANS, Newton, Iowa.—*Combined Grain-Drill, Seed-Sower, and Corn-Planter.*—June 29, 1869.

Claim.—1. The combination of the hopper C and lever C′, with the cams and the rods deriving motion therefrom, when so arranged that the rods may be thrown out of gear by the action of the lever, substantially as set forth.

2. The combination of the feed-bar D, sieve E, and trough F′, and tubes F, substantially as set forth.

3. The combination of the cutters I, tubes F, and revolving harrow L, substantially as set forth.

4. The combination of the double revolving harrow and the bar L^2, substantially as and for the purpose set forth.

5. The combination of the parts L, L^1, L^2, and L^3, arranged to operate substantially as set forth.

91,926.—HENRY B. FERNALD, Dedham, Mass.—*Car-Wheel.*—June 29, 1869; antedated June 19, 1869.

Claim.—1. The hub F, constructed with a transverse mortise for the key-blocks G, in combination with the key-blocks G, the squared journal *a a a a* of the axle A, the screw-bolts S, and nuts *n*, with or without the tires Y Y Y, substantially as herein described.

2. The wheel C, in combination with the hub H, constructed with a transverse mortise for the key-blocks J, the key-blocks J, the squared journal *e e e e*, and the screw-bolts *o*, substantially as herein set forth.

3. The hub N, constructed with a transverse mortise for the key-blocks V, in combination with the key-blocks V, the round journal *g g*, and the screw-bolts P, and nuts *p*, all arranged and applied to the axle-box, substantially as and for the purposes herein specified.

4. The combined guide-carriages K K, constructed as herein specified, and in combination with the anti-friction rollers L, and radial anti-friction wheels I, the whole being held in place, substantially as herein described.

5. The wheel B, in combination with the collars E, the radial anti-friction wheels I, the anti-friction rollers L, the guide-carriages K, and the hub F, the whole constructed and secured upon the axle A, as herein described, substantially as herein set forth.

91,927.—GEORGE A. FORD, Oswego, N. Y.—*Furling Gaff-Topsails.*—June 29, 1869.

Claim.—1. The grooved guide N *n′*, constructed and operating substantially as herein shown and described, and for the purpose set forth.

2. The combination of the metallic socket and strengthening-piece K, detachable catch L, and hoisting-rope M, with the sail E and guide-groove N, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the rope J, spool I, gear-wheels H G, and roller F, with each other, and with the gaff or arm D and sail E, substantially as herein shown and described, and for the purpose set forth.

4. Transferring the sail from one side of the rope O to the other, by means of the detachable catch L, socket P, and rope Q, substantially in the manner herein shown and described.

91,928.—RUFUS D. GARDNER, Watertown, N. Y.—*Milk-Cooler.*—June 29, 1869.

Claim.—1. The combination of the pans B and C, when the latter is hinged to the edge of the former, and adapted to swing up and be supported in a raised position by the pivoted bar G, as herein described, for the purpose specified.

2. In combination with the above, the funnels D E, when arranged with relation to the pans B C and vat A, as described, for the purpose of directing the milk between the pans and the cooling-liquid around the outer pan, as herein set forth and shown.

91,929.—ADIN GAUNTT, Chagrin Falls, Ohio.—*Apparatus for Changing Speed in Machinery.*—June 29, 1869.

Claim.—1. The combination of the shaft A, disk C, sleeve F, and pinion thereon, sliding-arms O, pinions M, intermediate wheels, and fixed wheel S, when arranged for communicating a slow motion to the shaft A from the said sleeve F, or pulleys thereon, substantially as specified.

2. The combination of the arms O, arms P, and oscillating spirally grooved ring T, substantially as specified.

3. The arrangement of the sliding-arms O, pinions M, studs N, and recessed cone-pulleys, all substantially as specified.

91,930.—MYRON GORE, Shelby, Mich.—*Lathe.*—June 29, 1869.

Claim.—1. The combination of the levers L M and wheel E, with the pulleys G′ G′ and mandrels G G, all the parts being constructed and arranged in the manner described and for the purpose specified.

2. The arrangement of the cord B′, shaft V, pulleys W Y, lever Z, and treadle Z′, lever C′, and treadle C″, and wheel F, with the center-bar O, in the manner described, when all the parts are constructed as and for the purpose specified.

91,931.—F. C. HAGEN, Cuba, N. Y.—*Bed-Bottom.*—June 29, 1869.

Claim.—The bed-bottom, constructed, as described, of the frame A, divided into three compartments by the transverse end partitions C C, the central compartment, containing the springs B, being covered by the hinged cushion D, and the two end compartments by the removable head and foot-cushions E F, all arranged as described, for the purpose specified.

91,932. — NATHANIEL HARRIER, Muscatine, Iowa.—*Gate.*—June 29, 1869.

Claim.—The combination of the caster-wheel D,

rail E, bars F, and triple crank-shafts G, with each other and with the gate C, said parts being constructed, arranged, and operating substantially as herein shown and described, and for the purpose set forth.

91,933.—EDGAR K. HAYNES, Boston, Mass., assignor to WILLIAM CARLETON, same place.—*Lamp.*—June 29, 1869.

Claim.—1. The combination, with a lamp-burner of otherwise ordinary or suitable construction, but in which the globe and its draught-nozzle are employed in lieu of the chimney, of an imperforate globe-rest, under such an arrangement that all the air required for the flame shall pass to the same through the burner, and not through said globe-rest, as and for the purposes set forth.

2. The mode of suspending the draught-nozzle wholly or partly within the globe, by means of hooked arms, which catch over the upper end or mouth of the globe, substantially as shown and set forth.

3. The combination of the imperforate globe-rest, arranged so that the air required to feed the flame shall pass through the burner, as before specified, and carrying the globe and draught-nozzle employed in lieu of the chimney, with a removable sleeve, fitting or supported upon the lower part of the burner, under the arrangement and for operation as set forth.

91,934.—M. C. HEPTINSTALL, Enfield, N. C.—*Lamp-Extinguisher.*—June 29, 1869.

Claim.—The combination of the spring concave extinguishers L L and revolving thumb-shaft P, with its wire yoke N, for closing the extinguishers, when constructed and operated as herein described.

91,935.—M. C. HEPTINSTALL, Enfield, N. C.—*Alarm-Gun.*—June 29, 1869.

Claim.—The arrangement of the tube G, spindle F, arms H I, and tripping-pins E, all substantially as specified.

91,936.—M. C. HEPTINSTALL, Enfield, N. C.—*Mustache-Guard.*—June 29, 1869.

Claim.—A detachable mustache-guard, A, for drinking-cups, provided with a mouth-piece, B, and groove, C, substantially as herein described, for the purpose specified.

91,937.—LYMAN F. HODGE, Poughkeepsie, N. Y.—*Velocipede.*—June 29, 1869.

Claim.—1. The thumb levers *g g*, in combination with the steering-bar of a velocipede, substantially as and for the purposes described.

2. An adjustable box or bush in the socket of the steering-post of a velocipede, substantially as and for the purposes described.

3. In combination with the bar D, the loop-lever *h*, for the brake-strap E, substantially as described.

91,938.—H. N. HOUGHTON, Brattleborough, Vt.—*Spoke-Fastener.*—June 29, 1869.

Claim.—In combination with a wheel for highway vehicles, the parts D and E, constructed and arranged substantially as and for the purposes herein shown and described.

91,939.—L. B. HYATT, Flemington, Pa.—*Straw-Cutter.*—June 29, 1869.

Claim.—1. The plate A, provided with the hollow axial pin D, annular collar F, and yielding-guide G, substantially as specified.

2. The cutter-arm C, provided with the projection H, and combined with the plate A, when the latter is arranged substantially as specified.

3. The combination, with the vibrating cutter-arm, of a yielding bearing, G, substantially as specified.

91,940.—THOMAS JEFFERIS, Council Bluffs, Iowa.—*Heating-Drum.*—June 29, 1869.

Claim.—The arrangement, within the heating-drum, of the perforated heat-distributing plates K, with relation to the air-flues, and heat supply and discharge pipes A A′, substantially as described, for the purpose specified.

91,941.—WILLIAM K. JOHNSTON, Cordova, Ill., assignor to himself, EDITH R. WYNKOOP, and DANIEL ZIMMERMAN, same place.—*Wagon-Brake.*—June 29, 1869.

Claim.—1. The locking-device D, applied to the segment E, or its equivalent, and receiving through it the lever C, substantially as described.

2. The lever C, loosely attached at its lower end, and applied to a box-slide, D, which is upon a bar, E, and to which the brake chain or rod is connected, substantially as described.

91,942.—HENRY J. KLINGENBERG and JOHN J. MAU, Davenport, Iowa.—*Apparatus for Operating Churns.*—June 29, 1869.

Claim.—The spring *a*, confined within the metal disks B, shaft *b*, ratchet *b′*, cog-wheel A, pinion *c*, bevel-gear D *e*, shaft E, escapement F, and brake I, when constructed and arranged as described, for the purpose set forth.

91,943.—CHRISTIAN HENRY KOCK, Davenport, Iowa.—*Water-Elevator.*—June 29, 1869.

Claim.—The combination of the cylinder A, spiral springs B, separated by the loose disks C, the piston D, ball-valve E, and its seat F, the metallic ribbon H, the windlass, the supply-pipe L, having the ball-valve *m*, and the discharge-pipe N, all arranged and operating as described, for the purpose specified.

91,944.—PHILIP LEONARD, Sharon, Pa.—*Machine for Turning and Scraping Grindstones.*—June 29, 1869.

Claim.—A machine for turning and scraping grindstones, consisting of the pivoted frame, carrying the longitudinally adjustable frame C, on which the transversely adjustable frame B is arranged, and of the tool A, the frame D being adjustable by means of screws F, and provided with a fender, J, substantially as herein shown and described.

91,945.—B. B. LEWIS, New York, N. Y.—*Sash-Holder.*—June 29, 1869.

Claim.—1. The bracket A, provided with shoulders *c c*, in combination with the projecting-bar D, and the eccentric B, having the rubber band C, all constructed and arranged to operate in the manner described, for the purpose specified.

2. The combination of the eccentric or cam B, with the bracket A, when the offset or shoulder *ax* of the latter is made to form a stop for the former, substantially as set forth.

91,946.—JEAN BAPTISTE LHOTE, Paris, France, assignor to SEWELL HENRY FESSENDEN, Boston, Mass.—*Mold for Glass from Gas-Carbon or Graphite.*—June 29, 1869.

Claim.—1. Manufacturing the molds, as hereinbefore described, from the graphite, or material which is formed in the interior of gas-retorts.

2. Manufacturing the molds by pulverizing the graphite, and then agglomerating it by a binding material, as hereinbefore described.

3. Manufacturing the molds by cutting and working the graphite, in its natural state, into the required form, as hereinbefore described, without pulverizing and agglomerating it.

4. Manufacturing the molds, especially when required to be of large size, by joining or connecting several pieces of the graphite, as hereinbefore described.

5. As a new manufacture, molds made of the graphite, or material which is formed in the interior of gas-retorts, either in its natural state or agglomerated, substantially as specified.

91,947.—J. P. O. LOWNSDALE, Portland, Oreg.—*Dust-Deflector for Railroad-Cars.*—June 29, 1869.

Claim.—The metallic dust-deflector for cars, consisting of the funnel-shaped case A, inclosing the inner triangular-shaped projection, both placed upon the plate E, in reverse positions with relation to each other, substantially as described, for the purpose specified.

91,948.—JOHN MACNAIR, New York, N. Y.—*Paper-Folding Machine.*—June 29, 1869.

Claim.—1. In combination with the rollers B B′ C C′, &c., the boxes or vacuum-chambers K K′, and pistons L L′, when constructed to operate substantially as and for the purposes set forth.

2. The combination of the rollers B B′, chambers K K′, piston L, spring J, shaft M, cams *m m*, and gear *b b s*, all constructed to operate substantially as and for the purposes described.

3. In a machine for folding paper or other fabrics, the employment of a current of air or simply atmospheric pressure, to assist in forcing the material between the rollers, substantially as herein described.

91,949.—James Mahoney, Newport, R. I.—*Steam-Generator Grate-Bar.*—June 29, 1869.

Claim.—The construction of the rectangular corrugated frame, with corrugated cross-bars and surrounding corrugated margin, as herein specified.

91,950.—Henry Markthaler, Elizabeth, N. J.—*Chimney-Top.*—June 29, 1869.

Claim.—A chimney-top, consisting of the body A, cap B, flange *b*, inner annular plate C, and inverted cup D, all combined and arranged substantially as and for the purpose herein shown and described.

91,951.—Samuel Mattix and James McPherson, Clinton County, Ind.—*Tile-Machine.*—June 29, 1869.

Claim.—1. The box A, hoppers B B, shafts E E, cog-wheels *a a*, knives *c c*, and cut-offs *c c*, in combination with shaft H, with its cog-wheel *b*, toothed plunger C, segment of cog-wheel R, and die-plates K K, with their cores *l l*, all constructed and operated substantially as described..

2. The toothed plunger C, and segment of cog-wheel R, in combination with the die-plates K K, with their cores *l l*, substantially as and for the purpose set forth.

91,952.—Benjamin Franklin Mayhew, Carmel, Me.—*Shingle-Machine.*—June 29, 1869.

Claim.—The arrangement of the series of shingle-bolt carriages upon the sides of the radial arms projecting from the horizontal revolving-shaft, all the parts being constructed, arranged, and operating substantially as and for the purposes set forth.

91,953.—Francis McCarty, Smith's Ferry, Pa.—*Distillation of Hydrocarbon-Oils.*—June 29, 1869.

Claim.—1. Causing the oil in the still to move in a continuously returning current or flow, by means of a jet of steam, and a funnel inserted in the steam-pipe back of the discharging aperture, substantially as described.

2. Feeding a jet of oil and a jet of steam continuously into a still through a common pipe, substantially as and for the purposes set forth.

3. A funnel *d*, inserted in a steam-pipe, *a*, inside the still, and back of the discharging aperture, substantially as and for the purposes hereinbefore set forth.

91,954.—W. L. McCord, Abbeville, S. C.—*Medical Compound.*—June 29, 1869.

Claim.—The medical compound, composed of the ingredients herein named, and in about the proportions specified, substantially as and for the purposes described.

91,955.—Jim H. McElroy, Warwick, N. Y.—*Self-Closing Telegraph-Key.*—June 29, 1869.

Claim.—The arrangement of the contact-spring *h*, depressed by the insulated thumb-piece *i*, in connection with the key A, substantially as described, for the purpose specified.

91,956.—John M. McGehu, Milton, Fla.—*Railway-Car Truck.*—June 29, 1869.

Claim.—The railroad-car, consisting of the two two-wheeled trucks A and B, each provided with the swinging bolster D, the forward truck A being supported on the cone-shaped wheels C C, arranged with their bases toward the central line of the car, and the rear truck B provided with the wheels C′ C′, having concave peripheries, all constructed as described, whereby the car is adapted for use on tracks of irregular gauge, for the purpose specified.

91,957.—J. Miles and E. P. Miles, Pleasant Hill, Ohio.—*Plow-Cleaner.*—June 29, 1869.

Claim.—The combination, with a plow, of the curved sliding cleaning-bar A, when arranged to be adjusted vertically, and from side to side of the beam, substantially as specified.

91,958.—Stephen Moore and Homer Rogers, Sudbury, Mass.—*Portable Straining-Press.*—June 29, 1869.

Claim.—1. The arrangement and combination of the bail and toggle applied to the bottom of the expressing-vessel, with the stepped projection applied to the follower.

2. The arrangement and combination of the handle with the expressing-vessel, and the bail, toggle, and stepped projection applied to the said vessel and the follower, in manner and so as to operate therewith, substantially as specified.

3. The arrangement and combination of the projection *e* with the handle *d*, the expressing-vessel, and the bail, toggle, and stepped projection, applied to the expressing-vessel and follower, in manner and so as to operate therewith, as explained.

91,959.—F. L. Morrison, New Albany, Ind.—*Hay-Fork.*—June 29, 1869.

Claim.—1. The adjustable shoulder-rest E, arranged on the handle of a fork, substantially as and for the purpose herein shown and described.

2. The jointed prong B, consisting of the parts *b c*, when arranged on a hand-fork, to operate substantially as herein shown and described.

3. The hand hay-fork, consisting of the handle A, fixed prongs B, detachable prongs C or D, which may be jointed, as described, all made and operating substantially as herein shown and described.

91,960.—Andrew J. Morse, Boston, Mass.—*Sirup-Holder for Soda-Fountain.*—June 29, 1869.

Claim.—For use in soda-water apparatus, a glass sirup-holder, formed rectangular and oblong, in horizontal cross-section, and having an open top and an outlet at its bottom, substantially as shown and described.

91,961.—S. Y. Orr, Morning Sun, Iowa, assignor to himself and J. M. Virgin, same place.—*Corn-Planter.*—June 29, 1869; antedated June 22, 1869.

Claim.—1. The use or employment of a smooth wire or cord, S, wound upon the reels R, in combination with the friction-disks P P, with rubber or elastic washers Q Q′, and nut *y*, with the cams E E′, or their mechanical equivalent, for the purpose of operating the seed-distributing mechanism, as the machine is drawn along, when constructed substantially as and for the purpose set forth.

2. The rod T, provided with the anchor V, and hook *i*, in connection with the eyes *j*, attached to the wires S, for the purpose of connecting the wires to the anchor V and rod T, when so constructed that, in combination with the small eye Bx, on the front end of the machine, the wire will be automatically unhooked from rod T, substantially as and for the purpose set forth.

3. The combination of the wires S, reels R, on axle D, cams E E′, lever F, and seed-dropping mechanism, all arranged to operate substantially as and for the purpose set forth.

4. The toothed rim L, latch Ax, spring *ax*, pinion *h*, in the ring M, attached to the lever N, and the wheel O, between friction-disks P P, on the axle D, all arranged to operate substantially as set forth, and for the purpose specified.

91,962.—D. D. Parmelee, New York, N. Y.—*Mode of Utilizing Tin-Plate Cuttings in the Manufacture of Iron and Steel.*—June 29, 1869.

Claim.—1. The process herein described, of utilizing the waste cuttings or scraps of tin plate, by forming the same into ingots, substantially as described, and subjecting such ingots to the melting or puddling process in any suitable furnace, as herein set forth.

2. The formation of interlaced masses of tin-scraps, preparatory to their being dipped in or mixed with molten cast iron, substantially as set forth.

3. The production of ingots composed of waste

tin-scraps and cast iron, substantially as herein set forth.

4. The method of and means herein described, for producing skeleton ingots of waste tin plate.

91,963.—F. L. PERRY, Canandaigua, N. Y.—*Cultivator.*—June 29, 1869.

Claim.—1. The attaching of the teeth E to the beams A, by having the front prongs *c* of the teeth pass through the front ends of plates *d*, and the rear prongs *f* fitted in the rear parts of the plates, in combination with the arms *g* of the plates, the arms of each pair of plates being fitted together, and all constructed and arranged substantially as shown and described, to admit of the turning or adjusting of the teeth as the beams A A are expanded or contracted, as set forth.

2. The adjusting of the clevis-plates *k k*, by means of the bolt *m*, fitted in any of a series of holes, *l*, in said plates, in connection with the spring-catch G, all constructed and arranged to admit of the adjustment of the gauge-wheel C, substantially as and for the purpose set forth.

91,964.—JOHN POFFENBERGER and IRA M. POFFENBERGER, Urbana, Ohio.—*Corn-Harvester.*—June 29, 1869.

Claim.—1. The inclined board X, when supported parallel to the endless apron R and inclined bars V, by means of the curved springs Y, as herein described, for the purpose specified.

2. The wheel I^2, adjusted upon the lower end of the frame U, by means of the toothed post J′, pawl K′, and rod L′, all arranged as described, for the purpose of steadying the machine, when the filled box N′ is operated, as herein shown and described.

3. The receiving-box N′, constructed, arranged, and operating in combination with the crane M′, jointed catch-lever O′, stationary end board or plate R′, and endless apron R, substantially as herein shown and described, and for the purpose set forth.

4. The combination and arrangement of the wheel E′, sliding post or standard W, and rod G′, with each other and with the platform F′, substantially as herein shown and described, and for the purpose set forth.

91,965.—TREAT T. PROSSER, Chicago, Ill.—*Machine for Forming Threads on Screws.*—June 29, 1869.

Claim.—1. The combination of a pair of circular disks, each with a lateral surface, upon which is formed an annular die, composed of a series of concentric screw-forming projections, lying in the same plane, arranged so that their contiguous and operative faces shall be somewhat inclined to one another, and at different elevations, or axes lying in different vertical and horizontal planes, substantially as set forth.

2. An improved screw-forming machine, constructed substantially as herein described, in which the spiral thread is formed upon a bar or rod, by the compression of two disks or cups, each having on its face concentric projections and grooves, the edges of said projections being, on each disk, on the same plane, and the faces of said disks being set at an angle to each other, and said disks revolving in opposite directions, upon axes in different vertical and horizontal planes, equidistant above and below the axis of the rod or bar subjected to their action, substantially as set forth.

3. In combination with the screw-threading disks F F, constructed and arranged to operate substantially as set forth, the guide G, having an internal thread at G′, substantially as and for the purpose set forth.

4. The combination of the screw-threading disks, the tubular guide, and the adjustable rod placed in the latter, for regulating the length of the thread to be cut, substantially as set forth.

5. The arrangement of the screws K K′, handle or lever H, and the rods, which are secured to the ends of the shafts carrying the thread-forming disks, in virtue of which said disks are equally and simultaneously actuated, both in approaching toward and receding from each other, substantially as and for the purpose set forth.

91,966.—JOSEPH W. V. RAWLINS and SAMUEL STEPHENS, Houghton, Mich.—*Ore-Concentrator.*—June 29, 1869.

Claim.—1. The combination of the receiver B, spout A, guttered table C, revolving table F, and receiving-trough G, all arranged substantially as specified.

2. The combination, with the tables C and F, of the brushes H and scraper M, all arranged substantially as specified.

3. The combination, with the receiver B, guttered table C, table F, and scraper M, of the receiver L, spout K, and pipe N, substantially as specified.

4. The arrangement of the revolving-table F, fixed table C, support X, projection W, bearing and guiding rollers, and operating mechanism, substantially as specified.

91,967.—J. H. RICKETT, West Dover, Vt.—*Clothes-Boiler.*—June 29, 1869.

Claim.—1. My improved arrangement of the annular chamber or space C, the clothes-chamber and basket of the vessel A, the said annular space communicating at top and bottom with such clothes-chamber as described, and the basket, under such arrangement, being separate from the walls or sides of the clothes-chamber, and extended up within and below them, in manner substantially as represented and described.

2. The combination and arrangement of the frame E with the eductes *f f*, the vessel A, the annular space C, and its upper series of educts.

91,968.—FRANCIS RITCHIE, Troy, assignor to S. S. JEWETT, Buffalo, N. Y.—*Cooking-Stove.*—June 29, 1869; antedated June 15, 1869.

Claim.—1. The combination, in a cooking-stove, of an oven, A, having the lower part *c* of the portion furthest from the fire-chamber extended rearward beyond the upper part *d*, with a water-reservoir E, extended below the level of the top of the oven and over the rearwardly extended lower portion thereof, as herein set forth.

2. The arrangement of the flues N, O, P P, Q Q, R, S, exit-passage T, and valve or damper U, in combination with the fire-chamber oven, having the lower portion extended rearward beyond the upper part, and water-reservoir extended below the level of the top of the oven, and over the rearwardly extended lower portion thereof, as herein described.

3. In a cooking-stove, a hot-water reservoir, arranged in the upper rear portion of the stove, and extended below the level of the top of the oven, when the rear upright side *i* of the reservoir is even with or in substantially the same plane as the upright outer rear flue-plate *g* of the stove, as herein set forth.

91,969.—JOSEPH SAXTON, Washington, D. C.—*Folding Opera-Glass.*—June 29, 1869.

Claim.—1. The connecting of the eye-glass *a* to a hinged and adjustable plate, *b*, which, when shut down, forms a part of the case or cover, substantially as described.

2. In addition to the pivoting of the large glass to the frame, to swing it in and out of the case, the hinge for allowing it to be turned at right angles to the plane on which it so swings in and out, substantially as described.

3. A folding opera-glass, which swings into a case or cover, forming a part of the instrument, and which is opened out and arranged for use, substantially as described and represented.

91,970.—SOCRATES SCHOLFIELD, Providence, R. I.—*Braiding-Machine.*—June 29, 1869.

Claim.—1. The combination of a handle, D, stop-rim B, spring L, and spring C, operating substantially as described.

2. The combination of the spool P, revolving upright arms or ribs *h h*, tension-weight I, and spring K, operating substantially as described.

3. The combination of a tension-weight, I, spring K, sliding-thimble Q, and guide-wire S, arranged upon a carrier, substantially as described.

4. The combination of a spring, K, sliding-thimble Q, stationary collar R, guide-wire S, and tension

weight I, arranged upon a carrier, substantially as described.

91,971.—GOTTLIED SCHWARZWALDER, Pittsburgh, Pa.—*Machine for Cutting Vermicelli.*—June 29, 1869.

Claim.—1. The box E, having the inclined bottom G, cover F, and guides *e e*, when constructed substantially as and used for the purpose specified.

2. The knife-frame S, held in position by the swinging-arm T, and crank U, by which the knife is operated, when the parts are arranged and operated substantially as described.

3. The combination of the knife, supported as described, and of the feed-rollers, operating as described, with the box G, constructed as described, forming a machine used for the purpose set forth.

91,972.—JOSIAH SHEPARD, Newport, Me.—*Plow.*—June 29, 1869.

Claim.—An improved plow, provided with a long roller, D, and horizontal roller or wheel F, and having the rear lower part of the landside cut away, substantially as herein shown and described, and for the purpose set forth.

91,973.—JOSIAH SHEPARD, Newport, Me.—*Cultivator.*—June 29, 1869.

Claim.—1. The combination of the two small plows A, bars B, supports D, wheels C, central bar F, and central plow G, having fingers formed upon the rear edges of its rings, with each other, substantially as herein shown and described, and for the purpose set forth.

2. The pivoted tilting-beam H, pivoted lever K, and staples h^1 h^2, arranged upon the frame B E F, bearing the wheels C, as herein described, for the purpose specified.

91,974.—JOHN SIMENSEN, Hermon, N. Y., assignor to himself and OTIS EARL, same place.—*Extension-Table.*—June 29, 1869.

Claim.—A dining or extension table, arranged to assume a curved form around a space at the axis of the curvature, when extended, substantially as herein specified.

91,975.—T. D. SIMONTON, St. Paul, Minn.—*Pocket-Stereoscope.*—June 29, 1869.

Claim.—1. A stereoscope instrument, consisting of the case or box A, adjustable slide C, and flexible partition E, all arranged substantially as herein described, for the purpose specified.

2. The folding partition E, arranged to slide upon the bottom of the case A, and to be supported when in use by the cover B, substantially as described, for the purpose specified.

91,976.—THOMAS D. SIMONTON, St. Paul, Minn.—*Pocket-Stereoscope.*—June 29, 1869.

Claim.—The pocket-stereoscope, consisting of the lens-piece A, having the slots D D, or their equivalents, and the slide and view-holder F, having the slots G H, or their equivalents, all constructed as described, and adapted to be applied to the card E, substantially as herein set forth, for the purpose specified.

91,977.—VALENTIN SIPPEL, Niagara City, N. Y.—*Harrow.*—June 29, 1869.

Claim.—The setting of the rails *o* a little wider apart at and toward the rear, the bars *f f* slanting in opposite directions across the front ends of the rails *o*, beginning the teeth at unequal distances from the ends of the rails, and all these features in combination with the sliding-hinge, draw-bar *b*, and ring *e*, when the whole are constructed, arranged, and operated, in the harrow described, substantially as and for the purposes set forth.

91,978.—OTTO SLIKER, Lincoln, Ill.—*Door-Holder.*—June 29, 1869.

Claim.—1. The expanding springs B B′, when provided with convex or semispherical projections C, in combination with plate E, provided with hole *e*, as shown, and for the purpose described.

2. In combination with the above, the ring or band D and cushion G, as shown, for the purpose described.

91,979.—OTTO SLIKER, Lincoln, Ill.—*Extension-Trestle.*—June 29, 1869.

Claim.—The combination and arrangement, in an extension-trestle, of sliding-legs A A′, B B′, sliding cross-beams C C′, screw-bolts *d d′*, thumb-nuts *e e′*, bands *a a′*, *b b′*, *c c′*, sheaves *f f′*, ropes *g g′*, slots *h*, ears *i i′*, bars *k k′*, pins *l l′*, and holes *m m′*, all arranged and operating as described and shown.

91,980.—BENJAMIN F. SMITH, New Orleans, La.—*Pipe for Water, Gas, &c.*—June 29, 1869.

Claim.—1. The use of American swamp-cane, as a base for water, gas, and other conduit-pipes, substantially as herein described.

2. The process, substantially as herein described, of preparing American swamp-cane for use as water, gas, and other conduit-pipes.

91,981.—WILLIAM SNOOK, Pleasant Plain, Iowa.—*Cultivator.*—June 29, 1869.

Claim.—The combination of the bent yoke K L, bent lever O, curved plates I, and the adjustable connecting-bars M N of the cultivator-beams, arranged, in their relation to the plows, as herein set forth.

91,982.—FREDERIC H. SNYDER, Jersey City, N. J.—*Composition for Covering Steam-Generators.*—June 29, 1869.

Claim.—The above-described composition, consisting of the ingredients named, and in substantially the specified proportions.

91,983.—JOSEPH SPOONER and EBENEZER SPOONER, New York, N. Y.—*Paper-Box Machine.*—June 29, 1869.

Claim.—1. The expanding head E, in combination with the cone *b′*, when used in connection with the operating mechanism of a paper-box machine, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the expanding head E, cone *b′*, shaft B, and hand-nuts G, with each other, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the shaft M, sleeve K, lever spring-catch L, and plates N and O, with each other, substantially as herein shown and described, and for the purpose set forth.

4. The combination of the shaft M, sleeve K, spring lever-catch L, plates N and O, springs R and S, and spring-catch P Q, with each other, substantially as herein shown and described, and for the purpose set forth.

5. The combination of the expanding head E, cone *b′*, shaft B, hand-nut G, plates N and O, shaft M, sleeve K, lever spring-catch L, springs R S, and spring-catch P Q, with each other, substantially as herein shown and described, and for the purpose set forth.

91,984.—GEORGE STACKHOUSE, Mount Washington, Pa.—*Attachment for Comb.*—June 29, 1869.

Claim.—A comb-attachment, consisting of the swinging-trough B, substantially as herein shown and described, to operate as set forth.

91,985.—W. H. TAPPEY, W. C. LUMSDEN, and ALEXANDER STEEL, Petersburgh, Va.—*Tobacco-Press.*—June 29, 1869.

Claim.—The compressing device, consisting of the band C, provided at each of its ends with the heads D E, operated by a right and left hand screw F, with nuts *g*, cog-wheel H, pawl I, and pawl-handle J, all combined and arranged substantially as herein set forth.

91,986.—CLINTON W. TERPENING, Geneseo, Ill.—*Harness-Tug or Trace-Supporter.*—June 29, 1869.

Claim.—As a new article of manufacture, the trace-supporter, consisting of the case A, spring C, and hook D, constructed as described, and arranged to operate in the manner herein shown and set forth.

91,987.—HUBBARD W. TILTON, Walpole, Mass.—*Axle.*—June 29, 1869.

Claim.—The arrangement of the groove-cavity *a*, within one of the ears, C or D, of the sleeve or journal-box.

91,988.—M. Umstadter, Norfolk, Va.—*Type Setting and Distributing Machine.*—June 29, 1869.

Claim.—1. The distributing of type, by shoving the same, through the medium of keys Q, and suitable mechanism connected therewith, transversely upon a bar, O, moving the type on said bar by means of the carriers on the belt L, composed of the spring-plates N, with prongs *c c* attached, and drawing the type into the proper chambers R by the hooked rods or bars A′, all arranged to operate in the manner substantially as and for the purpose set forth

2. The plate G′, connected with the bar F′, operated by the arm B′, arranged substantially as shown, for the purpose of rendering the carriers inoperative, when necessary, as hereinafter set forth.

3. The racks S, with pins *d*xx at their lower ends, in connection with the pinions T, ratchets V, and the pawls W, connected with the keys Q, all arranged to operate substantially in the manner as and for the purpose specified.

4. The setting up of the type, by forcing them from the bottoms of the chambers R transversly upon a bar, L′, on which they are propelled along to a stick, N′, by means of carriers attached to an endless belt, G, and composed of springs M′, provided with prongs *o o*, all arranged substantially as shown and described.

5. The spring-bars K′, operated upon by the arms J′, and arranged, in relation with the springs M′ of the carriers, on belt G, so as to render the carriers inoperative, when necessary, substantially as set forth.

6. The herein-described arrangement of the keys Q H′, for the purpose specified.

7. The combination of the two sets of keys Q H′, with their concomitant parts, the chambers R, with their racks S, and the endless belts and carriers, all arranged substantially as shown, to admit of the distributing and setting up of type being performed on one and the same machine, as set forth.

91,989.—J. B. Van Deusen, New York, N. Y.—*Fluid-Meter.*—June 29, 1869.

Claim.—1. A water-meter, composed of the following elements combined, viz:

(1.) Two D-valve cylinders or pistons, each provided with a D-cavity and two valve-ports leading out of the cylinder, water under pressure having access at all times to the inside of said cylinder, substantially in the manner herein set forth.

(2.) Two water-cylinders, within which the D-valve cylinders are to operate as specified, said water-cylinders being of sufficiently greater length than the D-valve cylinders, to provide a water-chamber at each end of water-cylinders, substantially as described.

(3.) A valve-seat piece, forming part of the two water-cylinders, having two seats, one the seat of one D-valve cylinder, and the other the seat of the other D-valve cylinder, said seats having each, at center of length, a discharge-port, and said seat piece having four passages through it, viz, one from each water-chamber of the one water-cylinder, leading to and opening into the seat of the D-valve of the other water-cylinder, so that the D-valve cylinder of one water-cylinder is at all times supplying water under pressure to the one chamber, and taking water from the other chamber of the opposite water-cylinder, continuous reciprocating movements of the two D-valve cylinders being thus produced, substantially in the manner set forth.

2. The valve-cylinders or pistons, constructed with a central cavity, and a valve opening on each side of said cavity, bearing the relation to the channel-ports and discharge-opening in each water-cylinder, substantially as herein shown and set forth.

3. The combination, with the two water-cylinders and central discharge-openings, of the inlet or bottom sediment-chamber, and the outlet or discharge-chamber, substantially as shown and specified.

4. The combination, with the reciprocating valve cylinders or pistons, of the cranks and shaft, for actuating the register and regulating the length of stroke of said valve-cylinders, substantially as shown and described.

5. The formation of the cylindrical valve-pistons, of brass or other sheet metal, substantially as and for the purposes set forth.

91,990.—Paul Viccellio, New Orleans, La.—*Wood-Plane.*—June 29, 1869.

Claim.—The above-described plane, when composed of the combination of the bit *c*, wedge *b*, cap *a*, and its adjusting devices, with the stock A, all constructed to operate in the manner and for the purpose substantially as described.

91,991.—Franz Wagner, New York, N. Y., assignor to himself and Joseph Metzner, same place.—*Fluid-Meter.*—June 29, 1869.

Claim.—The construction and arrangement of the meter-case A A′, the two cylinders B B′, with four valve-ports and delivery-chambers *l l′*, and four chambers or passages intermediate between the two cylinders, with intervening partitions *i j*, substantially as and for the purposes shown and set forth.

91,992.—Joseph B. Wilkinson, Troy, N. Y.—*Cooking-Stove.*—June 29, 1869.

Claim.—1. The employment of the back oven-plate of a cooking-stove as a support for a reservoir, warming-oven, or any equivalent thereto, as herein described.

2. Constructing the back oven-plate of a cooking-stove with a bend backward, and extension covering the back flues of the stove and the back plate of the stove, and extending to any distance beyond the back plate of the stove, so that it can be used as a shelf or support for a reservoir, warming-closet, or any other article, the said plate having apertures over the back flues of the stove for the passage of hot air, smoke, &c., with or without dampers, as desirable.

3. The boxing or encasing of the middle back flue, by the bent back piece or plate K and the side pieces J, in manner and for the purpose substantially as described and set forth.

91,993.—Joseph B. Wilkinson, Troy, N. Y.—*Cooking-Stove.*—June 29, 1869.

Claim.—1. The extension of the top oven-plate of a cook-stove beyond the back plate of the oven, over the back flues of the stove, to the back plate of the stove, covering the said back flues of the stove, and reaching or extending to any point or distance beyond the said back plate of the stove, in the manner and for the purpose substantially as described.

2. Curving or bending the said top oven-plate of a cooking-stove, at any suitable point in the extension or extended part thereof, beyond the back of the upper back corner of the oven, for the purpose and in the manner substantially as described and set forth.

3. The apertures F, in the said top oven-plate, with or without dampers, and in combination therewith, temporarily covering the same, in the manner and for the purpose substantially as described and set forth.

4. The employment of a water-reservoir or tank, or any equivalent therefor, in combination with the extended top oven-plate of a cooking-stove, resting upon or cast as a part of the said top oven-plate.

5. The division pieces S, or any equivalent therefor, in combination with the said extended top oven-plate, in the manner and for the purpose substantially as described and set forth.

6. The curved plate L, with or without apertures, and with or without dampers, substantially in the manner and for the purpose as described and set forth.

7. The covers T, with the pivots U, for the purpose and in the manner substantially as described and set forth.

91,994.—James Williams, New York, N. Y.—*Reversible Parasol.*—June 29, 1869.

Claim.—1. The arms or stretchers A, braces C, cover and runners B E, arranged for maintaining the parasol, when extended, in the form of a flat disk, with a central conical projection, substantially as specified.

2. The arrangement of the runners, braces, stretchers, and holding-springs, whereby the cover or top is made detachable from the handle, for reversing the position thereof, substantially as and for the purpose specified.

3. A parasol-frame, arranged for folding or spreading the same by a movement of the runner, carrying

either the braces or arms in either direction on the stock, substantially as specified.

91,995.—Louis Gabriel Yon, Paris, France.—*Rope, Cord, &c.*—June 29, 1869.

Claim.—As a new article of manufacture, ropes or cables, constructed as described, of the straight inner threads *a*, bound together by the outer woven layer of thread *b*, as herein described, for the purpose specified.

91,996.—Albert A. York, De Lancey, N. Y.—*Horseshoe.*—June 29, 1869.

Claim.—The lips F, and the removable elastic, angular clasps E, in combination with the shoe A, whereby the shell of the horse's hoof is adapted to rest upon the shoe, between the lip and clasps, to prevent it from being bent inward and broken, as herein shown and described.

91,997.—John Francis Adams, New York, N. Y.—*Stereoscope-Instrument.*—June 29, 1869.

Claim.—1. In combination with a stereoscope, the use of magnets, substantially as and for the purposes herein shown and described.

2. The metallic binding *m*, or its equivalent, on the ends of stereoscopic or photographic pictures, substantially as and for the purposes described.

3. The buttons J, in combination with a stereoscope, for delivering the pictures singly from the pack, when constructed, revolved, and operating substantially as described, for the purposes set forth.

4. The method of discharging the pictures from the magnets, substantially as described.

91,998.—Benjamin F. Alexander, Glen Hope, Pa.—*Horse Hay-Fork.*—June 29, 1869.

Claim.—The slide B′, provided with the pointed head B, handles *b b*, and shoulder *n*, in combination with the fixed part A, having the arms *c c* and shoulder *m*, the arms *c′ c′*, articulated to the head B, the arms *c c*, articulated to the parts A and *c′ c′*, and the eccentric lever *o*, pivoted in a slot in the part A, and operating against the inner face of the part B′, all constructed, arranged, and operating together substantially in the manner and for the purpose set forth.

91,999.—Benjamin T. Babbitt, New York, N. Y.—*Grate for Steam-Generator and other Furnaces.*—June 29, 1859.

Claim.—1. The construction of the grate, consisting of the hollow main bar A, provided with suitable inlet and outlet passages, for establishing flow of water through the grate and hollow side or branch bars B, left free or disconnected from each other at their outer ends, and in communication with the main bar at their inner ones, substantially as specified.

2. The combination, with the hollow main and branch bars A and B, constructed and arranged substantially as specified, of the bent tubes *a*, made of more flexible metal than the bars, substantially as specified.

92,000.—Benjamin T. Babbitt, New York, N. Y.—*Steam-Generator.*—June 29, 1869.

Claim.—1. The arrangement, with the main pipes or body of the structure, of the drum D, and connected with the same by means of bent pipes *a a*, whereby to secure an independent flexibility to such connections, and thereby to provide for the expansion and contraction of the main pipes, as herein set forth.

2. The combination, with the main pipes B B and branch pipes C C, of the tubular connections *b b*, of flexible character, as described, and arranged to connect the branch pipes with each other, and with the drum, substantially as specified.

92,001.—Edwin A. Barton, Boonville, Ind.—*Combined Seed-Sower, Harrow, and Roller.*—June 29, 1869.

Claim.—1. In combination with the roller-frame A A and harrow-frame J J, constructed as shown and described, the peculiarly shaped bearings P Q, the belts R R, and wedges M M, all operating substantially as and for the purpose set forth.

2. A combined seed-sower, harrow, and roller, capable of conversion by means of the peculiarly shaped bearings P Q, belts R R, and wedges M M, as and for the purpose hereinbefore specified.

3. In combination with the harrow-frame J J, when connected with the roller-frame A A, by means of the bearings P Q, belts R R, wedges M M, the screen O, constructed and arranged as and for the purpose set forth.

92,002.—Isidore Bezenah, St. Martin's, Ohio. *Stump-Extractor.*—June 29, 1869.

Claim.—1. In combination with the axle A and wheels B, the grapnel-chain J *j*, block I, chain H, blocks E E′ N, lever M, and chain or chains Q R *r*, the lever or hounds D C, as and for the purpose stated.

2. In combination with the elements A B C D M, the lever-frame S T U, for the double purpose of drawing back the lever M, and of raising the loosened stump clear of the ground, as set forth.

3. The provision, in the lever-frame S T U W, of the removable portion T U W, as and for the purpose stated.

92,003.—Ira Bicknell, Cincinnati, Ohio.—*Fuel.*—June 29, 1869.

Claim.—A fire-kindling, composed of wood saturated with petroleum, or its equivalents, and sized or coated with rosin or pitch, beeswax, and paraffine, to prevent its evaporation, or any other substantially the same, and will produce the same effect.

92,004.—F. C. A. Bock, Copenhagen, Denmark.—*Manufacture of Stearic Acid.*—June 29, 1869.

Claim.—The process of manufacturing stearic acid, employing sulphuric acid as an active agent, and avoiding the dangerous operation of distillation, by proceeding, for the elimination of the black substances, in the manner herein described.

92,005.—N. P. Bradish, Jerseyville, Ill.—*Rock-Drill.*—June 29, 1869; antedated June 18, 1869.

Claim.—1. The cams C C, constructed and arranged as described, in combination with grooved arms D and arm E, constructed and arranged as described, for the purpose set forth.

2. The arms D and E, when connected by means of the ball and socket joint, as and for the purpose set forth.

3. The clasp H, tooth-arm *h*, and bar *h′*, when constructed as described, and operated as and for the purpose set forth.

4. The drilling-machine described, consisting of the cams C, arms D E, clasp H, drills F, and frame I, the whole being constructed, combined, and arranged in the manner and for the purpose set forth.

92,006.—Barnerd Branon and George H. Baldwin, Sharon, Pa.—*Apparatus for Collecting the Waste Gases of Smelting-Furnaces.*—June 29, 1869.

Claim.—The furnace A, in combination with the pipes B and E, when said pipes are furnished with sliding-valves, constructed as and for the purpose described.

92,007.—Joseph Sykes Bromhead, Peckham, England.—*Regulator for Gas-Burner.*—June 29, 1869; patented in England July 23, 1868.

Claim.—The combination of a series of perforated disks of metal, with a screw-threaded rod, to permit of their ready adjustment, at suitable distances apart, according to the pressure of the gas, substantially as herein set forth.

92,008.—William Frank Browne, New York, N. Y.—*Broiler.*—June 29, 1869.

Claim—1. A broiler, having the form, and provided with the conical projections *a a*, with lateral apertures at their base, substantially as and for the purposes herein specified.

2. A broiler-cover, B, so formed as to serve the double purpose of a close cover for the broiler and a separate cooking-utensil, substantially as herein set forth.

92,009.—William Brückner, Central, Col. Ter.—*Process of Roasting Auriferous Sulphurets.*—June 29, 1869.

Claim.—The use and application of these materials in a particular manner, and for special purposes, substantially as set forth in the foregoing specification.

92,010.—David R. Bruton, Thomasville, N. C.—*Animal-Trap.*—June 29, 1869.

Claim.—The combination of the tube *e*, the rack *d*, the stay-beam *f*, and fall-doors, substantially as described above.

92,011.—George H. Buckius, Canton, Ohio, assignor to himself, C. Aultman, A. C. Tonner, and P. S. Sowers, same place.—*Harness-Tug Buckle.*—June 29, 1869.

Claim.—1. The buckle-frame C E B B A, herein described, having the tongue-base A, arranged with respect to the tongue-axle E and the portion C of the frame, substantially as and for the purpose specified.

2. The buckle-tongue D, constructed as described, when used in combination with the buckle-frame C E A, constructed as specified, substantially as and for the purpose herein specified.

3. So constructing and arranging the frame C, tongue-axle E, tongue D, and buckle-strap F, with respect to each other, as that the tongue D shall prevent the trace H from sliding back sufficiently to allow the tongue to free itself from the trace, except when the frame C and trace H are made to assume an angle with each other, substantially as and for the purpose specified.

92,012.—Aaron H. Burgess, Philadelphia, Pa.—*Window-Shade Fixture.*—June 29, 1869.

Claim.—1. The tongues *a a* of the pulley F, and disk F′, adapted to the grooves *b* and *b′* of the roller C, for the purpose of attaching the curtain H and the said pulley and disk to the roller, substantially at herein set forth.

2. The fixtures B and B′, arranged to support the pulley F and disk F′, and adapted for ready attachment to a window-frame, substantially as herein set forth.

92,013.—Bethel Burton, Brooklyn, N. Y.—*Breech-Loader.*—June 29, 1869.

Claim.—1. Constructing the trigger K with an arm, *k*, to operate the carrier, substantially as shown and described.

2. The spring J, in combination with the trigger K, arm *k*, and carrier T, substantially as shown and described.

3. The longitudinal rib N N′, or its equivalent, constructed and operating substantially as shown and described, for the purpose specified.

4. Fluting the breech-pin F, hammer L, and steady-pin I, or the under side of the strap C, substantially as shown and described, for the purpose specified.

5. The lateral hook *h*, on the finger H, and its combination with the rib N N′, in the slot of the breech-pin F, substantially as shown and described.

92,014.—George F. Case, New York, N. Y.—*Rock-Drill.*—June 29, 1869.

Claim.—1. The combination of the drill-rod *b* with the sleeve or collar *x*, nut *d*, and friction-band E, substantially as shown.

2. The friction-band E, lever F, standard G, and nut *h*, with connections, in combination with the friction-wheel *d*, when arranged substantially as shown and for the purpose specified.

3. The shaft *z*, in combination with the sleeve *x* and drill-rod *b*, and friction-wheel or band, as and for the purpose specified.

4. The loose collar C, with or without grooves, when placed upon the drill-head, as and for the purpose specified.

92,015.—James W. Chapman, Madison, Ind.—*Soda-Fountain.*—June 29, 1869.

Claim.—The combination, herein shown, of the treadles a^1 a^2, with the bent pump-rod *c*, tube *y*, and pump C, of a soda-fountain, when the said parts are arranged to operate substantially in the manner and for the purpose set forth.

92,016.—Luke Chapman, Collinsville, Conn., assignor to himself and Collins Company, same place.—*Gang-Plow.*—June 29, 1869.

Claim.—1. The combination of the frame of the gang-plow, with the cranked axle and wheels, by means of a rider, slotted as described, the whole constructed to operate substantially as before set forth.

2. The rider *g*, slotted substantially as described, for the purpose described.

3. The wheel-lever *l*, jointed in the manner described, to the crank-arm *j*, and pivoted at its lower extremity to the axle of the furrow-wheel *a*.

4. The combination of the jointed wheel-lever, the crank-arm *j*, and the rack *m*, the whole constructed to operate substantially as before set forth.

5. The posts *r* and *z*, attached, the former to the frame *d*, in the manner described, and the latter to the axle of the land-wheel, in the manner described, connected at the top by the jointed cross-bar Q.

6. The combination of the frame of the gang-plow, the cranked axle *s′*, the lifting-frame, the differential pulleys, and the chain therefor, the whole constructed to operate substantially as before set forth.

7. The combination of the frame of the gang-plow, the rider, the cranked axle, the lifting-frame, the seat, the jointed wheel-lever, the hand-lever, and racks, the whole constructed to operate substantially as set forth.

92,017.—Gardner Cox, Pierrepont, N. Y.—*Water-Wheel.*—June 29, 1869.

Claim.—The plates A, B, and G, gates C, chutes F, and pinion H, when constructed and arranged to operate substantially as and for the purposes specified.

92,018.—Joseph Croner, Cross Creek Village, Pa.—*Bee-Hive.*—June 29, 1869.

Claim.—A bee-hive, having box A, with bed-plate as described, frames *c*, rods *n*, tubes *s*, and hooks *u*, constructed and arranged to operate substantially as described.

92,019.—F. R. Crothers, Sparta, Ill.—*Gang-Plow.*—June 29, 1869.

Claim.—1. The adjustment-plates I, and brackets K, arranged to permit a lateral and vertical adjustment of the plow-beams L L′, substantially as set forth.

2. The beams L and L′, and the brace N, and link O, when arranged adjustably, substantially as and for the purposes set forth.

3. The foot-lever P, its attachment *q*, and chains Q, acting to raise the beams L and L′, and combined with the detent R, for holding the plows out of ground, substantially as set forth.

4. The axle A, and the adjustable sub-axle C, and frame G, when combined with the beams L and L′, by attachment devices, allowing each of said beams an independent vertical adjustment, substantially as set forth.

92,020.—James F. Dacey, Charlestown, Mass.—*Stench-Trap.*—June 29, 1869.

Claim.—1. A stench-trap, constructed with the partitions *h* and *i*, outlet *g*, outlet *p*, and screw-plug *q*, relatively arranged, substantially as shown and described.

2. The combination, with partitions *h* and *i*, when arranged as above set forth, of the overflow-pipe *f*, arranged as shown and described.

92,021.—George Edward Dering, Lockleys, near Welwyn, England.—*Railway-Rail Splice.*—June 29, 1869; patented in England November 23, 1860.

Claim.—Railway-fastenings of permanently elastic metal, (either steel-tempered, or wrought-iron case, or surface-hardened,) such fastenings constituting a new manufacture.

92,022.—Jerome C. Dietrich and Charles I. Humphrey, Rochester, N. Y.—*Plastering-Trowel.*—June 29, 1869.

Claim.—The standard C, formed with depressions *g*, and curved wings *f*, with or without the recess *e*, as herein shown and described.

92,023. — JOHN DUNLAP, Pittsburgh, Pa.— *Fruit-Can Label.*—June 29, 1869.

Claim.—As a new article of manufacture, providing each one of the constant series of labels, now in use upon the top of a fruit-can, with a corresponding indicator, consisting of an indentation to receive and retain a drop of the sealing-cement or other material, substantially as and for the purpose set forth.

92,024.—ROBERT DUNLAP, 1st, South Lyons, Mich.—*Potato-Digger.*—June 29, 1869.

Claim.—The cutters or shares and points E and G, provided with rods I and slats J, when said cutters are arranged relatively to each other, in connection with suitable frame A, and operating substantially as and for the purposes set forth.

92,025.—DAVID EATON, Rochester, Vt.—*Wagon-Brake.*—June 29, 1869.

Claim.—1. The arrangement of the bolster C, stop H, lever *h*, and upper part of reach E, operating as set forth.

2. The combination of the reach E, brake F, bolster C, stop H, and lever *h*, all arranged and operating substantially as shown and described.

92,026.—WESLEY FARRINGTON, Morrisania, N. Y.—*Mat and Scraper.*—June 29, 1869.

Claim.—The arrangement of the plate B, pivoted to the standards A A, and having scraper C, brush or mat D, and foot-attachment E, constructed as herein described, for the purpose set forth.

92,027.—ALBERT FICKETT, Rochester, N. Y., assignor to himself and CHARLES T. MOORE, same place.—*Process of Preparing Wood for Paper-Stock.*—June 29, 1869.

Claim.—1. As an improvement in the preparation of wood for the manufacture of paper-stock, the process of separating the fiber by pressure applied longitudinally with the grain, for the purposes set forth.

2. The process of producing paper-stock from wood, substantially as herein described.

92,028.—THOMAS E. FIELDS, Louisville, Ky.—*Stenciling-Apparatus.*—June 29, 1869.

Claim.—1. The described stencil-plate A, in combination with the described folding-leaf B, constructed and arranged and operated substantially as and for the purpose described.

2. The described cuneiform rod F, in combination with the described graduated staples *a a' a''*, constructed and operated substantially as described.

3. The described stencil-plate A, in combination with the described folding-leaf B, when both are used in combination with the described cuneiform rod F and staples *a a' a''*, in combination with each other, and constructed and arranged substantially as and for the purposes set forth.

92,029.—R. R. FOOTE, Chicago, Ill.—*Spray-Dampener.*—June 29, 1869.

Claim.—The combination of the pipe C, when provided with the wings *b b*, with the pipe B, substantially as and for the purpose herein described.

92,030.—FREDERIC J. FORSYTH, Au Sable, Mich.—*Windmill.*—June 29, 1869.

Claim.—The arrangement of the wings I, the vanes K, the arms H, the braces J, the levers N and Q, the pins L and M, the links O, and the flanges G, in combination with the shaft C, with its step D, collar E, and rollers *a*, and anti-friction bearing F, in connection with frame A and platform B, when constructed and operating as aforesaid.

92,031.—JAMES A. FOSTER, Detroit, Mich.—*Artificial Leg.*—June 29, 1869.

Claim.—1. The bolt A, in connection with plates or straps B and C, hollow nut *b*, wooden box or bearing D, eye-bolt E, and support F, and thigh and inferior leg, when constructed and operating substantially as and for the purposes set forth.

2. The screw H, provided with head I, nut K, and slot *i*, in connection with springs J, when constructed, arranged, and operating substantially as and for the purposes specified.

92,032.—JOSEPH FOWLER, Saugatuck, Mich.—*Copying-Press.*—June 29, 1869.

Claim.—The construction of a combined printing and letter-copying press, with the parts A, B, C, D, E, F, G, H, I, J, K, *a*, *b*, and *d*, or their equivalents, arranged and operating substantially as herein set forth.

92,033.—WILLIAM H. FOYE, San Francisco, Cal.—*Submarine Foundation.*—June 29, 1869.

Claim.—1. The ground frame, consisting of the rods F and girders *a*, in combination with the guide-rods *c*, connected and arranged substantially as herein set forth.

2. In combination with the rods *c*, the blocks K, provided with holes to receive said rods, substantially as described.

3. In combination with the above-claimed frame and rods, the top frame, consisting of the timbers A and B, and the cross-pieces I, provided with the staples *i i*, substantially as described.

4. In combination with the rods *c*, the binders *f*, substantially as and for the purpose specified.

92,034.—JOSEPH FREY and WENDELL EDERLE, Battle Creek, Mich.—*Scrubbing-Tool.*—June 29, 1869.

Claim.—As a new, cheap, and effective article of manufacture, the "cleaner and scourer" described, with a scouring-edge of India rubber, in which sand or emery has been combined in suitable proportions.

92,035.—G. W. FULTON, Fulton, Tex.—*Apparatus for Slaughtering and Curing Meat.*—June 29, 1869.

Claim.—1. The arrangement of the slaughter-house A, cooling and carrying way B, packing-house C, all substantially as specified.

2. The arrangement of the rails E, cars F, and cutting-table G, substantially as specified.

3. The combination of the cooling-apparatus I, cooling-chamber B, slaughter-house A, and packing-house C', when all arranged substantially as specified.

92,036.—JOHN GALE and MOSES B. AMES, Lawrence, Mass.—*Carriage-Seat.*—June 29, 1869.

Claim.—In combination with the body and jump, or shifting rear seat of a carriage, the bent arms C, partition or covering H, when combined and arranged substantially in the manner as and for the purposes set forth.

92,037.—ALPHEUS C. GALLAHUE, Riverdale, N. Y.—*Shoe-Pegging Machine.*—June 29, 1869.

Claim.—1. The frame A, pivoted centrally, and provided with curved rack E, in combination with pinion I, all constructed and arranged to operate as herein described.

2. The combination of the wheel G, provided with the spring *h*, and pin *n*, with sliding-bolt *o* wheel H, and spring *l*, all arranged to operate as herein set forth.

3. In combination with the pivoted standard C, the slotted arm *m* and spring-catch *r*, arranged to operate in connection with the pin *t*, substantially as herein set forth.

92,038.—JACOB GETZ, Buffalo, N. Y., assignor to himself and SAMUEL WILSON, same place.—*Smut-Machine.*—June 29, 1869.

Claim.—A smut-machine, consisting of the sectional concaves *b b*, with raised edges *c*, and beaters *a*, with edges *d*, combined and provided with the emery filling, substantially as and for the purpose described.

92,039.—CHARLES M. GRANNIS, Morrisville, N. Y.—*Stove-Pipe Shelf.*—June 29, 1869.

Claim.—The combination and arrangement of the rings A and B, sockets *c*, arms *s*, shelf C, and jaws and flanches, as herein shown and described, for the purposes specified.

92,040.—W. N. GRAVES, St. Louis, Mo., assignor to himself and E. C. STERLING, same place.—

Machine for Preparing Clay for Brick-Making.—June 29, 1869.

Claim.—The disk A, when supported by notches F and bolts G, and arranged as described, for the purpose set forth.

92,041.—ORLANDO M. GRIMES, Newark, N. J.—*Lathe.*—June 29, 1869.

Claim.—1. The combination of hollow tapered and slotted mandrel A, sleeve C, and lever E, as and for the purpose set forth.

2. The combination of the tool-holders I and H, lever J, gauges K and N, as and for the purpose set forth.

3. The arrangement of the drill O, cutters P and Q, and stock R, as and for the purpose set forth.

92,042.—JOHN T. HAGERTY, Camp Point, Ill.—*Self-Adjusting Equalizer for Plows, &c.*—June 29, 1869.

Claim.—The construction of the double rack D and C, in front of the double or whiffle tree B, in combination with the hammer-strap J, guard M, and pole A, when constructed, arranged, and operating so as to equalize the strain on the double-tree, as herein described, and for the purpose set forth.

92,043.—WILLIAM HAILES, Albany, N. Y.—*Coal-Stove.*—June 29, 1869.

Claim.—1. A fire-pot, having a depressed basket-grate extending into the ash-pit section of the stove, in combination with an air heating chamber, *a*, surrounding said fire-pot, and having passages *s* leading from it into the ash-pit, substantially as described.

2. A double-acting damper, J, or its equivalent, applied at the base of a chamber, *a*, surrounding a fire-pot, substantially as and for the purposes described.

3. The annular chamber *a*, perforated at four points, *b s e d*, substantially as described.

4. The relative arrangement of the annular deflector D, with the air-jet passages *d*, and a fire-pot having an air-heating chamber around it, substantially as described.

5. In a stove which has a depressed basket-grate, a heat-deflector, D, arranged substantially as described.

6. The annular flue-space *g*, and chamber *f*, arranged below the oven-plate *k*, substantially as described.

7. The heat-concentrating plate *e*, in combination with the oven G, and exit-flue *h*, substantially as described.

92,044.—H. F. T. HALE, East Saginaw, Mich.—*Velocipede.*—June 29, 1869.

Claim.—The steadying support C, consisting of the slotted prongs *p p*, operated by the sliding bifurcated rod *f*, and arm *e*, in combination with a velocipede, substantially as herein set forth.

92,045.—JOSEPH HALL and DANIEL HALL, Chicago, Ill.—*Railway Rail and Splice.*—June 29, 1869.

Claim.—A double-headed rail, A H, provided with flanges B, in combination with couplings E, provided with flanges D, said couplings being arranged to fit in gains in the ties, and the flanges to provide a solid seat for the rails, as set forth.

92,046.—CALVIN HART, Farmington, Ill.—*Farm-Gate.*—June 29, 1869.

Claim.—The gate C, as constructed, in combination with roller F and clasp J, provided with upper and lower rollers M and N, all arranged to operate substantially as and for the purpose set forth.

92,047.—C. F. HERRICK, Independence, Iowa.—*Door-Latch.*—June 29, 1869.

Claim.—1. The slotted lever I, when so arranged as to tilt forward and catch the arm G of the latch F, in the manner and for the purpose described.

2. The arrangement of the latch F, provided with the arm G, lever I, bolt C, slotted plate *d*, and door-plate A, when all are combined in the manner and for the purpose set forth.

92,048.—MATHIAS J. HINDEN, Detroit, Mich.—*Breech-Loading Fire-Arm.*—June 29, 1869.

Claim.—The safety-guard I, provided with slide R, in connection with the cylinder D, and the needle-stock G, when arranged and operating for the purpose aforesaid.

92,049.—G. W. HINMAN, Paducah, Ky.—*Fire-Place Grate.*—June 29, 1869.

Claim.—1. A coal-grate, constructed in sections, as described, and having lugs *i*, notches *v*, and extended side bars, as shown, substantially as and for the purposes specified.

2. In combination with a coal-grate, constructed as described, the lugs *s* and hooks *u*, arranged in the chimney, substantially as and for the purposes set forth.

92,050.—RICHARD M. HOE and STEPHEN D. TUCKER, New York, N. Y.—*Printing-Press.*—June 29, 1869.

Claim.—1. The combination and arrangement, in a printing-machine, of two series of rollers, consisting of two printing-cylinders and one impression-cylinder, with two impression-cylinders and one printing-cylinder, with the requisite inking machinery, arranged and operating substantially as and for the purposes set forth and specified.

2. Arranging the endless blankets for the impression-cylinders, as shown, whereby the same are made to perform the twofold duty of blankets and sheet-conveyers, thus dispensing entirely with the use of tapes for conveying the sheets, substantially as described and specified.

3. The mechanism for sustaining the cylinder for changing the form or blanket, consisting of the rod *o* and bar *k*, substantially as described.

92,051.—WILLIAM H. HOWLAND, San Francisco, Cal.—*Steam-Engine Governor.*—June 29, 1869.

Claim.—1. In combination with the springs *a*, the weights F, when constructed and arranged substantially as herein set forth.

2. In combination with the springs and weights above claimed, the case A, provided with the sliding-collar E, containing the valve-stem H, substantially as described.

3. In combination with the collar E, the adjusting-nuts *i i*, cap I, and cup *m*, substantially as described.

92,052.—WILLIAM H. HOWLAND, San Francisco, Cal.—*Steam-Engine Valve.*—June 29, 1869.

Claim.—1. The valve-chambers C C′, having the passages G, H, and J, together with rotating valves *a*, with their arms *a′*, when constructed substantially as herein described.

2. The reversing mechanism, consisting of the movable shafts E, with the oblique slots *d*, and the pins *e*, substantially as herein described.

3. The construction and arrangement of the valves *a* and passages *c e*, substantially as described.

92,053.—THOMAS A. HUNTER and JOHN BLEWITT, New York, N. Y.—*Lamp-Bracket.*—June 29, 1869.

Claim.—1. The clips *f*, fitted to receive the lower part of the lamp reservoir, in combination with the rib or projection upon said reservoir, as and for the purposes set forth.

2. The bracket or socket *k*, formed with two holes at right angles to each other, for receiving the pivot *h*, and provided with the clamping-screw *l*, as and for the purposes set forth.

92,054.—JACOB JAMESON, Philadelphia, Pa.—*Flux for Manufacturing Steel.*—June 29, 1869.

Claim.—The herein-described composition, as a flux, for the manufacture of steel.

92,055.—BENJAMIN F. JOHNSON, Troy, N. Y.—*Cooking-Stove.*—June 29, 1869.

Claim.—1. The back of a cooking-stove, constructed with rests and recesses, as described and shown, for the purpose set forth.

2. The combination of a water-tank with such recessed back of said stove, in the manner and for the purpose above described.

3. The division of the upper part of the flue by means of the plate *e*, or its equivalent, in combination with damper *b*, for the purpose above described.

4. The division of the said flue by the plate *e*, in Fig. 6, in combination with the flue f^2 in the tank A, Fig. 2, for the purpose herein described.

5. The two parts of the back plate of the stove *d* and *e*, in combination with the flue-opening between them, for the purposes herein described.

6. Said several parts of the back plate of a cooking-stove, and the flue-opening between the same, in combination with the water-tank A, constructed and arranged in the manner and for the purposes herein described.

7. The plate e^1, to complete the stove, without the combination of the water-tank, substantially as described.

8. The damper *b*, in combination with the plates *d* and *e*, substantially as described.

92,056.—JOHN JORDAN, Red Wing, Minn.—*Corn-Sheller.*—June 29, 1869.

Claim.—A corn-sheller of concave form, as shown and described, and having teeth *a* and *c* attached thereto, constructed and arranged to operate substantially as specified.

92,057.—AGUR JUDSON and STEPHEN A. FARRINGTON, Newark, N. J.—*Hydraulic-Press.*—June 29, 1869.

Claim.—1. The self-acting levers, having the swell and hook, or their equivalents, thereon, the swell having a prominence exceeding that of the hook, when the lever is used in combination with a plate, D, substantially as shown and described.

2. A series of disconnected plates, combined with a series of self-acting hook-levers, constructed substantially as described.

92,058.—WILLIAM W. KINGSBURY, Kalamazoo, Mich.—*Harvester-Rake.*—June 29, 1869.

Claim.—1. The pivoted rake-head F′, provided with the screen J, as described, for the purpose set forth.

2. The rake-arm F, with rake-head F′, crank-arm H, carrier rod I, and disk C, when combined and arranged as and for the purpose described.

92,059.—JOSEPH KLINKHARDT, St. Louis, Mo.—*Brick-Machine.*—June 29, 1869.

Claim.—1. The mold D′, arranged with a movable bottom plate, G, supported on the standard H, and pressed up by the cam I, and its operating devices, substantially as set forth.

2. The bar M, and its forks *m′*, operated in combination with the plate G, substantially as set forth.

3. The plunger *q′*, and its operating devices, acting to tilt the brick on the plate G, substantially as set forth.

4. The plunger R, S S′, T T′, when constructed as described, in combination with the cross-head U, intervening elastic connection *u*, or its equivalent, and set-screws V, substantially as and for the purposes herein set forth.

92,060.—S. M. KNAPP and JOSEPH SWITTER, Massillon, Ohio.—*Shovel-Handle Tops.*—June 29, 1869.

Claim.—The improved shovel-handle top herein described, composed of the socket A, arms B E, B E, provided with lips D D, cross-bar C, with end notches *k k*, and retaining-screws F F, or their equivalents, the several parts being constructed, combined, and arranged substantially as and for the purpose herein specified.

92,061.—W. C. KNOX, Jacksonville, Ill.—*Grain-Separator and Scourer.*—June 29, 1869.

Claim.—1. A grain-scourer, constructed of perforated sheet-iron or other metal, in segments of a spiral or inclined-plane shape, and so formed that, by opening or closing the outer or inner edges, the grain may be directed at the wish of the operator, substantially as set forth.

2. The arrangement of the circular receptacle C, tube *a*, shank D, with its cap E, having a circular flange *b*, and washer *c*, all substantially as shown and described.

3. In combination with the perforated lining or jacket *f*, the segmental scourers *h h*, secured to arms *g g* on the vertical shaft F, all substantially as and for the purposes herein set forth.

4. The arrangement of the tube *k*, lever *l*, screw-rod *n*, ears *o o*, and nut *p*, for the purpose of graduating the distance between the cap E and tube *i*, substantially as shown and described.

5. The arrangement of the suction-chambers O P, spout J, fan K, partition *t*, and opening *s*, all substantially as shown and described.

92,062.—WENZEL KOTZUM, Aurora, Ind.—*Draw-Bar.*—June 29, 1869.

Claim.—The combination of the draw-bar B, having shoulders *e e*, the cross-bars C C, springs *a a*, and flat bolt *b*, all constructed and arranged substantially as and for the purposes herein set forth.

92,063.—THOMAS LANGSTON, Brooklyn, N. Y.—*Lantern.*—June 29, 1869.

Claim.—The arrangement of the base A, with a shoulder on its top, catch C, flange B, slide E, and loop D, all constructed to operate substantially as set forth.

92,064.—THOMAS LANGSTON, Brooklyn, N. Y.—*Lantern.*—June 29, 1869.

Claim.—In combination with the base A, rim B, and catch C, the hinge D, and lug E, when all are arranged and combined to form a fastening for lanterns, substantially in the manner and for the purpose described.

92,065.—REUBEN LIGHTHALL, Brooklyn, N. Y.—*Compound to be Used in the Cure of Rheumatism.*—June 29, 1869.

Claim.—The appliances for the cure of rheumatism, and other diseases of similar nature, by the materials set forth.

92,066.—LANDY TUNSTALL LINDSEY, Jackson, Tenn.—*Electro-Magnetic Motor.*—June 29, 1869.

Claim.—1. The arrangement of the levers L L′, suspended over or between the magnets M M′ M″ M‴, and striking alternately upon the adjusting-screws *i i′ i″ i‴*, of the posts P P′ P″ P‴, substantially as hereinbefore described, and for the purpose of obtaining an unintermitting, reciprocating, automatic motion, as set forth.

2. The mechanical combination and arrangement of magnets M M′, lever L, stand S, posts P P′, constituting set No. 1; and of magnets M″ M‴, lever L′, stand S′, posts P‴ P‴, constituting set No. 2, the two sets taken together forming the instrument, the levers of each set actuated and controlled automatically by electro-magnetism, substantially in the manner set forth.

3. Extending the wires 3, magnet M and 5, magnet M′, of set No. 1, to and connecting them with posts P‴ P″, respectively, of set No. 2; uniting the wires 4, magnet M and 6, magnet M′, of set No. 1, and extending them by a connecting-wire leading from their junction to and connecting with stand S′ of set No. 2; extending the wires 7, magnet M″ and 9, magnet M‴ of set No. 2, to and connecting them with posts P P′, respectively, of set No. 1; uniting the wires 8, magnet M″ and 10, magnet M‴, of set No. 2, and extending them by a connecting-wire leading from their junction to and connecting with stand S of set No. 1, attaching or inserting the batteries, as hereinbefore described and set forth.

4. The employment of either of the sets as a governor, to regulate and control the rapidity of motion of the other set, substantially as set forth.

92,067.—ZEPHANIAH LOCKWOOD, Saratoga Springs, N. Y.—*Water-Elevator.*—June 29, 1869.

Claim.—1. The lazy-tongs, or compound lever for elevating water, when the links and the lever are made in the shape shown, and pivoted in such a manner that the chain shall gather faster from the bottom than from the top.

2. In combination with the above, the spring C, when arranged to operate as shown and described.

92,068.—DANIEL MACPHERSON, Edinburgh, North Britain.—*Sewing-Machine.*—June 29, 1869.

Claim.—1. The conical shuttle, having a lip, F, re-

cess D, and central pin E, for supporting a detachable spool, all constructed as described.

2. The combination, with the conical shuttle, of the hinged plates *q q'*, with their curved V-shaped edges adapted to the recess, *h*, of the shuttle, as and for the purpose specified.

3. The combination, with the conical shuttle, constructed as described, of the spring R and set-screw S, when the spring is arranged and bears upon the shuttle, so as to first detain and then release the loose loop of thread, as set forth.

92,069.—WILLIAM MAGUIRE, Baltimore, Md., assignor to himself and FRANCIS B. LONEY, same place.—*Railroad Platform-Scale.*—June 29, 1869.

Claim.—1. Constructing the frame of railway and similar scales in two parts, the lower part being supported by the weighing devices or mechanism, and the upper part supporting the platform or track, and so arranged as to rest on independent supports while the load is being run on or off, and so connected to the lower part, that the weight can be transferred from the independent supports to the lower part of the frame, and thereby to the weighing-mechanism, substantially as described.

2. The frames A and B, united by the bars F and plates I, arranged to operate as described, for the purpose set forth.

3. The combination of the rock-shaft O, bars G and F, and plates or bars I, when arranged to operate in connection with the frames A and B, substantially set forth.

92,070.—JOHN MALLIN, Chicago, Ill.—*Flour-Bolt Feeder.*—June 29, 1869.

Claim.—The agitator I, ribbed or cleated roller D, as arranged to operate, conjointly, in combination with the adjustable supplementary side G, and case, consisting of sections A B, all constructed and arranged to operate in the manner substantially as described and for the purpose set forth.

92,071.—M. R. MARCELL, Dansville, N. Y., assignor to himself and HIRAM CULVER, same place. —*Harrow.*—June 29, 1869.

Claim.—The combination, with the jointed harrow C^1 C^2, elevating-levers E E^1 E^2, and wheel-frame B, of the double set of draught-chains D D', radiating from the pole B', whereby one chain, D, holds the harrow in place, as it straightens back, and the other, D', balances it when elevated, as herein set forth.

92,072.—ISAAC W. MARTIN, Goodville, Pa.—*Thrashing-Machine.*—June 29, 1869.

Claim.—The arrangement of the contiguous perforated sliding-slats D, when connected with a hinged piece, F, or its equivalent, and to which the toothed rod G is also hinged, by a pivot or otherwise, both jointly moving in grooved or other guides, E, affixed so as to be stationary, in combination with the crank C, to operate the combined toothed rod, sliding-hinge, and slat, substantially in the manner and for the purpose specified.

92,073.—FREDERICK W. MASE, Waukau, Wis. —*Cockle-Separating Machine.*—June 29, 1869.

Claim.—1. As new, a revolving cylinder, B, with the inner periphery provided with cavities 3, substantially as described, for the purpose set forth.

2. The cylinder B, provided with cavities 3, in combination with vibratory receiver C and hopper D, substantially as described, for the purposes set forth.

3. The cylinder B, when provided with collars 2 2, bearings *b' b'*, and gear-wheel *g*, as and for the purposes set forth.

4. The shaft M, provided with a driving pulley or crank at N, pinion *g'*, bevel gear-wheel *h*, bevel-pinion and shaft *i*, crank *k*, connection *l*, when used in combination with and for operating cylinder B, and receiver C, substantially as described, for the purposes set forth.

92,074.—ABEL MATSON, Blockville, N. Y.—*Bed-Bottom.*—June 29, 1869.

Claim.—1. Constructing the bottom of a bed in two portions, which can be used to elevate the head, or shift the body from one side to the other, substantially in the manner and for the purpose set forth.

2. The slotted lever L, and tilting-lever M, shaft G, head and side piece B and C, and wheels H and I, when all are combined to form a bed-bottom, substantially as set forth and described.

92,075.—JAMES S. MCCURDY, New York, N. Y., assignor to G. L. and J. B. KELTY & Co., same place.—*Bedstead and Sofa or Chair.*—June 29, 1869.

Claim.—1. The connections or links *g*, extending from the upper parts of the arms *c* to the legs *f*, above the pivots *i*, in combination with the back *d* and bottom *b*, so that said links *g* form guards, as set forth.

2. The top rail *k*, attached to the legs *f*, in combination with the back *d* and connecting-links *g*, substantially as set forth.

92,076.—JOHN MCDONALD, Portville, N. Y.—*Saw-Swage.*—June 29, 1869.

Claim.—The sliding punch C, whose bevel-face *h* is in contact with the gauge-face *a*, in combination with spring *d*, substantially as and for the purposes set forth.

92,077.—EDWARD N. MCKIMM and HOWARD W. BENDER, Benderville, Pa.—*Fertilizing Compound.*—June 29, 1869.

Claim.—The above fertilizing compound, composed of the ingredients mentioned above, in about the proportions named, substantially as and for the purposes set forth.

92,078.—HENRY METCALF, Washington, D. C. —*Speed-Indicator for Vessels.*—June 29, 1869.

Claim.—1. The combination and arrangement of the compensatory tube B, extending down through the vessel, and having its mouth flush with the bottom, with the force-pipe A, parallel with the tube B, and with its mouth at right angles with the axis of the vessel, substantially as set forth.

2. The combination and arrangement of the indicating-scale D E, with the tube B and pipe A, and connected by the flexible tubes C C, all substantially as specified.

92,079.—CHARLES F. W. MEYER, Oconomowoc, Wis.—*Skating-Shoe.*—June 29, 1869.

Claim.—A skate, or "skating-overshoe," A, constructed and arranged, as described, of a metallic runner, K, secured to a runner-plate or sole-piece, *b*, carrying a flexible upper or covering-piece, *c*, and a stiff heel-counter or band, *e*, fastened together and firmly united thereto, when said upper *c* and counter *e* are so formed and combined with the runner-plate *b* and with the spring-catch N as to readily receive, closely embrace, and securely hold the ordinary boot or shoe of a skater, all as herein set forth.

92,080.—EDWARD MIALL, Jr., London, England.—*Saw.*—June 29, 1869.

Claim.—A reciprocating saw, having portions of its cutting-edge occupying different planes, for the purpose set forth.

92,081.—JAMES H. MOFFETT, Reading, Mich.—*Carriage-Axle.*—June 29, 1869.

Claim.—The grooved nut C and flanch D, constructed and arranged to operate substantially as and for the purposes specified.

92,082.—CHARLES MOORE, New York, N. Y.—*Fluid-Meter.*—June 29, 1869.

Claim.—1. The combination of the following devices: first, the swinging-pistons *k l*, actuated by a portion of the fluid; second, the gate *b*, that is opened in proportion to the flow of water; third, the indicator that is connected to the gate, substantially as set forth, so that the movement of the gate causes the indicator to act in proportion to the flow of water, as specified.

2. The swinging-pistons *k l*, in the chambers *h i*, in combination with the rotary valve *p*, inlet and eduction ports 9, 10, 11, 12, and cranks 4, 5, and 8, arranged and acting in the manner and for the purposes set forth.

3. The lever-link *s*, between the crank *r* and clamp

that operates the wheel u' of the indicator, in combination with the arm d and fulcrum-pin u, operated by the movement of the gate b, as and for the purposes set forth.

4. The indicator, formed of the wheel u', pinion 20, rack v, and wheel w, in combination with the actuating-clamp 16 and levers moving the same, as set forth.

92,083.—Thomas Morrison, Cincinnati, Ohio.—*Weighing-Apparatus.*—June 29, 1869.

Claim.—The combination and arrangement of the detachable section F G g, and stop N n, with the elevated rail-track, as and for the purpose described.

92,084.—George W. Moyers, Gordonsville, Va.—*Corn-Planter.*—June 29, 1869.

Claim.—1. In combination with the box M and concavo-convex bottom s, the cylinder T, when the latter is provided with oblique pockets, and all arranged in the manner and for the purpose specified.

2. The arrangement of the pockets t t', so that they arrive at the edge of the feed-openings at different times, when employed in connection with the curved plate r, as and for the purposes specified.

92,085.—N. Q. Munger, Cæco, and G. B. Pomeroy, South Haven, Mich.—*Instrument for Relieving Choke and Bloat in Cattle.*—June 29, 1869.

Claim.—The piston D, in combination with an instrument for the relief of choke and bloat, it consisting of a tube, B, with flaring open end C, and perforated egg-shaped end A, constructed and operating as above described.

92,086.—William B. Myers, Frenchtown, N. J.—*Medical Compound.*—June 29, 1868.

Claim.—The medical compound above described, compounded of the materials, of the proportions and in the manner substantially as specified.

92,087.—James Newman, Portland, Mich.—*Turbine Water-Wheel.*—June 29, 1869.

Claim.—1. The bucket E, above described, in combination with the cylinderical hub F, and flange G, when constructed and operating as above set forth.

2. The band-gate O, standards P, arms Q, sleeve S, lifting-braces R, and lever U, when arranged and operating substantially as set forth, shown, and described.

92,088.—J. S. Park, Montondon, Pa.—*Hoisting-Machine.*—June 29, 1869.

Claim.—1. The spool B, provided with collars c and d, and wheel C, having ribs e e, all substantially as shown and described.

2. The combination of the lever G, arm f, brake h, and arm E, all substantially as and for the purposes set forth.

3. In combination with the spool B, and wheel C, with its ribs e e, the shaft a, wheel D, arm E, lever G, and brake h, all constructed and arranged to operate substantially as and for the purposes herein set forth.

92,089.—Orlando Patee, Ypsilanti, Mich.—*Machine for Upsetting Tires, Axle-Trees, &c.*—June 29, 1869.

Claim.—1. The combination of platforms E F with bar I, wedges m n, eccentric shaft G, lever L, and hooks h h, all constructed to operate substantially as and for the purpose set forth.

2. Connecting the wedge m to the platform F, by means of the slot o and the spur of the platform projecting into it, when the parts referred to are constructed and operated as and for the purpose set forth.

3. Operating simultaneously all the eccentrics D D^1 D^2 D^3 of an upsetting-machine, by means of the parts Q S R T, substantially as and for the purposes described.

4. The hooked link or bar O, when constructed to operate in connection with platform F, bar I, beam a', and cam i, substantially as and for the purposes described.

5. The combination of weighted treadle M, with weighted levers K K, chains k k, wedges m n, and weights W W′, substantially as and for the purposes set forth.

6. In combination with the parts M K K k k m n W W′, the bent levers N N, constructed to operate in connection with platform F, as described.

92,090.—James B. Peake and James A. Lusby, Washington, D. C.—*Coffee-Roaster.*—June 29, 1869; antedated June 19, 1869.

Claim.—1. A coffee-roaster, constructed with a flange, a, and a double-damper, C D, substantially as and for the purpose described.

2. The arrangement in a coffee-roaster, having a revolving cylinder, of three or more rows of wire, set parallel to its pheriphery, substantially as and for the purpose set forth.

3. The combination, with the revolving coffee-roasting cylinder, of an oil-cup, substantially as and for the purposes described.

4. In a coffee-roaster, the trying device, consisting of slotted tube J, rod K, and piston t, substantially as and for the purposes set forth.

92,091.—Elijah S. Pierce, Hartford, Conn., assignor to the National Screw Company, same place.—*Mechanism for Converting Motion.*—June 29, 1869.

Claim.—1. The armed wheel L, with the impinging faces of the arms l l^1 l^2 l^3 l^4, made as described, in combination with the drive-pin k, all constructed and operating as and for the purposes described.

2. The spring s, in combination with the armed wheel h, when arranged and operating in the manner described.

3. The combination of the armed wheel L, with the index-wheel C, by means of the pins m and n, and the spring s, the whole constructed and operating as and for the purposes described.

4. The combination of the shaft b, cam e, drive-wheel D, drive-pin k, sliding-pin d, short arm e, shaft g, pawl h, spring o, armed wheel L, spring s, pins m and n, index-wheel C, and shaft a, all constructed, arranged, and operating as and for the purposes described.

92,092.—Henry G. Porter, Grand Rapids, Mich.—*Elevator.*—June 29, 1869.

Claim.—1. The arrangement, in the carriage B, of the pulley a, bent lever b, slotted slide e, pins e'' e''', and arm d, with its prongs d', all substantially as and for the purposes herein set forth.

2. In combination with the above, the plate o, for the purpose of dumping or tripping the hay-fork, substantially as herein set forth.

3. The "stop arrangement," consisting of the bars i i, roller r, pointed arm s, and roller t, all constructed and operating substantially as and for the purposes herein set forth.

92,093.—Benjamin F. Power, Morgan County, Ohio.—*Carriage-Spring.*—June 29, 1869.

Claim.—1. The spring A, in combination with flexible bars B B and leaves b b, substantially as and for the purpose described.

2. The single flexible bars B B, in combination with the leaves b b, substantially as and for the purpose set forth.

3. The leaves b b, constructed substantially as and for the purpose set forth.

92,094.—R. B. Prindle, Norwich, N. Y.—*Curtain-Fixture.*—June 29, 1869.

Claim.—1. The within-described curtain-fixture, consisting of the spool C, ratchet-wheel D, or its equivalent, pivot E, bracket F, provided with the curved slot f, and detent x', and the lever G, provided with the slot g, all constructed and arranged substantially as and for the purpose herein shown and described.

2. The bracket F, provided with the curved slot f, in combination with the lever G, containing the vertical slot g, and pivoted above said slot, substantially as herein shown and specified.

92,095.—François Raymond, Woodhaven, N Y.—*Enameled Bell.*—June 29, 1869.

Claim.—A gong or bell, constructed of sheet iron, stamped or wrought into the required form, and

enameled with porcelain or vitreous enamel, substantially as herein described.

92,096.—JOHN C. RHODES, Chicago. Ill.—*Device to Operate the Tilting-Floors of Malt-Kilns.*—June 29, 1869.

Claim.—The device, consisting of the endless chain O, catch or catches K, and guide M, all arranged and operating substantially as herein set forth and specified.

92,097.—J. W. RICE, Springfield, Mass.—*Railway-Car Brake.*—June 29, 1869.

Claim.—1. The combination of the drum a^5 and cap a^6, ratchet a^8, and sleeve n^3, shaft a^2, with its pawl o^7, the shaft n^1, pawls L and L′, and levers b^2 b^3, as a means of applying and releasing the brakes of a railway-car automatically, all constructed and operating substantially as herein described.

2. The swinging-block *e*, when used in connection with the winding-shaft a^1, having a socket in its lower end, and the spindle *n*, as a means of changing the vertical position of said shaft a^1, with its pinion a^6, substantially as described.

3. In a self-acting car-brake, the levers b^2 b^3 pivoted at o^1, in combination with the pawls L and L′, all constructed and operating substantially as described.

4. The cords b^4 and b^5, passing down between two pulleys, and through a loop or ring in the rods *b* and b^1, as a means of applying and releasing the brakes of a train or series of railway-cars simultaneously, substantially as described.

5. The combination of the chains *f*, c^4, and f^3, with the equalizing-lever O, whereby the hand-brake staff c^2 and self-acting brake-drum may be used in applying the brakes of a car, either separately or together, substantially as described.

6. The combination of the chains f^6, f^5, and f^3, with the equalizing-levers h^5 and O, as a means of applying the brakes of two or more cars at the same time, by the operation of one hand-brake staff, *r*, substantially as herein described.

7. A brake-lever, O, having a series of holes near each end, for the purpose of changing the leverage-power of the brake when desirable, constructed substantially as herein described.

92,098.—EDWIN T. RICE, New York, N. Y.—*Process of Treating Vegetable Fibers.*—June 29, 1869.

Claim.—The method herein specified of treating flax, hemp, and similar vegetable fibers, by an acid solution, at a temperature of more than 100° Fahrenheit, and less than the boiling-point, for the purposes and as set forth.

92,099.—WILLIAM B. RICE, Oakland, Oreg.—*Gang-Plow.*—June 29, 1869.

Claim.—The temper-holes A, in combination with the uprights B, hinges C, plates D, slot E, plate F, uprights for rollers G, screw H, lever *b*, leverage *c*, hinges *d d*, chain *e*, wheel *f*, all substantially as set forth and described.

92,100.—WILLIAM RICHARD, Clyde, Ohio.—*Pruning-Knife.*—June 29, 1869.

Claim.—The link D, formed at its upper end with a knife or hook, *d*, in combination with the shank A, and arranged to operate as and for the purpose set forth.

92,101.—T. M. RICHARDSON, Stockton, Me.—*Tobacco-Cutter.*—June 29, 1869.

Claim.—A tobacco-cutting apparatus, having cylinder A, cutters *c*, and boxes B and D, constructed, combined, and arranged substantially as specified.

92,102.—CHARLES H. ROBINSON, Greenwich, N. Y.—*Combined Drawer-Pull and Label.*—June 29, 1869.

Claim.—1. The slotted plate C, when used as a protection for the label, substantially as set forth and described.

2. The plates A and C, and label B, when combined so as to form a combined drawer-pull and label, substantially as specified.

92,103.—JAMES M. ROSS, Linden Hall, Pa.—*Corn-Sheller.*—June 29, 1869.

Claim.—A corn-sheller, having cylinder D, knives *d*, fan A, shaft H, and conduit K, constructed and arranged to operate substantially as specified.

92,104.—ELIPHALET S. SCRIPTURE, Brooklyn, N. Y., and JOHN H. DARRAGH, Aurora, Ill.—*Railway-Car Brake.*—June 29, 1869.

Claim.—The within-described brake, consisting of the beams B B, levers C C, and rod D, when so constructed and arranged as that the friction-surfaces of or upon said beams shall press directly against the inner faces of the truck-wheels, substantially as shown, and for the purpose set forth.

92,105.—CHARLES A. SEELY, New York, N. Y.—*Manufacture of Vapor-Gas.*—June 29, 1869; antedated April 10, 1869.

Claim.—1. The mixing of air with my vapor-gas, in the manner and for the purposes described.

2. The automatic adjustment or regulation of the flow of vapor-gas and air, and mixtures of them, in the manner and for the purposes described.

3. The combination of the mixing devices with the generator of the vapor-gas, in the manner described.

4. The combination of the regulating-devices with the generator and the mixing-apparatus, as described.

5. The combination of the regulating-devices with the generator, when the mixer is not employed.

92,106.—D. S. SHANABROOK, Greencastle, Pa.—*Hand-Carriage.*—June 29, 1869.

Claim.—1. The gear-wheels *a* *b′* *c*, H H^1 H^2, arranged to operate in connection with pinions a' a' n^1 n^1, substantially in the manner and for the purpose described.

2. The slide upon which the wheels n^1 n^1 work, in combination with the couplers or projections a' n^1, and lever *n*, arranged to operate as and for the purpose specified.

3. The combination and arrangement of the gear-wheels and pinions with levers *d* and *n*, slide n^4, couplers n^1, a', and lever p', all operating substantially in the manner and for the purpose set forth.

4. The combination of foot-levers *h* h^2, with rods h^1 h^1, pawls f' f', and ratchet-wheels i' *g*, all arranged to operate as and for the purpose specified.

5. The wheel *o*, provided with pawl o^2 and spring o^1, arranged to operate in connection with wheel B, when furnished with ratchet-wheels, substantially as described.

92,107.—JOHN SHAPLEY and A. D. HUTCHINSON, Rosefield, Ill.—*Medicine or Cordial.*—June 29, 1869.

Claim.—The alterative and invigorating cordial, prepared and compounded and to be used substantially as described.

92,108.—FREDERICK SHICKLE, St. Louis, Mo.—*Core-Bar for Molds Used in Casting Metal.*—June 29, 1869.

Claim.—1. A core-barrel, expanded at a single line, by wedge or other devices, against its own elasticity, and arranged to collapse with the aid of its elasticity, and with or without contracting devices, substantially as set forth.

2. The intermediate supports G and levers H, when combined with the levers E and B′, to support the axle F, substantially as set forth.

92,109.—HENRY SHIREY and JESSE M. FURMAN, Fond du Lac, Wis.—*Stove-Pipe Shelf and Sad-Iron Holder.*—June 29, 1869.

Claim.—The combination of the clamp B, provided with lugs D and set-screw C, and made in two sections, hinged together with the shelf A, provided with projections E, legs *d*, and handles F, when constructed and operating as and for the purpose above described.

92,110.—EDWARD G. SHORTT, Carthage, N. Y.—*Apparatus for Measuring Fluids.*—June 29, 1869.

Claim.—The combination of the hollow plug *m* with the hook and coupling *n*, attached to the trunnion-arms *c*, for supporting the measuring-vessel,

and the flexible tube *f*, for connecting it with the barrel, all substantially as herein set forth.

92,111.—W. EDGAR SIMONDS, Hartford, Conn.—*Telegraph-Insulator.*—June 29, 1869.

Claim.—1. As a new article of manufacture, a telegraph-wire insulator, having an insulating substance, *s*, interposed, in the manner described, between the insulator proper, *a*, and the cup *d*, the whole being arranged and constructed as described, for the purpose described.

2. The combination, herein described, of the insulator proper, *a*, constructed as described, the insulating substance *s*, and the cup *d*, the whole constructed, arranged, and operating as described, for the purpose described.

92,112.—NICHOLAS H. SIRRELLE, Baltimore, Md., assignor to MARTIN BURNELL and WILLIAM TASSIL TASSIL.—*Bottle-Washing Machine.*—June 29, 1869.

Claim.—1. The combination of the hollow mandrel C, stationary pipe L, nozzle N, and brush *o*, arranged and operating as set forth.

2. The arrangement of the thimble-valve *p* and spiral spring *t*, substantially as and for the purpose described.

3. The apparatus as a whole, constructed and arranged as described.

92,113.—A. J. SMITH, Decorah, Iowa.—*Fruit-Drier.*—June 29, 1869.

Claim.—The arrangement of the wooden frame A, with screens on top, bottom, and sides, screen-doors, B B, ledges A A, and screen-trays D D, forming a fruit-drier, as specified.

92,114.—CHARLES D. F. SMITH, Geneva, Ill.—*Stove-Pipe Drum.*—June 29, 1869.

Claim.—Constructing the inclined plane, forming the spiral flue, around a central air-drum or cylinder, wholly or in part in sections, susceptible of being adjusted to form a continuous circuitous spiral flue, or to open vertically and permit a direct vertical draught, substantially as and for the purposes set forth and described.

92,115.—C. J. SMITH, Norfolk, Va.—*Safety-Stove for Railroad-Cars.*—June 29, 1869.

Claim.—1. The chamber A, fire-pot B, each cone-shaped in form, and united by flanges *b c*, and cap-plate A^2, ash-chamber A^1, false-bottom G, openings *a a'*, and wire-guard F, when the same are so combined and arranged as to form a safety-stove, substantially as described.

2. Securing the door by casing, bolt, and weighted handle, when the same is so arranged as to operate substantially as described, as and for the purpose specified.

92,116.—DITON SNEDEKER, Lockport, N. Y.—*Combined Cleat and Capstan.*—June 29, 1869.

Claim.—1. Arranging the windlass-mechanism within the frame A, the top plate of which projects beyond the ends, so that the frame, as a whole, has the form and performs the functions of a cleat, as herein shown and described.

2. The construction and arrangement, with a boat-cleat, of the ring-bearing *d*, recess or hole *m*, the shaft C, and windlass B, for rendering the latter readily removable, as and for the purpose set forth.

92,117.—LARS ALBERT LEONARD SÖDERSTROM, Paris, France.—*Hot-Air Engine.*—June 29, 1869.

Claim.—1. The arrangement of devices for distributing the air throughout the apparatus, and for heating the same, consisting of main pistons Z, piston-valves X Y, valves *q r*, and annular chambers *x* x^2, substantially as described.

2. The arrangement of the furnace, with its peculiar closing-piece *g*, its vaulted roof *w*, and ascending platform *c*, substantially as set forth.

3. The arrangement of the valve *q*, for regulating the pressure, and of the double conduit *x u*, for the passage of the compressed air, substantially as set forth.

4. The escapement air-pipe B, arranged in a spiral around the furnace, in combination with chimney *e*, provided with the junction-piece, constructed and operating substantially as described.

5. The combination and arrangement of the various devices constituting the apparatus, substantially as hereinbefore fully set forth and illustrated in the accompanying drawings.

92,118.—FRANK F. SOMMER, Detroit, Mich.—*Fence.*—June 29, 1869.

Claim.—1. The construction of a fence, composed of pickets C and D, their lower ends being secured to the rail B, the upper ends of the pickets C secured to the rail A by the plates G, as described, and the upper ends of the pickets D secured to the pickets C by the plates F, thereby avoiding the employment of an intermediate longitudinal rail.

2. The foundation-post H, provided with serrations *f* and slot *g*, the clamp-plate I, provided with serrations *h*, and secured to the post by the bolt *i*, the whole attached to and forming an adjustable support for the lower rail of the fence

3. The brace J, provided with serrated head *o*, engaging with the serrations *l* in the projection *k* of the clamp plate K, and secured thereto by the bolt *n* passing through the slot *m* in said projection, said clamp-plate being secured to the upper rail of the fence by the bolt *j*, the whole forming an adjustable brace for securing the upper part of the fence in its proper position.

4. The pedestal M, provided with groove *q* and projections *p*, the clamp N and its recess *r*, and the bolt *s*, in connection with a similar groove and projections in the bottom of the sectional post L, for securing said post to its foundation.

5. In sectional posts, securing the cap to the same, by means of a bolt, *t*, provided with an elongated nut, S, entering the post through a transverse slot, T, and engaging with the longitudinal ribs *u*, substantially as described.

92,119.—R. H. SPRINGSTEED, Vandalia, Mich.—*Stove-Pipe Shelf.*—June 29, 1869.

Claim.—The combination of the corrugated stove-pipe collar, the toothed bars B, and the sharpened edges *c c*, with the slotted ears *b b*, and curved braces *c c*, in connection with the sectional shelf A A, as and for the purpose before mentioned.

92,120.—GEORGE STAMM, Pittsburgh, Pa.—*Oxygenating-Furnace.*—June 29, 1869.

Claim.—1. An oxygenating-furnace, constructed substantially as above described—that is to say, having the two chambers *a a* arranged on each side of the fire, the chambers *b d* back of it, the chamber *c* front of it, and the hollow grate-bars *e e* beneath it, and communicating with and connecting the parts *c d*, substantially as and for the purposes set forth.

2. In combination with the parts *a b c d e*, all constructed and arranged as described, the jacket *b'*, water-space *r*, and pipes *i o*, arranged and operating as and for the purposes set forth.

3. The arrangement of the inclined tray *h*, waste-pipe *p*, and jet *k*, in connection with the chambers *a a*, as and for the purposes specified.

4. The described construction of the parts *a a*, a^3 a^3, *b b'*, when said parts are shaped and connected together as shown and specified, and for the purposes set forth.

92,121.—S. T. F. STERICK, Washington, D. C.—*Hub for Carriage-Wheels.*—June 29, 1869.

Claim.—1. A hub for wagons and other vehicles, combining in its construction a pipe or socket, A, for the axle of the carriage to pass through, having upon it a fixed disk or flange, B, a loose sliding-disk, B', provided with inwardly projecting flanges and a tightening nut or nuts, C D, all constructed and arranged as and for the purpose set forth.

2. The projecting rim upon the disks B B', such rims projecting beyond the sockets for the spokes, substantially as and for the purpose set forth.

92,122.—JOSHUA C. STODDARD, Worcester, Mass.—*Hay-Spreader.*—June 29, 1869.

Claim.—1. The combination, with a hay-spreader, of a rake, rotating on an axis transverse to the main axle, the combination being and operating substantially as set forth.

2. The combination, substantially as set forth, in a hay-spreader, of a shaft rotating transversely to the main axle, with teeth radially adjustable relatively to their axis of rotation.

3. The combination, in a hay-spreader, of independently adjustable radial rake-teeth, with independent parallel shafts transverse to the main axle, the combination being and operating substantially as set forth.

4. The combination, substantially as set forth, in a hay-spreader, of a draught-frame, vibrating on the main axle, and a gearing-frame, vibrating on the same axle, and adjustable relatively to the draught-frame, with rakes rotating on shafts transverse to the main axle.

5. The combination, substantially as set forth, in a hay-spreader, of two wheels mounted on crank-axles, and a draught-frame connecting said axles below the axis of the wheels, with an adjustable gear-frame, pivoted in the line of the axles of the wheels above the draught-frame.

6. The combination, substantially as set forth, in a hay-spreader, of rakes rotating transversely to the main axle, in rear thereof, with a countershaft in front of said axle.

92,123.—J. SUMMERS, Winchester, Va.—*Safety-Pocket for Attachment to Suspenders.*—June 29, 1869.

Claim.—As a new article of manufacture, the safety suspender-pocket herein described, consisting essentially of the part A, having the front flap *b*, adapted to button to the back part by means of the button *c*, the button *c* adapted to button the flap, and also to connect the pocket to the lower end of the suspender, the straps D D fixed to the lower corners of the pocket, and adapted to be attached to the pantaloons, and the interlaced chains *e e*, covering and protecting the pocket, said parts being constructed and arranged as and for the purpose herein set forth.

92,124.—JOHN P. SUMMERS, Tiffin, Ohio.—*Sawing-Machine.*—June 29, 1869.

Claim.—The arrangement, upon the frame A, of the shaft M, spring-bearing N, pinions O P, wheels K L, jointed pitman D, guides E E, bar H, slide I, and lever G, all constructed and operating substantially as and for the purposes set forth.

92,125.—GREGOR TRINKS, New York, N. Y.—*Folding Chair.*—June 29, 1869.

Claim.—The leg *k*, hinged to leg *e*, with the sleeve *e*, on their axial rod *a*, and extended into the tongued segment *l m*, in combination with the grooved arm-rest *o n*, the hinged seat *g*, and pins *i*, substantially as and for the purpose described.

92,126.—JAMES TURNBULL, Edinburgh, Scotland.—*Railway-Car Coupling.*—June 29, 1869.

Claim.—1. The weighted levers, with their recesses and hooks, in combination with the draw-bars, having elongated inclined slots for the reception of the fulcrum-pins of the said levers, all substantially as and for the purpose described.

2. The combination of the above, the shaft *g*, its arms *f* and *h*, and the pin *i*, or its equivalent, for the purpose set forth.

92,127.—R. VORIS, Oneida, Ill., assignor to THE WESTERN NECK-YOKE COMPANY.—*Neck-Yoke.*—June 29, 1869.

Claim.—In neck-yokes, having leather holdbacks, the clasp C C, made either in one or two pieces, and secured to the yoke substantially in the manner and for the purposes herein set forth.

92,128.—JOHN F. WALLACE, Birmingham, Pa.—*Steam-Engine Slide-Balance Valve.*—June 29, 1869.

Claim.—1. The construction in detail of the slide-valve balancing-plunger, with the interposed loose rollers, all arranged substantially as described.

2. The construction and arrangement of the cover *g'*, as shown in Fig. 2, with an elastic packing, balanced plunger, slide-valve, and loose rollers, substantially as set forth.

92,129.—WILLIAM G. WARD, New York, N. Y.—*Breech-Loader.*—June 29, 1869.

Claim.—1. Constructing the arm A, which is operated by the trigger B and spring C, of one piece, separate from the trigger, substantially as shown and described.

2. The divided spring C, in combination with the arm A and trigger B, when arranged and operating substantially as shown and described, for the purpose specified.

3. Holding the arm A and the carrier D down by means of the trip E, or its equivalent device, until after the discharged cartridge-shell shall have been ejected by the backward movement of the breech-pin F, and the releasing said parts by the prolongation of the same movement in time for the new cartridge to be presented ready for insertion by the forward movement of the breech-pin, substantially as shown and described.

4. Preventing the remaining cartridge in the feed-tube G from interfering with the free movement of the carrier D, after the release of the first cartridge, by means of the magazine-stop H, when it is operated by the arm A or carrier D, substantially as shown and described.

5. Restricting the movement of the arm A and carrier D, by means of the movable stop J, or its equivalent, substantially as shown and described.

92,130.—ALMON F. WARREN, Brooklyn, N. Y.—*Door-Bolt.*—June 29, 1869.

Claim.—The elastic sleeve C, in combination with the bolt and the tubular socket B, substantially as and for the purposes herein set forth.

92,131.—GARDNER WATERS, Cincinnati, Ohio.—*Lubricator.*—June 29, 1869.

Claim.—An automatic lubricator, in which the bulb and the tube for holding the feed-stem are united, by means of a guard of fusible or soft metal or alloy, cast around the neck of the bulb, provided, upon its exterior, with corrugations or equivalent means, forming a holding surface for the metal, or both around and within the bulb, substantially as and for the purposes set forth.

92,132.—FREDERICK WESTPHAL, Jersey City, N. J., assignor to himself, JOHN V. R. SPENCER, and ALEXANDER BEAKES, same place.—*Velocipede.*—June 29, 1869.

Claim.—The steering-yoke G, constructed to allow of the rotation of the operating cranks within and beneath it, and forming bearings *d d*, to the axle E, outside of said cranks, in combination with the vertical steering-spindle H, having a bearing in the pole C, and upper bearing *f*, connected with the pole by braces *g g*, essentially as shown and described.

92,133.—CHARLES A. WIEDEMANN, New York, N. Y.—*Folding-Chair.*—June 29, 1869.

Claim.—1. The seat A, hinged to the legs C C, so as to be capable of either a folding or extending motion, and provided with hooks or notches *a a*, in combination with the leg and back pieces B B, and studs *a' a'*, substantially as herein shown and described.

2. The combination, with the seat A and hinged piece *b'*, of the combined back and bottom *b b'*, the hook *j*, and recess *j'*, substantially as and for the purpose herein set forth.

92,134.—MOSES G. WILDER, West Meriden, Conn., assignor to NATHAN F. GRISWOLD and GEORGE F. SEARLES, same place.—*Machine for Bending Tubes.*—June 29, 1869.

Claim.—1. The combination of the two grooved dies, constructed to roll upon the tube, and the bridle for holding the tube to one of the dies, substantially as before set forth.

2. The combination of the said grooved dies and bridle with cog-wheels, by which one die is caused to roll upon the other, substantially as before set forth.

3. The combination of the said grooved dies, bridle, and cog-wheels, with shafts, substantially as before set forth.

4. The combination of said grooved dies and bridle with a lever, by which the dies are pressed together, substantially as before set forth.

5. The combination of the said grooved dies and

bridle with a lever, by which the dies can be caused to exert a rolling action upon the tube, substantially as before set forth.

6. The combination of the said grooved dies and bridle with two levers, one for pressing the dies together, and the other for causing them to exert a rolling action, substantially as before set forth.

92,135.—NATHANIEL WILSON, St. Louis, Mich.—*Sulky-Cultivator.*—June 29, 1869.

Claim.—1. The bars B, secured to the frame A, as described, and operated by the treadles J, ropes or chains *m*, and pulley *n'*, substantially as set forth.

2. The rock-shaft G, arms *h*, ropes or chains *i*, pulleys K, lever H, and quadrant I, in combination with the longitudinal bars *a* and B, provided with standards C, and cultivator-teeth *g*, operating as and for the purposes described.

3. The arrangement of the parts A, B, C, D, E, F, G, H, I, J, K, L, *a*, *b*, *c*, *d*, *e*, *f*, *g*, *h*, *i*, *k*, *m*, *n*, and *o*, or their equivalents, when combined and operating substantially as and for the purposes herein set forth.

92,136.—DAVID WILLIAMSON, New York, N. Y.—*Manufacture of Metallic Cartridge-Case.*—June 29, 1869.

Claim.—A sheet metal cartridge-case, formed with a teat, the metal of which is soft, and with cylinderical sides, the metal of which is hardened by the action of the dies, as and for the purposes set forth.

92,137.—RANSOM F. RANKIN, Columbus, Ohio.—*Advertising-Device.*—June 29, 1869.

Claim.—The strip A, roller B, frame C, wheels D and E, and spring G, in combination; but this I claim only when said parts are arranged within a tubular slotted case, I, and used as a device for advertising, substantially as set forth.

92,138.—JOHN Q. ADAMS, North Brookfield, Mass.—*Sewing-Machine.*—July 6, 1869.

Claim.—1. The combination, with the projections E F on the needle-carrier, of the cam C, composed of parts of an eccentric circle *c c' c'' c'''*, and concentric circles *a a' b b'*, when constructed and operating substantially as set forth and described.

2. The combination of the cam N, arms *m n*, thread-carrier P, stem M, and the slide A, or its equivalent, when constructed and operating in the manner and for the purposes set forth.

92,139.—WILLIAM ADDLETON, Mottville, N. Y.—*Harrow and Marker Combined.*—July 6, 1869.

Claim.—1. A flexible harrow-body, composed of chain or link *b c c'*, with teeth attached, substantially as and for the purpose herein described.

2. The removable stretcher-bars B B, made elastic or flexible, when constructed, arranged, and applied substantially as and for the purpose set forth.

3. The bar C C, with markers D, when adapted to be detached, in combination with a harrow-frame composed of chain-links, substantially as herein described.

92,140.—FRANCIS M. ALLERTON, Alliance, Ohio.—*Horse-Rake.*—July 6, 1869.

Claim.—1. In combination with the rake-head, the arms *c*, with their stops *e'*, and the shaft *i*, with its arms *h*, the whole operating as and for the purpose described.

2. In combination with the rake-head, the bars *b*, shaft *i*, lever *k*, hinged bars *c*, and arms *e*, the whole operating substantially as described.

92,141.—WILLIAM A. AMBURG, Chicago, Ill.—*Paper-Clip.*—July 6, 1869.

Claim.—A paper holder, file, and binder, when constructed and operating substantially as described, and in a convenient form for indexing and binding, substantially as set forth.

92,142.—JOHN ANDERSON, Brooklyn, N. Y.—*Shield for Protecting Horses from Sunstroke.*—July 6, 1869.

Claim.—As a new article of manufacture, the shield or horse-bonnet C, provided with apertures E, as shown and described, and for the purpose set forth.

92,143.—WILLIAM J. ARRINGTON, Jefferson County, Ga.—*Plow.*—July 6, 1869.

Claim.—1. The flange A of the landside; substantially as shown and herein specified.

2. The combination of flange A, standard S, and brace C, (with its attachment to handles,) the whole constructed substantially as and for the purposes hereinbefore described.

92,144.—WILLIAM J. ARRINGTON, Jefferson County, Ga.—*Cotton-Seed Planter and Drill.*—July 6, 1869.

Claim.—1. The adjustable portals *g*, and doors *a*, in a revolving cotton-seed drill or seed-planter, substantially as herein shown and described.

2. The triangular buttons C, constructed in the manner and for the purpose above set forth.

3. The drums D D, with the separating-wheel B, made and applied substantially as herein shown and specified.

92,145.—SILAS M. BARRETT, Cincinnati, Ohio.—*Method of Bending Chair-Rims, &c.*—July 6, 1869.

Claim.—As a new article of manufacture, chair backs or rims, constructed as described.

92,146.—DANA BICKFORD, Boston, Mass.—*Knitting-Machine.*—July 6, 1869.

Claim.—1. The combination, with a revolving cam, grooved substantially as described, of a thread-carrier, so held by friction on the cam-plate or ring as to be carried by it, and yet permit the latter to continue its motions after the carrier is at rest, substantially as set forth.

2. In combination with above last-named devices, adjustable pins and a series of holes in the frame of the machine, substantially as and for the purpose set forth.

3. Stops, or their equivalents, and projections on the cylinder, for determining the extent of traverse in either direction of the cam-cylinder of a rotary knitting-machine.

4. A needle ring or plate, the tops of whose walls or ridges, between the needle-grooves, are rounded off, substantially as and for the purposes set forth.

5. The continuously grooved cylinder, having spacious rebates P, two similar needle-elevating cams, and two automatic spring-switches, substantially as and for the purpose set forth.

92,147.—EDWARD BIERSTADT, Jersey City, N. J., assignor to himself and JAMES M. TOWER, same place.—*Hand Dating-Stamps.*—July 6, 1869.

Claim.—1. The employment, in hand-stamps, of parallel frames arranged side by side on a plane, to receive the type, when made adjustable, so that any word or number may be brought into position for printing or retired therefrom, at will, substantially as herein set forth.

2. In combination with said adjustable type-frames, the cam or wedge D, and dog-lever C and wedge D, or their equivalent, arranged and operating substantially as and for the purposes described.

3. The arrangement of the type, forming the words or numbers which compose the inscription of the stamp, in sliding-cases, which are moved in or out of range of the ribbon, by means of the extension *h h*, and the rack or pinion, or other suitable means, substantially as set forth.

4. In combination with the sliding type cases or forms the indicating-device, consisting of the extensions *h h*, having characters marked thereon, which correspond with those of the type, which are concealed by the ribbon, and the register *l*, for gauging the position of the type, substantially as herein set forth.

92,148.—JOSEPH BIRKETT, Tazewell County, Ill.—*Axle-Gauge.*—July 6, 1869.

Claim.—An instrument for finding the proper angles for setting thimble-skeins, iron or wooden axles, and consisting of three movable gauges, A B C, with scales or inches marked thereon, adjusted one upon the other by means of slots and thumb-

screws, or their equivalents, as and for the purposes described.

92,149.—A. F. Bishop and John H. Aiken, Norwalk, Conn., and John M. Pendleton and A. W. Gates, New York, N. Y.—*Card-Clothing.*—July 6, 1869.

Claim.—1. The compound vulcanized fabric, having the central cloth, the enveloping softer fiber, the gum vulcanized in place among the fibers, and the covering fabric or fabrics, combined and arranged as specified, and so as to possess the qualities substantially as herein set forth.

2. The above-defined backing-material, in combination with the card-teeth, as specified.

92,150.—Etienne Boileau and Charles Mesnier, St. Louis, Mo.—*Hinge.*—July 6, 1869.

Claim.—The combination of the notches C C′ with the cams D D′, Fig. 3, so arranged that by reversing the upper part, B, the hinge may be used either right or left, and the shutter fastened both open and closed, all as shown and described.

92,151.—Asa T. Brooks, New Britain, Conn., assignor to Russell & Erwin Manufacturing Company, same place.—*Knob-Latch.*—July 6, 1869.

Claim.—1. The combination with the latch-bolt A, of the latch-plate B *b*, and the locking-plate E, constructed, arranged, and operating substantially as described, and for the purposes set forth.

2. The combination, with the main-latch or latch-bolt A, of the locking-plate E, with its noteh *r*, arranged and operating substantially as and for the purposes set forth.

3. The combination of the locking-plate E, or its equivalent, with the knob-lever G, when so arranged, that, as the latter is moved backward, it will raise the former, substantially as and for the purposes set forth.

4. The arrangement of the slot *t*, or its equivalent, in the latch-plate *a*, in relation to the pin *s*, on the knob-lever, so as to permit the said lever to have a backward movement (to operate the locking-bar E) before acting on the main latch.

5. The combination of the latch-bolt, knob-lever, and locking-plate, so constructed and arranged that the knob-lever, or its equivalent, will adjust the locking-mechanism before actuating the latch.

6. The combination, with the locking-plate E, or its equivalent, of the key-bar *n*, with or without the key-hole guard I, acting upon such locking-bar through the medium of the knob-lever, as described, and for the purposes set forth.

7. In combination with the latch-bolt A, locking-plate E, and knob-lever G, the construction and arrangement of the divided hub J, substantially as and for the purposes set forth.

92,152.—Asa T. Brooks, New Britain, Conn., assignor to Russell & Erwin Manufacturing Company, same place.—*Knob-Latch.*—July 6, 1869.

Claim.—1. The combination, with the latch-bolt A and latch-bar *c c′*, arranged as described, of the locking-plate B, the several parts being constructed and operating substantially as described.

2. The arrangement of the projection *g* on the lock-bolt A, and the projections *f f* on the locking-plate B, substantially as and for the purposes described.

3. The combination, with the latch-bolt A, supplemental latch-bar *c c′* and locking-plate B, constructed and arranged as described, of the knob-lever and key-bar *q*, substantially as and for the purposes set forth.

4. In combination with the latch-bolt A, having within it the supplemental latch-bar *c c′*, the arrangement of a striking-plate, with a right-angled lip, *l*, or its equivalent, substantially as and for the purposes set forth.

5. In combination with the latch-bolt A, and supplemental latch-bar *c c′*, locking-plate B, and knob-lever E, the construction and arrangement of the divided hub H, substantially as and for the purposes set forth.

92,153.—Asa T. Brooks, New Britain, Conn., assignor to Russell & Erwin Manufacturing Company, same place.—*Knob-Latch.*—July 6, 1869.

Claim.—1. The combination of the main latch A, supplemental latch-plate A′, locking bar or plate B, and divided knob-lever, arranged and operating substantially as and for the purposes set forth.

2. The combination of the main latch A, locking bar or plate B, and divided knob-lever, substantially as and for the purposes set forth.

3. The combination of the main latch A, locking bar or plate B, divided knob-lever, and key-bar *i*, or its equivalent, substantially as and for the purposes set forth.

92,154.—George W. Brown, Providence, R. I.—*Scrubbing Brush.*—July 6, 1869.

Claim.—The arrangement of the plate *a a*, provided with teeth *d d d*, handle-socket and handle *e f*, held together by bolts *b* and thumb-screws *c*, as shown, for the purpose of using waste broom-corn, or parts of brooms worn out in ordinary use, as shown and described.

92,155.—Francis M. Buckles, Altona, Ill., assignor to himself and John A. Stuckey, same place.—*Two-Way Rain-Water Conductor.*—July 6, 1869.

Claim.—The movable joint C C″ C‴, with collars H and D, when combined and operating with the joint B, the elbows B B″ B‴ and J J″, for changing the direction of the discharge from eaves, substantially as described, and for the purpose set forth.

92,156.—Daniel Bull, Amboy, Ill.—*Horse Rake.*—July 6, 1869.

Claim.—1. The combination of the rake-head A and small wheels or rollers H, when so constructed and arranged that the wheels support the rake-head, but are raised from the ground, and carried over with the rake-head when the rake is revolved.

2. The combination of the rake-head A, spindles C, draught-rod E, and wheels H, when constructed and operating substantially as and for the purposes described.

3. The combination of the rake-head A, spindle C, and piece D, pawl I, wheel H, draught-arm E, and anti-friction-wheel L, when constructed and arranged substantially as and for the purposes specified.

4. The combination of the handle H′, with the rod Z and stop S, when so constructed and arranged that, by turning the said handle, the stop is relieved, so as to allow the rake to revolve, substantially as described and shown.

92,157.—John O. Burch, Buffalo, N. Y.—*Carriage-Jack.*—July 6, 1869.

Claim.—The standard A, having the ratchet-teeth shown, and the prongs or projections C, with the adjustable lever D, having notches F, hook H, and the adjustable pawl E, all constructed, arranged, and operated as described, for the uses and purposes set forth.

92,158.—John Burnham, Batavia, Ill.—*Truss.*—July 6, 1869.

Claim.—A truss-pad, the adjustment of which to the wearer is governed by a slotted plate attached to the truss-spring by a hinge-joint, and moving upon the pad-lever, and holding the same in the position desired, by pressure against it, produced by a set-screw, substantially as and for the purpose set forth.

92,159.—Walter Caldwell, Bryan, Ohio.—*Corn-Planter.*—July 6, 1869.

Claim.—1. The cams M, when constructed and arranged to operate in combination with the swing-bar I, in the manner substantially as described and for the purpose set forth.

2. The arrangement and combination of the roller U, rake C, shares *c* and D, and shoe H, in the manner substantially as described, and for the purpose specified.

3. The winged wheels A, cams M, swing-bar I, cultivators P, and corn-droppers, when constructed, arranged, and combined to operate and co-operate in relation to each other, substantially as described, and for the purpose set forth.

92,160.—R. W. Campbell, Spurgeon, Ind.—*Wheat-Drill.*—July 6, 1869.

Claim.—1. The adjustable guides E^3, in combination with coulters D^1 and drills c^3, or their equivalents, as and for the purpose set forth.

2. The above-described arrangement for elevating the drills, constructed substantially of the sliding-tongue b^1, lever c^3, pivot c, treadle c^1, connecting-rod b, curved rod B^3, rod B, with arm B^2 B^2, &c., arranged and operated substantially as described.

92,161.—WELLINGTON CAMPBELL, Millburn, N. J.—*Machinery for Manufacturing Composite Paper.*—July 6, 1869.

Claim.—1. The combination of the moving pervious surface for forming the sheet of paper-pulp, the narrow moving pervious surface for forming the strips, and the pressing-rolls, the whole constructed to operate substantially as before set forth.

2. The combination of the said moving pervious surface for forming the sheet of paper-pulp, the narrow moving pervious surface, the pressing-rolls, and the separate vats for the two pervious surfaces, the whole constructed to operate substantially as before set forth.

3. The combination of the press-rolls and folding-guide, substantially as before set forth.

4. The combination of the press-rolls, folding-guide, and moving pervious surface for forming the sheet, the whole constructed to operate substantially as before set forth.

5. The combination of the press-rolls and thread-guide, substantially as before set forth.

6. The combination of the press-rolls, the thread-guide, and the folding-guide, the whole constructed to operate substantially as before set forth.

92,162.—SANFORD CARTMEL, Henry, Ill.—*Band-Cutter for Thrashing-Machines.*—July 6, 1869.

Claim.—The shaft C, with knives D, when arranged transversely with and below the chute A, the knives D operating through the slots H H, substantially as described, and for the purpose set forth.

92,163.—FREDERICK CATLIN, New York, N. Y.—*Safety-Attachment for Breast-Pins.*—July 6, 1869.

Claim.—The combination of the sliding-bolt b with the milled disk g, slotted movable tube J, and fixed tube F, arranged as described, for the purpose of locking the tubes together, as herein described, for the purpose specified.

92,164.—JOHN I. CHEATHAM, Athens, assignor to CICERO A. MITCHELL and RUFUS W. SMITH, Greensborough, Ga.—*Churn.*—July 6, 1869.

Claim.—The combination and arrangement of the crank-wheel D, with its adjustable crank-pin b, the intermediate sliding-gate J, and dasher-rod M, adjustable to different heights on the gate, substantially as and for the purpose herein specified.

92,165.—D. D. CHITTENDEN, Baldwinsville, N. Y.—*Milking-Stool.*—July 6, 1869.

Claim.—1. In combination with the stool A, the pail-rest B b, hinged to the slotted standard E, in such manner as to be adjustable and capable of folding up, when said parts are constructed and arranged substantially as herein shown and described.

2. The clamping-lever D d, in connection with the standard C and milking-stool A, all constructed and operated as and for the purpose herein set forth.

92,166.—DANIEL B. CLEMENT, Brighton, Mass., assignor to himself and DUANE H. NASH, New York City.—*Hay-Spreader.*—July 6, 1869.

Claim.—1. The revolving head e, set upon the side-pieces d', and revolved by the cones of pulleys g h in combination with the shafts n, hinged to the pieces d', and the axle b, of the wheels a, as and for the purposes set forth.

2. The spring clearing-rods m, supported by the bar l, in combination with the revolving-head e and spring-teeth f, as set forth.

3. The lever o, in combination with the shafts n, revolving rake-head e, axle b, and side-pieces d', as and for the purposes set forth.

4. The caster-wheels q, applied below the side-pieces d', in combination with the revolving-head e and teeth f, as and for the purposes specified.

92,167.—CHARLES G. COLE, Bennington, Vt., assignor to DANA BICKFORD, Boston, Mass.—*Circular Knitting-Machine.*—July 6, 1869.

Claim.—1. The cloth-raiser k, applied in substantially the manner and for the purposes set forth.

2. The cylinder m, and slot 3, in combination with the cloth-raiser k, and gearing connecting the same with the cam-ring e, substantially as and for the purposes set forth.

92,168.—LEANDER T. CONANT, New Lisbon, Ohio.—*Wagon-Brake.*—July 6, 1869.

Claim.—The combination and arrangement of the lock-bars A A, rubber-blocks B B, lever-shafts P P, wheels C C, M M, and straps O O and D D, substantially as described.

92,169.—JACOB COOKE, Muncy, Pa.—*Brick-Machine.*—July 6, 1869.

Claim.—The combination and arrangement, in the peculiar manner herein shown, of the pug-mill B, molds m m m, and strike-off knife b, when said knife b is supported upon and operated by the rails c c, that communicate motion to the molds m m m m, for the purpose herein described.

92,170.—ROBERT AVIS COPELAND, Brooklyn, N. Y.—*Oil and Tallow Cup.*—July 6, 1869; antedated June 22, 1869.

Claim.—1. An oil or tallow cup, with a tapering plug or key, similar to those used in corks, being fitted tightly by the ordinary method, and secured on the inside by means of a nut and washer, substantially as shown and described.

2. The thimble or ferrule b, the plug D, the cover J, handle and spring K, air-cock H, provided with the bowl i, openings E E and G G, and the base or stem-piece c, in combination with an oil or tallow cup, substantially as and for the purpose set forth.

92,171.—CHARLES M. CORNELL, Ionia, Mich.—*Combined Seed Planter, Dropper, and Cultivator.*—July 6, 1869.

Claim.—1. The arrangement of the two frames H I, and their independently hinged connection with the main frame, so that the rising and lowering of the frame H may correspondingly raise and lower the frame I, as described and represented, and for the purpose described.

2. In combination with the main frame and the plow-frame, the lever k, cords or chains j l, and pivoted foot-brace m, for the purpose of raising and lowering the plow and harrow frames, or holding them down, as herein described and represented.

3. In combination with the main frame and the plow and harrow frames, the lever, cords, and brace, with a locking-lever, J, arranged to act in connection with the raising-lever k, as and for the purpose herein described and represented.

4. In combination with a main frame and with a plow and harrow frame, arranged and operating as herein described, a seed-hopper or box, and seeding-mechanism connected thereto, and operating as herein stated, so that seed sowing, cultivating, or harrowing may be done by one and the same machine, as set forth.

5. In combination with the outer teeth w, the guards or fenders v, extending from the lower parts of said teeth up, and connected to the frame, substantially as and for the purpose described.

92,172.—DAVID B. COX and ALBERT BROWN, Troy, N. Y.—*Coal-Stove.*—July 6, 1869,

Claim.—1. In a heating-stove, having both a downward and upright draught, the construction of the combustion-chamber B, enlarged laterally outward and upward below the fuel-chamber A, and its outer surface or wall s, having an inclination inward from a horizontal plane only sufficient to properly deliver the ashes and cinders to the grate, in order to radiate the heat downward as much as practicable, outside of the base of the stove, substantially as herein specified.

2. The revolving hollow damper F, with hollow trunnions f f, when arranged in the upper part of the fuel-chamber A, and constructed and operating as and for the purpose herein set forth.

92,173.—Joseph Cox, Philadelphia, Pa.—*Plate for Parlor Stoves.*—July 6, 1869.

Claim.—An illuminating parlor oven-stove, having each of the vertical outside plates or walls of both the oven and the illuminating portion of the said stove cast or constructed in one and the same piece, substantially as and for the purpose described.

92,174.—William G. Creamer, Brooklyn, N. Y.—*Basket-Rack for Railroad-Cars.*—July 6, 1869.

Claim.—Covering the edges of the wire-work racks, for railroad-cars, with a slotted tubular covering, as shown and described.

92,175.—William E. Derrick, Jordan, N. Y., assignor to himself and George B. Garrison, same place.—*Horse Hay-Fork.*—July 6, 1869.

Claim.—In connection with the curved tines A′ A, the swinging-arm B, one end of said arm being pivoted to tine A′, and its opposite end sliding vertically on the opposite tine A, with a cam-lever, E, for securing the arm upon the tine A, the whole arranged and operating substantially as herein described.

92,176.—Fritz Englehorn, August Clemm, Heinrich Caro, and Carl Clemm, Manheim, Germany. *Method of Obtaining Benzole and its Homologues from Coal-Gas.*—July 6, 1869.

Claim. The production of the benzole, and its homologues, from the coal-gas, and other gaseous products capable of supplying light, by first absorbing, and subsequently separating them, as herein described, using for that purpose the above-mentioned liquid compounds, or any other substantially the same, and which will produce the intended effect.

92,177.—George Engle, Patch Grove, Wis.—*Lumber-Sled.*—July 6, 1869.

Claim—1. The construction and arrangement of the cross-bars K K K′ K′, playing in staples L L L′ L′, so as to secure an independent flexibility of each runner, as and for the purpose set forth above.

2. The combination and arrangement of the rockers G G′, rocker-bar I, cross-bars K K K′ K′, reach H, swivel O, with its rod P and linch-pin, and rails D D′, in connection with sleds A and B, when constructed and operating substantially as and for the purpose described.

92,178.—John Farrell, New York, N. Y.—*Construction of Safes.*—July 6, 1869.

Claim.—Interposing between the several layers of steel and wrought-iron plates, composing the shell of burglar-proof safes, and other like structures, any non-conducting material or evaporating substance, as and for the purpose described.

92,179.—Auguste Fau and Eugene Fau, Castres, France.—*Mode of Cleaning Sheep and other Skins for Tanning.*—July 6, 1869.

Claim.—The use of jets of water, under pressure, as we have above described, for washing, freeing from burs, and unhairing woolly skins.

92,180.—Elias T. Ford, Stillwater, N. Y.—*Packing Pump-Pistons.*—July 6, 1869.

Claim.—In the plunger J, having the expanding-disk D, the metal casing C, with tongue *b* and socket *c*, when arranged as described, for the purpose set forth

92,181.—William A. Foskett and Henry B. Tyler, New Haven, Conn.—*Machine for Manufacturing Brushes.*—July 6, 1869.

Claim.—1. The double-incline blocks D and E, in combination with the punch B, for the purpose of varying the stroke of the said punch, substantially as shown and described.

2. Constructing the former F separate from the driving-lever G, substantially as shown and described.

3. The arrangement and construction of the divider-slide H and cam I, to operate independently of the fingers, as shown and described.

4. The construction and arrangement of the slide K, in combination with the table J, for elevating and depressing the same, substantially as shown and described.

5. The combination of the index-plate M and arm N with the table J, to give any required angle, in the manner substantially as shown and described.

6. The arrangement of the bristle-feed table, in connection with the other parts of the machine, in order that the bristles may be fed from the same end of the machine at which the wire is fed, which renders the machine more compact, as shown and described.

7. Locking the fingers S S apart, for the first portion of their backward movement, by the cam-shaped or incline slot T, in combination with the pin *e* and slide R, as shown and described.

8. The cam *h*, in combination with the projection *g*, upon the slide *f*, to allow for the varying thickness between the two ends of the bunch of bristles, substantially as shown and described.

9. The slide A′, in combination with the slide *f* and fingers S S, for the purpose of separating the bristles, fingers, &c., substantially as shown and described.

10. In combination with the table J and its devices, the center-pin L, for holding the plate in position under the punch, substantially as shown and described.

92,182.—Perry G. Gardiner, New York, N. Y.—*Railway-Car Spring.*—July 6, 1869.

Claim.—The combination, with an India-rubber hollow cylinder, surrounded by a spiral spring, of an elastic substance or substances, such as wool, cotton, hair, sponge, cork, or equivalent fibrous material, either single or several of them combined, forced under pressure, into the central hollow space of the India rubber tube, in the manner and for the purpose substantially as specified.

92,183.—Perry G. Gardiner, New York, N. Y.—*Railway-Car Spring.*—July 6, 1869.

Claim.—The combination of an India-rubber ring or belt, B, with or without an internal metal spring G, the bottom-plate A, and cover C, provided with an external bell-mouthed ring E, and an internal cylindrical ring D, arranged and operating in the manner and for the purpose substantially as described.

92,184.—P. P. Gardner, Stoneborough, Pa.—*Combined Corn-Dropper and Cultivator.*—July 6, 1869.

Claim.—1. The slide *p*, lever Q, springs Q^1 Q^2, arm R, shaft K, arranged and operated by suitable gearing and driving-wheels, substantially as and for the purpose set forth.

2. The roller H, harrow G, arms F F′, cam D^1, and driving-wheels D, in combination with the elements of first claim, and V-shaped cultivator, when arranged and operating substantially as and for the purpose set forth.

3. In combination with the frame E and the shaft K, the beveled block *m*, with screw *m′*, as and for the purpose specified.

4. In combination with the rollers H, harrow G, arms F F′, cam D^1, and driving-wheels D, the adjustable teeth or shears A^3, substantially as specified.

92,185.—Thomas Garrick, Providence, R. I.—*Machine for Making Eyelets.*—July 6, 1869.

Claim.—1. The combination and arrangement of a set of eyelet-forming instruments, which move and operate simultaneously upon both sides of a strip of metal, with a stationary slotted block to guide the metal, and prevent its removal by the withdrawal of the instruments, substantially as described.

2. The combination and arrangement, in an organized machine, of a number of sets of eyelet-forming instruments, with their guides, as described, in such a manner that the consecutive operations of raising, shaping, cutting out, and delivering eyelets in a complete form, may be performed in rapid succession, substantially as specified.

3. Combining, in an organized machine for making eyelets from a strip of metal, by a number of mechanical devices, operating consecutively, substantially as described, a heating-apparatus and a cooling-

apparatus or device, for the purpose of annealing the strip of metal at any suitable stage of the operation, so that the successive operations may be performed uninterruptedly, and for the purpose of delivering the eyelets from the machine completely annealed and ready for use.

92,186. — WILLIAM S. GROVER, Oconomowoc, Wis.— *Combined Seeder, Roller, and Cultivator.* — July 6, 1869.

Claim.—1. The within-described agricultural implement, consisting of the frame A A, B and B, cross-bar C, rollers E E, cultivator shares and supports *f* and F, bar G, lever H, chain *g*, catch K, for raising said cultivator-shares, hopper M, with its false bottom, shaft N, provided with the arms *n n*, corrugated ring O, arm P, and rod *p*, for actuating said false bottom, spouts R R, lever S, and catch *x*, all combined and arranged substantially as and for the purpose specified,

2. The vertical shaft N, provided with the arms *n n*, in combination with the corrugated ring O, substantially as and for the purpose shown.

92,187.—JAMES HANN, Frenchtown, N. J.—*Machinery for Bending Wood.*—July 6, 1869.

Claim.—1. The combination of the former upon which the wood is bent, and a set or pair of vibratory toothed sectors, at each end of the former, carrying the forming or bending rolls, and actuated to move around the ends of the former, said parts being constructed and arranged to operate substantially as and for the purposes set forth.

2. The toothed sectors and bearings, in which their tubular journals are held, in combination with the former-box and pins or rods passing through the former-box, and into or through the tubular journals of the sectors, arranged to operate substantially as described, whereby the box can be released, by removing the pins, without disturbing the position of the sectors.

3. The employment, for the purpose of supporting the toothed sectors, of movable bearings or frames, capable of being adjusted longitudinally, so as to conform to the size of the former-box, substantially as shown and described.

4. The sectional former box or frame, constructed and arranged substantially as shown and described, so as to be extended or contracted, to conform to the size of the article to be bent, as set forth.

5. The combination of the vibratory sectors, their adjustable frames or bearings, and the sectional former-box, arranged to be contracted or extended, as herein described, under the arrangement substantially as specified.

6. The arrangement in the adjustable or movable frames or bearings, which support the toothed sectors, of the driving-gear, by which such sectors are actuated, substantially as set forth.

7. Supporting the metal plates *m*, by means of straps or arms, which hang from a bar arranged in or upon the former-box, so as to be raised or lowered, and thereby hold or release the end of the said metal plates, substantially as shown and described.

92,188.—G. M. HARNISCH, Chicago, Ill.—*Harness.*—July 6, 1869.

Claim.—The combination of the strap I I′, sweat-leather A, hames-tug B, tug C, nut E, buckle M N L J G K P, arranged as described, and for the purpose set forth.

92,189.—CYRUS HARRIS, River Point, R. I.—*Skewer for Speeder-Bobbins.*—July 6, 1869.

Claim.—The skewer, constructed as herein described and shown, and provided with a shoulder, B, near its top, to afford a support for the bobbin or spool, for the purpose specified.

92,190.—CHARLES HARRISON, New York, N. Y. —*Self-Closing Cock for Water-Closets.*—July 6, 1869.

Claim.—A water-closet cock, in which the leakage water-way *i*, between the variable chamber *n* and the outlet *k*, is regulated from outside the cock, as and for the purposes set forth.

92,191.—J. R. HOFFMAN, Fort Wayne, Ind.—*Saw-Mill.*—July 6, 1869.

Claim.—1. The combination of the shaft-support *c* with the adjusting-block *a′*, slots *g′*, and screw *g*, constructed and arranged to operate in the manner and for the purpose substantially as described.

2. The combination of the shaft-support *c* with the sliding keeper or box *b*, and adjusting key *b′*, all constructed and arranged to operate in the manner and for the purposes substantially as described.

3. The guide E′, constructed in the manner and for the purpose described.

92,192.—JAMES M. JOHNSON, Northcutt's Store, Ky.—*Mechanical Movement.*—July 6, 1869.

Claim.—The combination and arrangement of the barrels E and Q, diverse trains of gears *h r*, fly-wheel shaft I, crank-shaft M, and screw-threaded arm N, as and for the purpose described.

92,193.—GARRET G. JONES, Rushsylvania, Ohio. —*Locomotive Steam-Engine.*—July 6, 1869.

Claim.—1. The bars C, D, and G, connected by a chain, as described, with shaft H, arranged substantially as specified.

2. In combination with the lifting devices herein described and shown, the slotted bearings, (Fig. 4,) for the front wheels of the tender, substantially as specified.

3. In combination with the shaft H, pinion *i*, bars C, D, and G, the lever *n*, dog *o*, and pawl *s*, when constructed and arranged substantially as described.

92,194.—H. KASIER and A. KASIER, Columbus, Ohio.—*Sprinkling-Can.*—July 6, 1869.

Claim.—The arrangement of the force-pump B, permanently attached to the inside of the can A, with the valves *k* and *h*, all combined and arranged as set forth.

91,195.—ARCHIBALD KELLY, Sharpsburgh, Pa. —*Shredding-Auger for Barrels.*—July 6, 1869; antedated June 19, 1869.

Claim.—The shredding-auger herein described, consisting of shank A, cutting-head B, spring *c*, when all are constructed and arranged to operate as set forth.

92,196.—W. P. LATHROP, West Winsted, Conn. —*Knife-Handle Bolster.*—July 6, 1869.

Claim.—1. The bolster B, having the slot b^2, lips *d d*, mortise *c*, and side-plates *b*, connected by the hub b^1, substantially as and for the purpose specified.

2. In combination with the above, the handle C, with its tenon *c′*, substantially as described.

92,197.—J. D. LEACH, Penobscot, Me., assignor to himself, SABIN HUTCHINGS, and SEWELL LEACH same place.—*Navigator's Bearing Indicator.*—July 6, 1869.

Claim.—1. Combining with the mariner's compass a mechanical device, which, when sighted or brought to bear upon any object, shall indicate upon the compass the direction or bearing of such object.

2. The indicator, substantially as described and shown, and for the purposes specified.

92,198. — ALFRED E. LYMAN, Northampton, Mass.—*Transplanting and Weeding Machine.*—July 6, 1869.

Claim.—The three-sided angular pieces A and B, with edges on the sides, shutting within each other so closely as to retain itself in any desired position, the same being held firmly by suitable bolts (or rivets) of any required length best adapted therefor, the stay E to be only at the option of the operator, (used when desired,) the handle C D being operated at will, adjusting the parts A and B as they turn on the handle or hinge F, so as to produce the intended effect.

92,199.—JOHN MAIR, Philadelphia, Pa., assignor to himself and HAZLETON W. CRAMER, same place. —*Metallic Grommet.*—July 6, 1869; antedated June 22, 1869.

Claim.—The application of the metallic ring R to the flanges F or F′, so that when the tube part of one is inserted into the other, the canvas will pass between the tube and the ring R, and thus hold the grommet firmly in the canvas or cloth when pressed or riveted together.

92,200.—WILLIAM H. MCCORMICK, Muncie, Ind.—*Corn-Planter.*—July 6, 1869.

Claim.—1. The covered seed-cells C′ C′, consisting of the slides *h h*, passages *c′*, *d′*, and *b‴*, and brush B, substantially as described.

2. The perforated stop *h′*, in combination with the brush B and openings in the hollow plunger V, constructed and operated substantially as described.

3. The hollow plunger V, in combination with the gate *o* and spring *s*, substantially as described.

4. The hollow plunger V, in combination with the plunger *u*, working therein, constructed and operated substantially as described.

5. The slotted cam *a*, in combination with the curved arms *b b′*, and friction-rollers *t r m*, on the plungers *u* and V, substantially as described.

6. The cross-piece *z*, working in the slot *y*, arm a^8, and foot-lever a^9, in combination with the rock-shaft a^7, arm a^{10}, and cross-piece m^2, working in the slot *a′*, as and for the purpose set forth.

7. The cross-bar m^5, lever n^2, and spring m^6, in combination with the clutch-lever m^7, and grooved pulley on the main axle, substantially as described.

8. The combination of the foot-lever a^6, rock-shaft K, arm *l*, and friction-roller *m′*, substantially as described.

9. In combination with the cross-bar m^{12}, the driver's seat K, and rods *p p*, substantially as described.

92,201.—SAMUEL B. MCCULLOUGH, Rock Spring, Md., and JOHN R. WEST, Lancaster County, Pa.; said WEST assigns to said MCCULLOUGH.—*Cheese-Press.*—July 6, 1869.

Claim.—The arrangement of the cog gear-wheel K, pinion *k*, drum L, cord or rope *m*, and weight M, when combined with the rotating-frame F, whose center is a right and left hand screw, all constructed to operate in the manner herein set forth and shown.

92,202.—S. A. MCFARLANE, Grand Rapids, Mich.—*Pruning-Shear.*—July 6, 1869.

Claim.—Toggle-levers A B, terminating in shear-blades *b b′* at their outer ends, and in spiked shanks *i i*, at their opposite ends, and otherwise constructed and adapted to operate, substantially as described.

92,203.—HENRY MILLER, Cranston, assignor to himself and GEORGE O. MILLER, Johnston, R. I.—*Metallic Flower Stand and Holder.*—July 6, 1869; antedated January 6, 1869.

Claim.—The combined cast-metal basket and close-fitting dish, constructed substantially as herein described, as a new article of manufacture.

92,204.—JOSHUA MONROE, New York, N. Y.—*Ships' Berth.*—July 6, 1869.

Claim.—1. A folding-frame, composed of a series of shelves arranged one above the other, and connected together by means of common supports, substantially as herein described.

2. The combination of the bottoms A, vertical strips B, and corner-supports C, all arranged substantially as described, and forming a folding-frame.

3. In combination with the bottoms A, strips B, and corner-supports C, the hinged boards D, which serve to give rigidity to the frame, substantially as herein set forth.

4. In combination with the folding-frame or series of berths, constructed and arranged substantially as described, the coupling-pieces E F, and detachable feet G, substantially as described.

92,205.—ALFRED B. MULLETT and BARTHOLOMEW OERTLY, Washington, D. C.—*Metallic Door or Shutter.*—July 6, 1869; antedated June 30, 1869.

Claim.—A metallic door or shutter, made by riveting or bolting two sheets of metal to rigid bars B and braces D, laid between them without welding, all substantially as and for the purposes herein specified.

92,206.—HARRISON OGBORN, Richmond, assignor to SAMUEL WATSON, Lewisville, Ind.—*Clothes-Line Holder.*—July 6, 1869.

Claim.—The construction of the cam L and lever K, connecting-bar F and pulley W, when used for the purposes and in the manner set forth.

92,207.—WILLIAM P. PATTON, Harrisburgh, Pa.—*Ironing-Table.*—July 6, 1869; antedated June 26, 1869.

Claim.—1. Attaching the connecting-piece *b* to the upright supports *a a′*, of the frame A, in such a manner as to allow of the entire or partial revolution of both of said supports, substantially in the manner and for the purpose herein set forth.

2. The combination and arrangement of a hinged or folding bracket, *o*, with the devices of the first claim, substantially as shown, and for the purpose specified.

3. The combination of the ironing-board B with a supporting-frame, A, when said frame is constructed and operated in conjunction with said ironing-board, substantially as herein described.

92,208.—WILLIAM F. PRATT, East Bridgewater, Mass., assignor to the E. CARVER COMPANY, same place.—*Cotton-Gin.*—July 6, 1869.

Claim.—1. The application, to a cotton-gin, of fan chambers, arranged at the ends of the brush-cylinder, and connecting, by flues, directly with the lint-room, so that the air-currents produced by the fans do not pass through the brush-chamber, but flow directly into the lint-room, in the manner and for the purpose described.

2. The wings H, on the ends of the brush-cylinder G, in combination with the casings J, forming, with the ceiling of the gin, fan-chambers at the end of the brush-cylinder, in the manner and for the purpose set forth.

92,209.—MARY H. RAMSAUR, Lincolnton, N. C.—*Medical Compound.*—July 6, 1869.

Claim.—The above-described compound, prepared substantially as and for the purpose set forth.

92,210.—GEORGE RICHARDSON, Lowell, Mass.—*Machine for Drying Yarn, &c.*—July 6, 1869.

Claim.—The trunk C, conducting a blast of heated air, said trunk being provided with ribs or deflectors K K K, placed transversely and arranged alternately, as shown, all combined and operating for the purpose of rapidly and economically drying yarns, twines, or other fabrics of fibrous material, substantially as herein described and set forth.

92,211.—P. H. RYAN, Cincinnati, Ohio.—*Boiler-Flue Brush.*—July 6, 1869.

Claim.—The clamping-plates C C′, and the bolts E, when the same are constructed and arranged substantially in the manner herein shown and specified.

92,212.—J. MILTON SANDERS, New York, N. Y.—*Furnace for Generating Steam-Gas.*—July 6, 1869.

Claim.—An apparatus for generating steam-gas, consisting of a furnace, air and steam inlets, introduced through a close chamber under said furnace, and gas outlets, controlled by stop-cocks or cut-offs, and the whole arranged to operate as herein described, and for the purposes set forth.

92,213.—M. J. SANFORD, Fredonia, N. Y.—*Washing-Machine.*—July 6, 1869.

Claim.—The combination and arrangement of the adjustable rests E E′, rods G G, and catches H H, with the bar A, when the said parts are employed in connection with the depending rollers C D D, in the manner and for the purpose specified.

92,214.—SAMUEL S. SHERMAN and JEREMIAH G. SHERMAN, McHenry, Ill.—*Post-Auger.*—July 6, 1869.

Claim.—A post-auger, with each bit or cutting-edge made in two or more parts, substantially as and for the purposes specified.

92,215.—THOMAS R. SINCLAIRE, New York, N. Y.—*Apparatus for Filtering Liquids under Pressure.*—July 6, 1869.

Claim.—1. The combination of the safety or loaded valve C, or its equivalent, and the vessel A, containing the rectifying or clarifying medium, when the fluid to be operated upon is forced, under pressure, through the rectifying or clarifying medium, for the purpose set forth.

2. The two check-valves H H, in the supply-pipe E, in combination with the pipe G, when said parts are arranged as shown, and used in connection with

or applied to a rectifying or clarifying apparatus, substantially as and for the purpose specified.

92,216.—Cornelius T. Smith, Nyack, N. Y.—*Roofing.*—July 6, 1869.

Claim.—The within-described arrangement of the intermediate fastening-pieces B, the hollow-based covering-pieces E, and the hollow-topped main boards C, substantially as and for the purposes herein set forth.

92,217.—David E. Smith, Bronxville, N. Y.—*Pocket-Cutlery.*—July 6, 1869.

Claim.—The knife-handle, with the back, sides, and projection 2 cast in one piece, in combination with the folded spring, applied in the manner and for the purposes specified.

92,218.—George S. Smith, Bozrahville, Conn.—*Yarn-Evener.*—July 6, 1869.

Claim.—The adjustable needles E E, in combination with the adjustable trimmers F′ F′, in a spooling-mechanism, arranged and operating substantially as and for the purpose set forth.

92,219.—William M. Smith, Augusta, Ga.—*Railway-Car Truck.*—July 6, 1869.

Claim.—1. Arranging the wheels upon one side of a truck-frame in movable bars C C, while those on the other side are arranged in stationary bars B B, and mounting said wheels on their own independent axles, so that the movable ones may be shifted to or from the stationary ones, to adapt the car to roads of wider or narrower gauges, substantially as described.

2. In combination with shifting-wheels on one side of a car or truck, a shifting bolster-beam, that brings the weight of the car-body into a position central between the wheels, whatever gauge said wheels may be set for, substantially as described.

3. The combination of the screw-shaft *q* and nuts *u u*, with the cogged or racked plates *j r*, and cogged rollers *n n*, as and for the purpose described and represented.

4. In combination with a car-body and a bolster-beam, the cup *w*, with the circular racks and cogged rolls *x*, for allowing the trucks to freely turn under the body, or the body on the trucks, substantially as described.

5. Securing the oil or lubricating-boxes to their respective journals, by means of the recesses in said boxes and journals, and a "Babbit-metal" joint, substantially as described and represented.

6. In combination with the truck-frame and car-body, the safety-beams G, suspended to the former, and so as to catch and hold the latter in case of breakage of the axles or wheels, substantially as described.

7. The pulley-cylinders N, arranged above one or more of the wheels of the truck, with a cord connecting one of them with an alarm, so that if the body of the car, by any casualty, should drop, said pulley-cylinder would come in contact with the wheel and be rotated thereby, and, by winding up the cord, sound an alarm, substantially as described.

92,220.—James R. Speer, Pittsburgh, Pa.—*Process of Treating Cast Iron for the Manufacture of Horseshoes and other Articles.*—July 6, 1869; antedated June 26, 1869.

Claim.—The method hereinbefore described for making malleable cast-iron or steel horseshoes, &c.

92,221.—James R. Speer, Pittsburgh, Pa.—*Mode of Treating Pig-Iron for Making Steel and Malleable Cast Iron.*—July 6, 1869; antedated June 26, 1869.

Claim.—Treating melted pig-iron with the ingredients herein named, said ingredients being used in about the proportions and manner herein specified, and for the purpose set forth.

92,222.—Monroe Stannard, Hartford, Conn., assignor to Pratt, Whitney & Co., same place.—*Water-Meter.*—July 6, 1869.

Claim.—1. The combination with the principal measurement cylinder E, of a smaller secondary cylinder, M, and piston N, the latter connected to and operating the main valve K of the principal cylinder, when both cylinders are arranged within a case, to which the water to be measured is admitted, substantially as and for the purpose set forth.

2. The combination of the channel-plate A, for supporting the working parts of the meter, and containing the inlet and outlet passages B and C, and the channels of communication H^1 and H^2, with the measuring cylinder and with the box-like cover D, when this is arranged substantially as described, to facilitate uncovering the working parts.

3. The caps E^1 and E^2, with their openings G^1 and G^2, in combination with the tubular part E of the main measuring cylinder.

4. The combination of the bolts *f* and *f* and the set-screws g^1 and g^2 with the caps E^1 and E^2, and the tubular part E of the main cylinder, as described, for the purpose specified.

5. The combination of the two lever-arms T and T^2 lying within the measuring cylinder or its caps, one at each end of the cylinder, with the two lever-arms R^1 and R^2 lying outside of the cylinder, and connected with the valve O, for the purpose hereinbefore set forth.

6. The combination of the bushings t^1, with the self-packing hubs upon the top of the valve-driving rock-shafts S^1 S^2, substantially as set forth.

7. The combination of the registering-pawl with the secondary valve O, substantially as described, so that the required movement of the pawl shall be produced by that portion of the movement of the valve necessary to overcome the "lap" of the valve, for the purpose hereinbefore set forth.

8. The combination, with the register-pawl arm V and the mechanism by which it is moved, of a frictional coupling, and of positive stops x^1 and x^2, for the purpose hereinbefore explained.

92,223.—George W. Swett, Troy, N. Y.—*Cooking-Stove.*—July 6, 1869.

Claim.—1. The tubular grate I, consisting of two plates, *e e*, substantially as described, so that it will form longitudinal and transverse tubes, with open sides, substantially as and for the purpose herein shown and described,

2. Extending the central pipe *h* of the grate beyond the ends of the same, to form the hollow open-ended trunnions, upon which the grate can be reversed, as herein shown and described.

3. The openings *f* in the fire-box, communicating with the open ends of the long tubes of the grate, in combination with the short tubes *g* in the sides of the stove, to operate as specified.

4. The openings *c* and *t*, in the side of the stove, arranged with relation to the top of the fire-box, and the air-passage *b* between the front plate *a* of the oven, the back of the fire-box, and the perforated plate *r*, for the purpose of permitting a regulated supply of air to be brought to the fire-box from the sides of the stove, as herein shown and described.

5. The damper N, in combination with the fire-box G, arranged above said fire-box across the smoke-passage M, for the purpose of throwing the smoke down through the grate, as specified.

6. The plate *r*, perforated at its curved front end interposed between the bottom of the stove and the oven H, for the purpose of forming the smoke-passage M, and the air-passage *s*, in which air is, through openings in the sides of the stove, carried to the back and bottom of the fire-box, as specified.

7. The draught-chamber *l*, formed under the hearth plate, and in front of the fire-place, by means of the perforated plate *m*, substantially as herein shown and described.

8. The channels *l* and *s*, when carried so far under the grate as to produce a narrow air-entrance under the same, substantially as herein shown and described.

9. The pipes *w w*, extending from the hot-water reservoir to the fire-place of a stove, or near to the said fire-place, substantially as and for the purpose herein shown and described.

10. The perforated shield *v*, arranged in the oven H, to produce circulation, by causing the heated air to traverse behind the shield from the upper to the lower side of the oven, as herein shown and described, for the purpose specified.

11. The horizontal partition *x*, arranged in the case S, with relation to the reservoir and openings

a and *b'*, in the back plate E of the stove, whereby the products of combustion are directed from the flue M, through the opening *a'*, into the lower chamber *z*, and around the back of the boiler to the upper chamber *y*, escaping into the flue M through the opening *b'*, as herein described, for the purpose specified.

12. The suspended draught-plate K, pivoted to the hearth-plate, and arranged in and across the ash pan, substantially as herein shown and described.

13. The hinged perforated plate *p*, arranged within the front oven L, substantially as herein shown and described, so that it can be swung out of the way, as specified.

14. The perforated damper U, arranged in the back smoke-passage, opposite the opening *a'* to the chamber *z*, substantially as herein shown and described, to operate as specified.

15. The combination of the dampers U and V with the openings *a' b'*, chambers *z* and *y*, and horizontal partition *x*, all arranged and operating substantially as herein shown and described.

16. The plate *u*, arranged in rear of the ash-pan, for the purpose of conducting the downward-passing smoke to the channel M, as set forth.

92,224.—JOHN W. SWICKARD, Galva, assignor to himself and WILLIAM H. HOWELL, Altona, Ill.—*Excavator.*—July 6, 1869.

Claim.—1. The longitudinally curved shovel P, when suspended by oscillating arms S from the axle D, and combined with the dirt-box M, substantially as and for the purpose set forth.

2. The combination and arrangement of bars H, guards K, wheels F, and shovel P, for carrying up the dirt, substantially as described.

3. The arrangement of lever T, arm S'', slide *a*, with clutches *b b* and *n'' n*, and notches *c* and *e*, spring W, and axle D, substantially as described and for the purpose set forth.

92,225.—NICHOLAS CHARLES SZERELMEY, Belgrave road, Pimlico, assignor to WILLIAM HENRY VALPY, No. 8 Craig's Court, Charing Cross, England.—*Manufacture of Tarpaulins.*—July 6, 1869; patented in England January 29, 1869.

Claim.—The improvements in making tarpaulins, and in treating sail-cloth and other fabrics, substantially as above described.

92,226.—GILBERT F. TAYLOR, New York, N. Y.—*Carpet-Sweeper.*—July 6, 1866.

Claim.—The combination of the two toothed wheels or gears C D, the upper one C, on the axis of the vibrating brush, being permanently keyed, or otherwise secured on the shaft *a* of the rotating brush B, and the other wheel D being attached to or cast with a friction or traction wheel E, when said gears are placed, one directly over the other, and with the axis of the rotating brush in the same axial plane, having a vertical or nearly vertical position, substantially as and for the purpose herein set forth.

92,227.—ENOCH THOMAS, Craigsville, Va.—*Retainer for Tobacco-Presses.*—July 6, 1869.

Claim.—The combination of the slotted sections C' C' with the follower C, and uprights B B, the said sections being connected with the follower by means of the joints *b b*, and straps E, the several parts being arranged and operating substantially in the manner and for the purpose herein set forth.

92,228.—WILLIAM THOMSON, Glasgow College, Scotland.—*Reflecting Galvanometer.*—July 6, 1869.

Claim.—1. The reflector M, magnet N, coils or helix C, source of light A, and scale or equivalent receiving surface D, combined and arranged as described, and adapted to serve, relatively to each other and to a telegraphic conductor, substantially as and for the purposes set forth.

2. The method, herein described, of rendering visible rapidly succeeding changes in weak currents, through long telegraphic conductors, by causing the same to deflect a ray of light, substantially as and for the purposes herein set forth.

92,229.—BENJAMIN C. TILGHMAN, Philadelphia, Pa.—*Process of Treating Vegetable Substances to Obtain Fiber.*—July 6, 1869.

Claim.—1. The process of treating vegetable substances which contain fibers with a solution of sulphurous acid in water, either with or without the addition of sulphites, heated, under a pressure not exceeding that of the atmosphere, to a temperature sufficient to cause it to dissolve the intercellular or incrusting matter of said vegetable substances, so as to leave the undissolved portion in a fibrous state, applicable to the manufacture of fibers for spinning, or of paper-pulp, or of cellulose, or to other purposes, according to the nature of the material employed.

2. The use and application of sulphites, or other salts of equivalent chemical properties, as above described, in combination with a solution of sulphurous acid in water, as an agent in treating vegetable substances which contain fibers, when heated therewith at a pressure not exceeding that of the atmosphere, to a temperature sufficient to cause said acid solution to dissolve the intercellular or cementing matter of said vegetable substances.

92,230.—FREDERICK TOWNSEND, Albany, N. Y.—*Railway-Car Brake.*—July 6, 1869.

Claim.—1. A laterally movable screw-shaft, provided with couplings on its extremities, and adapted for operating railroad-car brakes, substantially as described.

2. A double-acting lever, D, or its equivalent, interposed between a traveling nut, on a rotary-screw shaft, G, and a system of brakes, substantially as described.

3. Lever D, constructed with forked arms *h h*, and combined with a traveling-nut and a system of brakes, substantially as described.

4. The manner of suspending the lever D from a car-bed, so that it will accommodate itself to the motions of the shaft G, and car-trucks, substantially as described.

92,231.—CHARLES W. TREMAIN, Chicago, Ill.—*Balance Piston-Valve for Steam-Engines.*—July 6, 1869.

Claim.—1. The steam-chest K, provided with recesses, G, in its bottom, and the bolts I, for securing said chest to the cylinder, arranged as herein set forth.

2. The construction of the annular valve-seat D, with reference to the cylindrical steam-chest, substantially as described.

3. The construction of the recessed double-wedge P, and its arrangement with the set-screws S, for expanding the outer packing-rings of piston-valves, substantially as herein set forth.

4. The arrangement of the peep-holes O in the annular steam-passage A, in reference to the valve E, substantially as herein set forth.

92,232.—D. J. TRUE and E. FAIRFIELD, Portland, Me.—*Washing-Machine.*—July 6, 1869.

Claim.—The rubber lip *n*, as herein set forth, attached as described.

92,233.—JONATHAN B. TURNER, Jacksonville, Ill., assignor to himself and BRONSON MURRAY, New York City.—*Clod Breaker and Pulverizer.*—July 6, 1869.

Claim.—1. The use of parallel chains, attached at right angles, or less than right angles, to parallel bars, the whole forming a drag, for the purpose of destroying clods or lumps of earth by attrition, when drawn over the same.

2. The use of angular bars of metal, secured so as to be drawn over the ground, with an edge or angle downward, and in contact therewith, for pulverizing the surface of the ground, as and for the purposes hereinbefore described.

3. Uniting the bars B^1 to B^4 by links, so as to allow independent lateral and vertical motion, substantially as and for the purposes hereinbefore described.

4. The angular bars B^1 to B^4, box E, and bearers A A, chains *e e e*, and loops *d d*, all arranged and combined substantially as and for the purposes hereinbefore described.

92,234.—Morris L. Utter, Rockford, Ill.—*Seeder.*—July 6, 1869.

Claim.—The seed-wheel, with journals A A, constructed as described, the partition B B and square shaft C, the whole being combined and arranged as described, for the purpose set forth.

92,235.—Samuel W. Valentine, Bristol, Conn.—*Fruit-Picker.*—July 6, 1869.

Claim.—The combination of the knife *k* with the beveled jaws *i* and *j*, substantially as and for the purpose specified.

92,236.—George Weaver and H. Nelson Allen, Boston, Mass., assignors to themselves and E. R. Cheney, same place.—*Rubber Spring.*—July 6, 1869.

Claim.—The hollow rubber spring or packing A, constructed with a cylindrical exterior, one or more apertures, B, and an internal cavity, C, increasing in diameter from the ends toward the center, substantially as and for the purpose described.

92,237.—Phineas D. Wesson, Providence, assignor to himself and James Phillips, Central Falls, R. I.—*Low-Water Indicator for Boilers.*—July 6, 1869.

Claim.—The arrangement of the shell B, the expansible tube I, and the diaphragm *m*, follower E, stem Z, lever T, and whistle D, substantially as specified.

92,238.—James W. Weston, New York, N. Y.—*Carriage-Hub.*—July 6, 1869.

Claim.—A wheel-hub made of laminæ of wood, in the manner specified, and for the purposes set forth.

92,239.—James B. Wheeden, Baltimore, Md.—*Window-Awning.*—July 6, 1869.

Claim.—The combination of the awning and frames B C, slides E, and cords D *a*, in the manner substantially as specified.

92,240.—Gottlieb H. Wilde, Aurora, Ill.—*Apple-Parer.*—July 6, 1869.

Claim.—Combination of guide C, pins F, and blade A, when constructed and arranged so as to operate substantially as and for the purposes specified.

92,241.—William H. Williams, Canton, Ohio.—*Nut-Locking Washer.*—July 6, 1869.

Claim.—The nut-locking washer herein described, the same being constructed of malleable metal, with arms or depressions *a a*, arranged around the bolt-hole *b*, and fitting into slots or indentations *f f*, in the nut-plate, and being caused to lock the nut by the turning of its edge over a side face of the nut, substantially in the manner and for the purpose herein specified.

92,242.—Charles E. Wilson, Boston, Mass.—*Truing Grindstones.*—July 6, 1869; antedated June 19, 1869.

Claim.—The arrangement of the grindstones B B, in such a manner upon the frame A, that their peripheries will touch, so that when they are revolved at unequal speed, they will mutually level each other's faces, the same being adjusted substantially as herein set forth.

92,243.—H. C. Alexander, New York, N. Y.—*Toy-Velocipede.*—July 6, 1869.

Claim.—An improved toy-velocipede, constructed and operating substantially as shown and described.

92,244.—E. F. Anderson, Mansfield, Conn.—*Teacher's Toy.*—July 6, 1869.

Claim.—1. The arrangement, upon a revolving plate, B, of several blocks upon spindles, so as to turn each block independent of the other and of the table, substantially as described.

2. The arrangement, upon a revolving table, B, of two or more series of blocks, F and G, each series revolving independent of the other series, and each block independent of the other block of the same series, substantially as described.

92,245.—Henry K. Averill, New Oregon, Iowa.—*Thrashing-Machine.*—July 6, 1869.

Claim.—1. So constructing the thrashing-machine, that the cylinder and endless carrier are adapted to be driven either by the wind-wheels or a tumbling-rod and horse-power, or both combined, substantially as described, for the purpose specified.

2. The arrangement of the carrier D′, closed bottoms F and F¹, and the shaking-device K, all substantially as specified.

3. The combination, with the carrier, of the winnower G, constructed and arranged substantially as specified.

92,246.—Joseph F. Baldwin, Provincetown, Mass.—*Preserving Animal and Vegetable Sustenances on Ship-Board.*—July 6, 1869.

Claim.—1. The herein-described arrangement of the main deck and hull and the ice-receptacle, with the cargo-receptacles and the air-spaces between and about the cargo-receptacles.

2. The arrangement of the water-tight flooring and the ballast-receptacles in the hull, with the cargo and ice receptacles and air-spaces disposed together, and with respect to the main deck and hull, in manner substantially as set forth.

3. The combination and arrangement of the poop P, with the main deck, the ice and cargo receptacles and their air-spaces disposed together and within the hull, substantially as specified.

92,247.—Harvey Ball, Walpole, N. H.—*Billiard-Counter.*—July 6, 1869.

Claim.—1. The latch *n* and stop *f*, arranged in connection with the slide *o′* and toothed wheel B, substantially in the manner and for the purpose specified.

2. The pawl n^3, constructed and operated in connection with pin n^2, and slide *o′*, substantially as and for the purpose described.

3. The pivoted levers p^1 p^1, arranged to operate substantially as and for the purpose set forth.

4. The combination of the levers p^1 p^1, slide o^1, and pawl *m*, substantially as and for the purpose described.

5. The toothed wheel B, provided with stop *f* and pin f^2, in combination with latch *n* and dog e^3, operating as and for the purpose set forth.

6. The pawls *g* and f^2, operating conjointly or independently, for either setting back one or more points, substantially in the manner described.

7. The combination of the lever h^1, pawls *g* and f^2, and toothed wheels B, all operating substantially as and for the purpose set forth.

8. The combination of the pawl f^2 with lever *g* and toothed wheel B, substantially as and for the purpose specified.

92,248.—Simon S. Barger, Golconda, Ill.—*Medical Compound for Treating Hog-Cholera.*—July 6, 1869.

Claim.—The application of a compound for the prevention of hog-cholera, composed of the ingredients as herein designated.

92,249.—R. F. Baughn, Lexington, Miss.—*Car-Coupling.*—July 6, 1869.

Claim.—The parts A B, with the springs G, constructed, arranged, and operating substantially as and for the purposes herein shown and described.

92,250.—John Beattie, Chicago, Ill., assignor to William Baker, same place.—*Hoisting-Apparatus.*—July 6, 1869.

Claim.—1. The improved method of gearing and ungearing the clutch F and drum A, by means of the drums C and D, actuated as described, the tappet-wheel N, and catch M, chain H, and weighted cord I, all substantially as and for the purpose specified.

2. The combination with the drum A, bell-crank, and clutch, of the drum C, weighted cord O, tappet-wheel N, latch M, and weighted cord I.

92,251.—Bernard J. Beck, Brooklyn, N. Y.—*Paper File or Binder.*—July 6, 1869.

Claim.—The string or cord C, when the same is provided with a needle, E, having a double cutting-

edge, *e e*, and eye, *e' e'*, and is fastened by a clamping-buckle, D, each feature being constructed and secured as shown, and the whole being combined and arranged so as to operate substantially as described, as and for the purpose specified.

92,252.—STEPHEN A. BELL, Newtown, Ohio.—*Turbine Water-Wheel.*—July 6, 1869.

Claim.—1. The provision of the pit K, and connecting-conduits L, in the stationary cover, constructed and operating substantially in the manner and for the purpose specified.

2. In the described combination, with the elements of the preceding clause, the bucket-extension H and flange I, for the purpose described.

92,253.—ETIENNE BOILEAU, St. Louis, Mo.—*Fire-Plate for Stoves.*—July 6, 1869.

Claim.—The within-described back or fire plate A, consisting principally of the triangular bars B B, joined together at their upper and lower ends, and containing the annular openings *c c*, near the upper edge thereof, substantially as and for the purpose shown.

92,254.—HORACE C. BRADFORD, Providence, R. I.—*Eyelet-Making Machine.*—July 6, 1869.

Claim.—1. The combination of the dies E and F, or their equivalents, with the revolving cutter G, or its equivalent, arranged relatively to each other, substantially as herein described, for the purposes specified.

2. The revolving cutter G, with its open center constructed to operate substantially as described, for the purposes specified.

92,255.—WILLIAM BRADY and CHRIST. H. BRADY, Mount Joy, Pa., assignors to themselves and H. A. BRADY, same place.—*Lifting-Jack.*—July 6, 1869.

Claim.—1. The bed-piece A, constructed substantially in the bent form herein described, and provided with a perpendicular slotted standard, B, as shown and described.

2. In combination with the bed-piece A and slotted standard B, the toothed and flanged bar D, block C, and clamp or jaw E, all constructed and arranged to operate substantially as and for the purposes herein set forth.

3. The arrangement of the ears *e e* on the bed-piece A, the lever F, loop *h*, and hook *m*, or their equivalents, all substantially as and for the purposes herein set forth.

92,256.—HOMER BROOKE, New York, N. Y.—*Lamp-Chimney.*—July 6, 1869.

Claim.—A chimney for gas or lamp burners, constructed with an external rib or projections, for support of the shade, substantially as herein described.

92,257.—JAMES F. BROOKS, Stafford Springs, Conn.—*Apparatus for Operating Scrapers.*—July 6, 1869.

Claim.—The combination, with the scraper A B, of the vehicle herein described, when arranged and attached to the scraper, as herein set forth and shown, for the purpose specified.

92,258.—SAMUEL D. BROOKS, Baltimore, Md.—*Process for Soldering the Joints and Seams of Metallic Vessels.*—July 6, 1869.

Claim.—The improved method, herein substantially described, of producing a soldered joint or seam in a metallic vessel, viz: by first dipping, into a bath of molten metal or alloy, one or both of the edges or surfaces which are to form the desired joint or seam, so as to coat them with fusible metal before they are brought together; and, secondly, applying heat, in any suitable manner, to the joint or seam obtained, by properly placing and holding these coated edges in contact, with or without flux, all substantially as herein set forth.

92,259.—P. F. BURKE, Worcester, assignor to THOMAS DOOLEY, Boston, Mass.—*Die for Making Horseshoe Toe-Calks.*—July 6, 1869.

Claim.—1. For punching dies for toe-calks, the offset arrangement of the punches and the openings in the die, substantially as shown and described.

2. The non-integral structure, consisting of the carrier *e d*, separate punching-cutters *a b*, *a b*, clamping-plates *e e*, and bolts *f f*, substantially as and for the purposes specified.

3. The bridge *h*, combined with the die *g*, and operating substantially as and for the purpose specified.

92,260.—JOHN G. BUTLER, New York, N. Y.—*Electro-Magnetic Alarm.*—July 6, 1869.

Claim.—1. The connection of one end of the electro-wire directly with the armature-spring, substantially as and for the purposes set forth.

2. The combination of the spring G with the wire *o*, set-screw L, and armature F, carrying the bell-hammer, substantially as described, for the purpose specified.

3. Connecting the electric wire with any portion of the bell-hammer armature, as herein described, for the purpose specified.

92,261.—R. P. BUTTLES, Mansfield, Pa.—*Countersink.*—July 6, 1869.

Claim.—A countersink, having a tubular stem, A, with the burr E formed on its lower end, and arranged to be used in connection with a bit or boring-tool, substantially as described.

92,262.—JOHN E. BUXTON, Owatonna, Minn.—*Combined Drill and Seeder.*—July 6, 1869.

Claim.—1. The tilting-spouts D and rod C, in combination with the perforated bottom of the hopper B, with the frame A, and with the spouts E and G, substantially as herein shown and described, and for the purpose set forth.

2. Providing a seeder with two sets of spouts, E and G, to adapt it for use as a drill or broadcast-seeder, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the lever H and catch-bar I, with the bar C and tilting-spouts D, substantially as herein shown and described, and for the purpose set forth.

92,263.—DANIEL CAMPBELL, Elizabeth, N. J., assignor to CHARLES PARKER, Meriden, Conn.—*Power-Press.*—July 6, 1869.

Claim.—In a power-press, in which the vertical slide is arranged so as to be operated by a revolving shaft extending back from the said slide, combining with such slide and shaft a mechanism substantially such as described.

92,264.—E. D. CHAMBERLAIN, New York, N. Y.—*Hand-Stamp.*—July 6, 1869.

Claim.—The set card F, composed of the rows or figures N N', in combination with the frame of a hand-stamp, employing revolving printing-disks C, substantially as and for the purpose set forth.

92,265.—WILLIAM LATTA CHAMBERS, Pleasant Unity, Pa.—*Atmospheric Car-Brake.*—July 6, 1869.

Claim.—1. The cylinder B, operated as described, the brake-cylinder F, and brake F', arranged relatively to each other, as herein described.

2. The valve-box G, valve g^1, and safety-valves g^4 g^5, in combination with the reservoir C, pipes e' G^1, and brake-cylinders F, the whole constructed substantially as set forth.

3. The brake-cylinder F, piston *f*, arm F', and brake-shoes H, with the chains f^5, pulleys f^6, and spring f^7, the whole arranged substantially as described.

4. The boxes K, and pivoted doors K', in combination with the flexible pipes I' L, and air-pipes G^2 and I, constructed substantially as described.

5. The shaft b^8, and gear-wheel b^6, in combination with the shipper b^{12}, spring b^{13}, and pivoted lever b^{16}, the whole arranged substantially as described.

92,266.—CHARLES P. CASE, Troy, Pa.—*Saw-Filing Machine.*—July 6, 1869.

Claim.—1. The frame D, ratchet-wheel E, pawls *n*, levers *h* and *k*, set-screw *l*, spring *i*, and arm *v*, when constructed and arranged to operate substantially as and for the purposes set forth.

2. In combination with the foregoing devices, the frame P, with its double saws, as described, arranged to operate substantially as specified.

3. The frame R, with its rollers e', slotted plates S, thumb-nuts a', pins d', crank and screw T, and beveled gear, as described, constructed and arranged to operate substantially as and for the purposes specified.

4. The above-described machine for filing saws, both on the upper and lower side of a tooth, at one operation.

92,267.—J. W. COCHRAN, New York, N. Y.—*Railway-Car Spring.*—July 6, 1869.

Claim.—1. The combination, with a metallic spiral spring, and surrounding rubber one, of a telescopic tube or sleeves, arranged to surround the spiral spring, and within the eye of the rubber spring, substantially as specified.

2. The combination, with a metallic spiral spring, and surrounding rubber one, of a telescopic tube or sleeves, arranged to support the spiral spring on its interior, essentially as herein set forth.

3. The combination of inside and outside telescopic tubes or sleeves to a metallic spiral spring, with an outside or surrounding rubber spring, substantially as specified,

4. The combination, with an inner metallic spiral spring, and surrounding rubber one, of a telescopic tube or case, arranged to freely surround, on its outside, or inclose the rubber spring, substantially as described.

92,268.—CORNELIUS A. COGGESHALL, Bridgeport, Conn., assignor to himself, ROBERT T. CLARKE, and SALATHIAL T. NICKERSON.—*Machine for Bending and Hardening Springs.*—July 6, 1869.

Claim.—1, A "former," B, either hollow or solid, made capable of axial adjustment or rotation, and constructed so as to present forming-faces $a\ a$ of different curvatures, substantially as specified.

2. The combination of the adjuster D, gauges e, and supporting-former B, operating together substantially as described.

3. The construction and arrangement of mechanism, by which the adjuster D and pressers C are simultaneously operated, substantially as set forth.

92,269.—DAN. A. CONNOR, Milford, Conn., assignor to himself, CHARLES RODER, and ROBERT E. WIRSCHING, same place.—*Water-Proof Fabric for the Manufacture of Hats and other Articles.*—July 6, 1869.

Claim.—Coating the surface of articles with a compound, prepared and applied substantially as set forth.

92,270.—ALFRED E. COOKE, Philadelphia, Pa.—*Brick-Machine.*—July 6, 1869.

Claim.—1. The grinding-rolls A and B, made adjustable in relation to each other, and automatic as regards the stoppage of the feed on an obstacle passing in between them, by means of the rising and falling hangers C C to the one roll, and falling stops or props D D, substantially as specified.

2. The combination of the toothed pulverizing roll G with the screen-back and ribbed concave H, constructed essentially as shown and described.

3. The reciprocating screen-separator I, in combination with the toothed pulverizing-roll G and its concave H, constructed substantially as specified.

4. The combination of the loose sleeves $t\ t$, with the chargers $n\ n'$ or $o\ o'$ of the feed-table or tables $N\ N^1$, for operation on or over the face of the mold-bed, substantially as described.

5. The hinged leaves S S', attached to the ends of either feed-table $N\ N^1$, and arranged to rise and fall during the reciprocating action of said table or tables, essentially as and for the purpose or purposes herein set forth.

6. The combination of the cam-wheels $K^2\ K^2$ or $K^3\ K^3$, and rocking segment or segments $I^2\ I^3$, with pinions and racks for operation of the feed table or tables, substantially as described.

7. The combination, with the lower followers R or R', of the adjustable levers M^2, for gauging the depth of the molds open for reception of clay, essentially as herein set forth.

8. The combination, with the lower followers R R', or pins or projections z, carried by the blocks or tables thereof, of the beams $w\ w$, and clamps $v\ v$, for adjustment and grip of the off-bearing boards T T, substantially as specified.

9. A brick-machine, made up of intermittently reciprocating feed-tables, provided with sleeves t, mold-beds, with molds therein, and upper and lower followers, all arranged, and the several working parts being operated, substantially as specified.

92,271.—JOHN C. COTTINGHAM. Philadelphia, Pa.—*Gaff-Chock for Vessels.*—July 6, 1869; antedated June 24, 1869.

Claim.—Arranging the yokes Y and Y' in the stock S of the gaff G, the said yokes being constructed as shown, and provided with sockets, for the purpose of holding the friction-rollers, substantially as specified.

92,272.—DAVID B. COX, Troy, N. Y.—*Cooking-Stove.*—July 6, 1869.

Claim.—The raised hearth-plate A, constructed and applied to the hearth of a cooking-stove, substantially as and for the purposes herein specified.

92,273.—BENJAMIN P. CRANDALL, New York, N. Y.—*Velocipede.*—July 6, 1869.

Claim.—1. The combination, with the steering-wheels, of the hand-lever G, arranged at the sides of the seat D, substantially as and for the purpose described.

2. The slot H, to allow vibration of the steering-wheels, without disturbing the hand-levers, substantially as set forth.

3. The combination, with a fixed wheel on the crank-axle, of a similar wheel, mounted loosely thereon, for the purpose described.

4. The reach C, forming an auxiliary bearing for the crank-axle, as set forth.

5. The standard L, rising from the reach, and supporting the rear of the seat, substantially as and for the purpose described.

6. The pedals T, suspended from the reach, and arranged in relation to the parallel rods E, as herein described.

7. The hand-levers G, at the sides of the seat, substantially as set forth.

92,274.—JASON CRANE, Bloomfield, N. J.—*Preserving Furs, Clothes, and the Like Articles from Injury by Moths, &c.*—July 6, 1869.

Claim.—1. The herein-described mode of preserving furs, clothes, and other articles, the same consisting in filling suitably formed spaces within boxes or packing-cases with cedar shavings, cedar sawdust, or other equivalent preservative material, substantially as herein described.

2. The new article of manufacture, boxes for preserving furs, clothes, and the like, having spaces for preservative agents, substantially as described.

92,275.—MOSES G. CRANE, Newton, and EDWIN ROGERS, Boston, Mass.—*Automatic Signal-Box for Fire-Alarm Telegraphs.*—July 6, 1869.

Claim.—1. The combination, with an automatic signal-box, of a circuit-wheel, operated by a weight or spring, through the means of a reciprocating gear-sector, the teeth of which sector engage with a pinion, which rotates loosely upon the circuit-wheel shaft, or a shaft geared thereto, in one direction, and drives said shaft when rotating in the opposite direction, substantially as described.

2. In combination with the weighted lever, and the gear-train operated by the lever, a spring, or series of springs, interposed between the weight and the rotating gears, substantially as described.

3. In combination with the gear-train, and an escapement and pallet connected thereto, a reciprocating fly, placed directly on the pallet-shaft, substantially as described.

4. In combination with the setting-lever a^2, and the slot through which the finger-piece of the lever traverses, the stationary guard-plate g^2, substantially as described.

5. In combination with the lever a^2, the swinging or spring-lifter c^2, substantially as shown and described.

6. In combination with the weighted lever, the slide-pin b^2, so arranged that while it may be actuated by the lifter whenever the signal is not being transmitted, it cannot be operated while the signal is in course of transmission.

92,276.—JOHN CRAWLEY, Brooklyn, N. Y., assignor to VICTOR E. MAUGER, New York City.—*Lithographic Press.*—July 6, 1869.

Claim.—1. The water-reservoir A, when provided with apertures for receiving the screw-valves C, and with the converging sheets of absorbing material, substantially as herein shown and described, to operate as set forth.

2. The screw-valves C, applied to the moistening attachment herein described, when grooved or flattened, substantially as and for the purpose specified.

92,277.—A. G. CUMMINS and J. R. CUMMINS, McKinney, Tex.—*Plow.*—July 6, 1869.

Claim.—The plow-beam A, formed with the front end B enlarged horizontally, and perforated for the purpose specified, the same being likewise provided with the seat E, longitudinally adjustable thereon, by means of the bolt *f* and holes *g*, and the adjustable standards D D and adjusting braces *d*, as herein set forth.

92,278.—SUSAN C. CURRIE, New York, N. Y.—*Medicine-Spoon and Bottle-Stopper Combined.*—July 6, 1869.

Claim.—A medicine-spoon, provided with a projection upon its under side, by which it is adapted to be applied to the cork of a medicine-bottle, substantially as specified.

92,279.—ISRAEL J. CURRIER and JOSEPH HAWSE, Wolcott, Vt.—*Potato-Washer.*—July 6, 1869.

Claim.—A potato-washer, consisting of the bucket A, crank-shaft B, stirrer C, revolving bottom *b*, with diagonal strips, and cross-bars or rods *a' a' a'*, all combined, arranged, and operating substantially in the manner and for the purpose set forth.

92,280.—JOSEPH O. CURRYER and WILLIAM C. YOUNG, Thorntown, Ind.—*Door-Latch.*—July 6, 1869.

Claim.—The combination and arrangement of the plate *a* with its slot *s*, catches *c* and *u*, and guard *v*, when constructed substantially as and for the purposes specified.

92,281.—HENRY CURTNER, Anna, Ohio.—*Sausage-Stuffer.*—July 6, 1869.

Claim.—The arrangement of the sector-shaped chamber D, door *a*, follower F, cylindrical or sectional plates H I, and lever M, substantially as and for the purpose stated.

92,282.—MARK ANTHONY CUSHING, Aurora, Ill.—*Hot-Air Furnace.*—July 6, 1869.

Claim.—1. The furnace A, in combination with a chamber for receiving the heated products of combustion, having within it an escape-pipe, with an adjustable mouth or escape-opening, substantially in the manner and for the purpose above described.

2. A chamber for receiving the products of combustion, separate from the combustion-chamber, having within itself an escape-pipe for the products of combustion, with an adjustable mouth or escape-opening, which may be elevated or depressed, substantially in the manner and for the purpose above described.

3. An adjustable escape-pipe for passing off the products of combustion, by means of which the escape-draught may be made direct or revertible at the pleasure of the operator.

92,283.—HENRY A. DANIELS, Thomaston, Conn.—*Lubricator.*—July 6, 1869.

Claim.—The conical valve D, constructed as described, upon the upper end of the stem *c*, in combination with the adjustable shank B, carrying the oil-cup, whereby, when the shank B is sufficiently elevated above the journal-box, the valve is seated and the supply of oil cut off, substantially as herein shown and described.

92,284.—WILLIAM EDWARD DAVIS, Jersey City, N. J.—*Telegraph-Sounder.*—July 6, 1869.

Claim.—1. The hollow sounding-column A, when made of hard rubber, and covered by a metallic cap, substantially as herein shown and described.

2. The combination of the perforated base C and steel bolt E with the hollow rubber column A, cap D, and armature-lever F, all arranged and operating substantially as herein shown and described.

3 The stud or standard *h*, carrying the pin *g*, when provided with double slots *i* and *j*, substantially as and for the purpose herein shown and described.

92,285.—WILLIAM EDWARD DAVIS, Jersey City, N. J.—*Telegraph-Key.*—July 6, 1869.

Claim.—The bent lever G and spring *i*, in combination with the spring-lever C, slotted standard B, contact points *c k*, and the insulated point of the adjusting screw *e*, all arranged as described, for the purpose specified.

92,286.—JOSÉ F. DE NAVARRO, New York, N. Y., assignor to EMERY ROTARY MACHINE COMPANY, same place.—*Rotary Steam-Engine.*—July 6, 1869.

Claim.—The arrangement of the loose ring I, operating in central slots *d*, in the pistons D, said pistons having a radial motion in grooves on the inner sides of the heads E F of the eccentric revolving drum C, substantially as shown and described.

92,287.—J. F. DE NAVARRO, New York, N. Y., assignor to EMERY ROTARY MACHINE COMPANY, same place.—*Measuring-Faucet.*—July 6, 1869.

Claim.—The arrangement, in relation to a measuring faucet and its revolving operating shaft E, of the screw G, the worm-wheel I, and revolving dial K, with its index M, substantially as shown and described.

92,288.—WILLIAM H. DOBSON, Medina, N. Y., assignor to himself and HOMER BELDING, same place.—*Scroll-Sawing Machine.*—July 6, 1869.

Claim.—1. The adjustable bar F, adjustable rollers H, springs J, and cord K, supporting the upper end of the saw, constructed and arranged as described, for the purpose specified.

2. The sliding cross-head or plate N, constructed substantially as herein shown and described, in combination with the ways O and saw M, as and for the purpose set forth.

92,289.—WILLIAM B. DUNNING, Geneva, N. Y.—*Shaft-Coupling.*—July 6, 1869.

Claim.—The key *a* and shaft A and B, in combination with the annular wedge *b*, shell C, and screw-cap D, constructed to operate substantially as and for the purpose set forth.

92,290.—J. W. DURHAM, Ripley, Tenn.—*Match-Safe.*—July 6, 1869.

Claim.—As an improved article of manufacture, match-boxes, provided with pins B and catches D, substantially as specified.

92,291.—RUFUS M. EASTMAN, Boston, Mass., assignor to himself and FRANCIS L. BOYD, same place.—*Automatic Tongs.*—July 6, 1869.

Claim.—The automatic tongs, composed of devices A, B, H, *f*, and *c*, combined and arranged substantially as specified.

92,292.—HENRY V. EDMOND, Norwich, Conn.—*Composition for Staining Glass.*—July 6, 1869.

Claim.—1. The compound or preparation hereinbefore described, for coloring or staining glass.

2. The use of gelatine as the base, in combination with aniline or coal-oil dye, in the production of a compound for coloring or staining glass, substantially as described.

3. The employment of glycerine, in combination with gelatine and aniline, or any kind of color, in a liquid form, in the production of stained or colored glass, substantially as described.

4. Stained or colored glass, produced as hereinbefore described, as a new article of manufacture.

92,293.—JOHN ELBERTSON, Kirksville, Mo.—*Railway-Car Coupling.*—July 6, 1869.

Claim.—1. The bar C, with its pin *d* and hook *c*, as described, when constructed and arranged to operate substantially as and for the purposes specified.

2. The sliding-bars G, with their lips and pins, as described, in combination with the lever D and its pins, when the same are constructed and arranged to operate substantially as set forth.

3. In combination with the levers B and D, the vertical rods a' and e' *c*, and the dog *d*, when the same are constructed and arranged to operate substantially as and for the purposes described.

92,294.—GEORGE S. ELLARD, Westerly, R. I.—*Harvester.*—July 6, 1869.

Claim.—The wheel A, constructed as described, with the ratchet C and corrugated flange upon opposite sides, in combination with the driving-wheel B, pawl D, and sleeve F, carrying the lever E, all arranged as described, for the purpose specified.

92,295.—ELIHU FIELD, Geneseo, Ill.—*Corn-Husker.*—July 6, 1869.

Claim.—The improved corn-husker, constructed as described, of the straight shank A, having a slightly curved point, and bent at B to form a loop, C, for the reception of the three fingers, exclusive of the index-fingers, as herein shown and described.

92,296.—FREDERICK FISHER, Rockland, Me.—*Marline-Spike.*—July 6, 1869.

Claim.—A marline-spike, A, made hollow for a portion or the whole of its length, and provided or not with a removable head, substantially as and for the purpose described.

92,297.—ROBERT FORMAN, Normal, Ill.—*Corn Planter.*—July 6, 1869.

Claim.—1. The combination of the partition k^1, dropping-device k^2 k^3, and shaft J, with the conductor-spout K, and plate H of the dropping-device G H I, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the connecting-bar L, connecting-rod M, lever N, connecting-rod G, lever P, and hub-enlargement or wheel b', having a zigzag groove formed in it, with each other, with the plates H of the dropping-device G H I, and with the frames E, frame A, and wheel B, substantially as herein shown and described, and for the purpose set forth.

92,298.—SAMUEL WARD FRANCIS, New York, N. Y.—*India Rubber Tooth-Brush.*—July 6, 1869.

Claim.—A tooth-brush, made of vulcanized-rubber sponge, substantially as herein described.

92,299.—JOHN W. FRY, Elizabeth, N. J.—*Telegraph-Insulator.*—July 6, 1869.

Claim.—1. An insulator for telegraph-wires, formed to hold the wire by the compression of a surrounding cushion of India rubber, or other non-conducting and elastic substance, substantially as set forth.

2. An insulator, consisting of the spindle A, jaws *b c*, and India rubber *f*, arranged and operating substantially as and for the purpose set forth.

92,300.—FREDERICK GARDNER, Hamilton, Canada.—*Knitting Machine.*—July 6, 1869.

Claim.—1. The combination, with the cam-cases G or G' and the stationary cams H, of the movable cams H, provided with lugs *a*, and the screw-ring I or I', provided with the groove *c*, all constructed and operating substantially as described.

2. The grooved gates O P, constructed as described, and operating in connection with the zigzag grooves, and the groove *p*, substantially as and for the purpose set forth.

3. The latch-opener J, constructed with a single eye, *t*, and two wings, *u u*, and arranged in relation to the upper and lower carriers D E, substantially as and for the purpose described.

92,301.—ALFRED CHARLES GARRATT, Boston, Mass.—*Physiological Battery.*—July 6, 1869.

Claim.—The arrangement of buttons *a a*, *c c*, of dissimilar metals, upon a flexible non-conducting base, A, insulated from the back B, the buttons connected by wires *d d*, the whole forming a single-element physiological battery, substantially as herein set forth.

92,302.—DOMENICO GIAMBASTIANI, Washington, D. C.—*Armor-Plating for Vessels.*—July 6, 1869.

Claim.—1. A defensive armor for ships or batteries, consisting of many distinct blocks or plates of steel, with beveled, pointed faces, as described, in combination with the elliptic springs, as and for the purpose set forth.

2. The combination and arrangement, as described, of the blocks C', B^4, and elliptic springs D, for the purpose specified.

92,303.—G. F. GOETZE, New York, N. Y.—*Papier-Maché Compound.*—July 6, 1869.

Claim.—A compound for petrified papier-maché, made of the ingredients herein specified, and mixed together substantially in the manner and about in the proportion described.

92,304.—ISAAC C. GROOM, Albany, N. Y.—*Potato-Digger.*—July 6, 1869.

Claim.—1. The endless band of digging-forks, consisting of the tines *z*, bar *x*, flat metal links V, oblong links O, arranged substantially as and for the purpose set forth.

2. The vibrating sieve L, in combination with the receiving-basket M, substantially as and for the purpose set forth.

3. The lever W, rod U, spring T, standard W', catch W'', in combination with the main frame D and the front axle Q, substantially as and for the purpose set forth.

4. The levers P, pivots *f*, connecting-links *h*, and buttons *r*, in combination with the shaft *g*, substantially as and for the purpose set forth.

92,305.—WILLIAM HALL, North Adams, Mass.—*Let-Off Mechanism for Looms.*—July 6, 1869.

Claim.—The pivoted lever *e*, provided with press-plate e', and projection *f*, in combination with sliding-plate b'', guide b''', levers *a a*, and bands *d d*, all arranged as and for the purpose described.

92,306.—THOMAS A. HARES, New York, N. Y.—*Apparatus for Propelling Carriages.*—July 6, 1869.

Claim.—1. The arrangement, in a carriage, of two spring clock-work devices, entirely independent of each other, and wound up by independent cranks, F, or their equivalent, one apparatus and crank being on one side, and the other on the other side of the carriage, and so constructed and operating that, while either is running down and propelling the carriage forward, the other may be winding up, substantially and for the purpose herein set forth.

2. In a carriage having two spring clock-work devices winding independently of each other, as and for the purpose specified, and in combination with said devices, the clutch *i*, pinion H, and teeth *e e*, operating substantially as and for the purposes set forth.

3. The construction and arrangement of the two disks c^2 c^3, one above and one below the projecting end of the prow, said parts being rigidly connected by the standard b', to the axle of the forward wheels, the upper disk having a crown-wheel cog-rim, and being connected with the pinion c^1, horizontal shaft *c*, and its hand-wheel, in the manner described, and for the purposes herein specified.

4. The form and construction of the carriage, herein shown, in order to adapt it to the use of the motive-power above described.

92,307.—ABRAHAM W. HARRIS, Providence, R. I.—*Lubricator.*—July 6, 1869.

Claim.—1. Constructing the stem of the regulating-valve D, of an oil-cup, A, with an expansible disk-rim head, E, substantially as described, for the purposes specified.

2. The combination of the oil-cup A, regulating-valve D, expansible rim E, and tapering plug *h*, or equivalent device, substantially as described.

92,308.—B. N. HARRIS, Talbotton, Ga.—*Churn.*—July 6, 1869.

Claim.—The dashers L, adjustable disks M N, shaft G, pulley H, and hinged arm C, all constructed and arranged to operate as herein described, and for the purpose set forth.

92,309.—JOHN B. HASTINGS, Ironton, Ohio, assignor to himself and LOVEARD T. DEAN, same place.—*Cleaning and Polishing Attachment to Sheet-Metal Rolls.*—July 6, 1869.

Claim.—1. The provision upon the periphery of a roll for making sheet-metal, of one or more pressure-rollers, substantially as set forth.

2. The arrangement of the pressure-rollers D E, journaled in levers F G, having adjustable weights, or springs H or J, for the purpose indicated.

92,310.—WILLIAM E. HENRY, Joliet, Ill.—*Railway-Rail Splice.*—July 6, 1869.

Claim.—The railway-rail splice, consisting of the bar *d*, grooved bar *a*, elastic strip *b*, continuous washer *c*, and connecting-bolts, all constructed and arranged to operate substantially as and for the purposes set forth.

92,311.—JAMES M. HILL and HENRY C. HILL, Fairfield Post Office, Ill.—*Windmill.*—July 6, 1869.

Claim.—The combination and arrangement of the cranks *c*, arms *d*, wheels H and *n*, ratchet *o*, pawl *s*, handle *a*, and springs *u* and *b*, substantially as and for the purposes specified.

92,312.—NOAH WILLIAM HOUSE, Adrian, Mich.—*Rope-Molding Machine.*—July 6, 1869.

Claim.—1. A machine for cutting rope-molding, provided with a face-plate, B, die-plate C, nose-piece D, oblique knives *a b*, and spiral grooves *e*, arranged, connected, and operating substantially as and for the purposes herein described.

2. The face-plate B, die-plate C, and nose-piece D, in combination with the clutches S T, slots *h i*, and projections and depressions 1, 2, 3, 4, substantially as described.

92,313.—CHRISTIAN HUGHES, Niles, Ohio.—*Injector.*—July 6, 1869.

Claim.—1. The construction and arrangement of the enlarged extension E, of the steam-pipe D, as specified.

2. The arrangement of the T-pipe connections, substantially as described.

3. The combination, with the steam-valve K and steam-tube D, of the spirally-fluted extension, substantially as specified.

92,314.—G. H. JONES, Grand Rapids, Mich., assignor to himself and HENRY L. WISE, same place.—*Railway-Car Truck.*—July 6, 1869.

Claim.—The combination, with the tread-wheels C C, of the intermediate set of double wheels D D, projecting lower than the tread-wheels, to embrace the rails, and having tread-surfaces, *d d*, to strike upon the rails and elevate the ordinary wheels above the track in replacing, as herein set forth.

92,315.—HERMANN KAEMPF, Newark, N. J.—*Dog-Muzzle.*—July 6, 1869.

Claim.—The flat spring B, in combination with the wire ring C and the bent wires *a*, *b*, *c*, *d*, *e*, *f*, *g*, and *h*, when said spring extends from the nose to the ring C, conforming to the curvature of the head, all arranged as herein shown and described, for the purpose specified.

92,316.—EDWARD G. KELLEY, New York, N. Y.—*Oil-Can from Paper-Stuff.*—July 6, 1869.

Claim.—A can for containing oil or hydrocarbon liquids, when made of paper or paper-pulp, and when coated on the inside with a substance impervious to oil, and on the outside with water-proof material, substantially as herein shown and described.

92,317.—PATRICK KELLY, Dayton, Ohio.—*Gas-Generator.*—July 6, 1869.

Claim.—An apparatus for carbureting air, combining in its construction the following groups of elements:

1. A gasometer for pumping air with induction-valve and eduction-pipe;

2. A storing-gasometer, with an induction-valve and eduction-pipe;

3. A series of carbureting-chambers, containing the chemicals, connected by pipes arranged to carry the air through such chemicals; and

4. A gas-pipe, through which the gas is carried for use, and having a branch-pipe with gas-jet, arranged to heat the air in the pipe D, said parts being arranged substantially as and for the purpose set forth.

92,318.—REUBEN A. KELLY, Hope, Ind.—*Clod-Fender for Plows.*—July 6, 1869.

Claim.—1. A combination of a runner, plow-beam, clamp, and spring, arranged to hold the runner upon the ground with a yielding force, substantially as specified.

2. A combination of a clod-feeder, runner, clod-discharging wing, and reinforcing springs, when adjustably connected together, substantially as specified.

92,319.—WILLIAM KENNEDY, New London, Pa.—*Shaft-Coupling.*—July 6, 1869.

Claim.—A shaft-coupling, formed of two parts or halves, drawn together upon the shafts by means of tongues and mortises, secured by gibs and keys passing through the parts, substantially as set forth.

92,320.—JAY KNICKERBOCKER, Dunning, Pa.—*Harrow.*—July 6, 1869.

Claim.—An adjustable harrow, consisting of the triangles A B and bars C D, the triangles being pivoted together, and one or both of the bars being hinged to the triangles, substantially as herein shown and described.

92,321.—HENRY F. LAWRENCE, Vallejo, Cal.—*Funnel.*—July 6, 1869.

Claim.—A funnel, in which are combined and arranged the jointed rod *h*, operated as described, the guide-pipe *g*, the ball-valve *f*, the tube *b*, and the jacket *e*, all as and for the purpose described.

92,322.—H. Y. LAZEAR and J. L. SHARP, New York, N. Y.—*Gas-Heater.*—July 6, 1869.

Claim.—1. The expansion or commingling chamber *c* above the end of the tube, and between it and the perforated diaphragm *e*, as herein recited.

2. The perforated diaphragm or plate *e*, in combination with the chamber *c* and plate *d*, as herein set forth.

92,323.—CHARLES M. LELAND, Central City, Colorado Territory.—*Machine for Washing Dishes, Knives and Forks, &c.*—July 6, 1869.

Claim.—The kettle A, crate C, and perforated cylinder D, when combined, arranged, and operated as and for the purpose specified.

92,324.—SAMUEL LEWIS, Williamsburgh, N. Y.—*Portable and Convertible Coffer-Dam.*—July 6, 1869.

Claim.—1. The portable and extensible coffer-dam, constructed of double walls, laid off into the water-tight and air-tight compartments, furnished with the tubes and valves, and braced and timbered as shown, all constructed and arranged as specified, and for the object set forth.

2. The adjustable supports 17, for supporting the upper sections of the portable and extensible coffer-dam, said sections being adapted to slide one within the other, as herein described, for the purpose specified.

3. The removable side, with its special compartments, tubes, and valves, with the objects and for the purposes explained.

4. The cam, constructed and arranged, in its several parts as herein shown and described, for the purpose specified.

92,325.— SAMUEL LEWIS.—Williamsburgh, N. Y.—*Ice-Planer.*—July 6, 1869.

Claim.—1. The pivoted lever D, constructed with toothed segmental ends in combination with the inclined racks *b'*, formed upon the runners B, arranged

and operating as described, for the purpose specified.

2. The combination of the gauge-rack bar E, levers D, and runners B, with each other, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the gauge-bars F, and adjustable stops *f'* with the brakes M, substantially as herein shown and described, and for the purpose set forth.

4. The draught-attachment L, constructed as described, in combination with the frame of an ice-planer, substantially as herein shown and described, and for the purpose set forth.

5. Arranging the vertical cutters K, with their curved edges forward, substantially as herein shown and described, and for the purpose set forth.

92,326.—SAMUEL H. LINTAN, Burrows, Ind.—*Clover and Flax Thrashing Machine.*—July 6, 1869.

Claim.—The combination, with the cylinder and inclined ways *d*, of the perforated shaker and the endless scraper or carrier *e*, all arranged substantially as and for the purpose described.

92,327.—DANIEL LOEFFEL, Mount Vernon, Ind.—*Revolving Screen for Cleaning Grain.*—July 6, 1869.

Claim.—An improved grain-screen, formed by the combination of the feed-hopper J K L M N, spur-wheel O, screen I, shaft C, pipe E, tapering screen B b^1 b^2 b^3, box A, and discharge-spouts D and F, with each other, said parts being constructed, arranged, and operating substantially as herein shown and described, and for the purposes set forth.

92,328.—THOMAS L. LUDERS, Olney, Ill.—*Device for Holding Thread While Doffing in Spinning-Machine.*—July 6, 1869.

Claim.—1. The hooks *d d*, in combination with the case *c*, spring *e*, base *m*, and support *n*, substantially as described.

2. The combination of the wires or rods *g g*, spring *f*, base *m*, and support *n*, substantially as described.

92,329.—CHRISTIAN MACK, Leipsic, Ohio.—*Gate.*—July 6, 1869.

Claim.—1. The arrangement and combiuation of the horizontal pivoted arms F F', the vertically-pivoted bars J J', and their connecting-rods, with a swinging gate, substantially as before described.

2. The arrangement and combiuation of the pivoted latch-lifter P P', the crank-locking arm R R', the horizontal pivoted arms F F', and their connecting-rods, with the slotted connection *a b*, with the gate, substantially as described.

92,330.—L. J. MARCY, Newport, R. I.—*Magic-Lantern.*—July 6, 1869.

Claim.—1. The outer case A, when provided with an opening through the top, to allow the insertion of the chimney B, and with projecting flanges *a*, that are fastened to the chimney, substantially as herein set forth and described.

2. The deflector-plates *c d*, formed on the chimney, substantially as and for the purpose herein set forth and described.

3. The inner case of a magic-lantern, when so attached that it is in no metallic connection with the outer case, above the flame, except at the connections *b*, as specified.

4. The plate F, having the slot *e* and struck-up parts *f*, substantially as and for the purposes herein set forth and described.

5. A magic-lantern, when provided with a lamp which has no cone formed on it, so that the lamp can be moved in or out from the side or end, as specified.

6. The tube J, when provided with the projecting loop *i* and hook *j*, to be fastened to the pins *k l*, substantially as herein set forth and described.

92,331.—A. Z. MASON, Adrian, Mich.—*Vise.*—July 6, 1869.

Claim.—The combination of the parts E, B, and C, when the same are constructed and arranged to operate as described, and for the purpose set forth.

92,332.—JOHN K. MAYO, Williamsburgh, N. Y.—*Process and Apparatus for Manufacturing Composition Pipes, Tubes, Barrels, &c.*—July 6, 1869.

Claim.—The process and apparatus, substantially as above described, for producing barrels, pipes, and other hollow articles of laminated wood.

92,333.—C. MCELROY, New Baltimore, Mich.—*Device for Detaching Horses from Carriages.*—July 6, 1869.

Claim.—1. The arm D, constructed substantially in the manner herein shown and described, that is to say, having its forward end slotted, notched, and rounded, or beveled off, as and for the purpose set forth.

2. The combination of the spring-bolt H F with the arm D and thill A, substantially as herein shown and described, and for the purpose set forth.

3. The trigger or catch-lever E, constructed substantially in the manner herein shown and described, in combination with the arm D and spring-bolt H F, as and for the purpose set forth.

92,334.—JAMES MCKEE, Mount Vernon, Ohio.—*Fence.*—July 6, 1869.

Claim.—The rails B B, secured to iron post A by miter-joints *c*, and bolts *b*, with screw-nuts, in combination with brace-rods C, so arranged with the posts and bottom rails as to give greater strength to the fence, substantially as described.

92,335.—J. M. MCMASTER, Rochester, N. Y.—*Car-Brake and Starter.*—July 6, 1869.

Claim.—The arrangement of the gearing B C E and *f* and G, spring H, ratchet-wheels *b* and *b'*, in combination with the sliding-disks *h* and *h'*, and hand-levers *p* and *p'*, for connecting and disconnecting the pawls *a* and *a'*, in the manner shown, and for the purposes described.

92,336.—ROBERT MCVEEN, Cleveland, Ohio.—*Ruling-Pen.*—July 6, 1869.

Claim.—The tube A, constructed as described, in combination with the handle B, substantially as and for the purpose set forth.

92,337.—SAMUEL C. MOORE, Boston, Mass.—*Nickle-Lined Culinary Vessels.*—July 6, 1869.

Claim.—A vessel for culinary purposes, having a lining of nickle, applied by electro-deposition or otherwise.

92,338.—STEPHEN MOORE, Sudbury, Mass., assignor to himself and HOMER ROGERS, same place.—*Pipe-Leak Stopper.*—July 6, 1869.

Claim.—The leak-stopper, substantially as described, that is, as composed of the tubular segment, the two flanges or pairs of inclined planes, and the clamps, arranged in manner and so as to operate together, as and for the purpose as specified.

92,339.—C. H. MOSEY, Mansfield, Ohio.—*Horse Rake.*—July 6, 1869.

Claim.—1. The sliding rock-shaft M, arranged in boxes *b b*, and provided with the head R, hand-lever Q, and foot-lever N, when used in combination with the revolving-rake T S T, substantially as and for the purpose herein specified.

2. The spring P, when used in combination with the arm O, on the rock-shaft M, substantially as and for the purpose herein specified.

3. The combination of the sliding rock-shaft M, provided with the hand-lever Q, and guard-piece *r*, ratchet-wheel U, and revolving hay-rake T S T, the several parts being constructed, arranged, and operating substantially as and for the purpose herein specified.

92,340.—GEORGE MUNRO, Philadelphia, Pa.—*Hat-Ventilator.*—July 6, 1869.

Claim.—The adjustable wings F F, arranged within a hat, substantially in the manuer and for the purpose specified.

92,341.—WILLIAM MUSBASH and CHARLES R. SMITH, Middletown, N. Y.—*Chimney.*—July 6, 1869.

Claim.—The chimney-top, constructed as described, of the inclined beveled plates F F', secured

to the cap D and E, and base A′ B, by means of the recesses in the former, the curved flanges *g* upon the latter, and the central bolt C, passing through both, all arranged as herein shown and described, for the purpose specified.

92,342.—F. B. NEWTON, Bouckville, N. Y.—*Straw-Cutter.*—July 6, 1869.

Claim.—1. The arrangement of the balance wheel A, relatively to the end of the trough, and the attachment to the arms thereof of the cutters, by means of the brackets, all substantially as specified.

2. The arrangement of the shaft B, detachable pinions F, wheel G, on the feed-roller shaft, all substantially as specified.

3. The presser-block H, shaft I, links L, slotted bearings K, crank-shaft N, and springs O, all arranged substantially as specified.

92,343.—MOSES H. NICHOLS, Hancock, N. Y.—*Device for Securing Covers to Jars for Transportation.*—July 6, 1869.

Claim.—The combination, with the jar A, of the right and left hand screw-rods D D, and the top and bottom pieces B B, as herein described, for the purpose specified.

92,344.—OSCAR NICHOLSON, New York, N. Y.—*Locking Wardrobe-Hook.*—July 6, 1869.

Claim.—The combination of the parts A and B, constructed substantially as described, toothed arm b^2, pawl C, spring D, and guard E, with each other, substantially as herein shown and described, and for the purpose set forth.

92,345.—RICHARD NORRIS, Jr., Baltimore, Md.—*Mode of Hardening and Working "Ransome Concrete Stone."*—July 6, 1869.

Claim.—Forcing chloride of calcium to harden, or water to wash out the chloride of sodium, in the manufacture of the "Ransome concrete stone," so known, into and through the material, by artificial means and force, applied in a close chamber, substantially in the manner herein described and represented.

92,346.—BENJAMIN NOTT, Albany, N. Y.—*Illuminator for Stoves, Ranges, &c.*—July 6, 1869.

Claim.—1. The solid glass cylinders, prisms, or pieces of glass, substantially as set forth.

2. The solid glass cylinders, prisms, or pieces of glass, in combination with the frame, substantially as and for the purposes as set forth.

92,347.—ASA J. OLNEY, Van Buren, Ind.—*Bag-Filler.*—July 6, 1869.

Claim.—The bag-filler, consisting of the removable box D and of the supporting-frame F, which is suspended from springs, and which carries the fastening pins or hooks *f*, all arranged and operating substantially as herein shown and described.

92,348.—JOSEPH A. PADDOCK and JEREMIAH S. ESTEP, Cass County, Ill.—*Bee-Hive.*—July 6, 1869.

Claim.—1. The self-adjusting brace, formed by the combination of the horizontal bar C and elastic bands *g g*, substantially as and for the purpose set forth.

2. The combination of the adjustable brace C with the triangular guides *a a*, as described and represented.

92,349.—WILLIAM PARLIN, Canton, Ill.—*Plate for Plowshare-Blanks.*—July 6, 1869.

Claim.—A rolled plate of metal, for plowshare-blanks, of the shape herein described and shown, that is to say, with the raised or thickened portion extending obliquely across it, of sufficient breadth to yield a thickened portion to two plowshares when divided centrally, as set forth.

92,350.—D. H. PAUL, De Witt, Iowa.—*Cultivator.*—July 6, 1869.

Claim.—The application of reciprocating saws to a cultivator, in the manner substantially as shown and described, for the purpose of cutting or severing weeds or trash, which may adhere to the plow or share standards, and stripping it from the latter, as set forth.

92,351.—BENJAMIN F. PENNY and JAMES JONES, Rochester, N. Y.—*Grate-Bar.*—July 6, 1869.

Claim.—The box-grate A, with openings *b*, in combination with the auxiliary grate B, constructed and arranged substantially as described.

92,352.—JOHN PERHAM, Beloit, Wis.—*Reversible Stove-Pipe Shelf.*—July 6, 1869.

Claim.—1. A reversible collar for stove-pipe shelves, adjustable to different-sized stove-pipes, substantially as and for the purpose herein set forth.

2. A reversible and adjustable collar for stove-pipe shelves, so constructed with sliding-ways, C C′, as to allow the shelf to be moved around and extend in any direction, substantially as described.

3. An extension and revolving shelf, in combination with a reversible and adjustable collar, constructed substantially as and for the purposes described.

4. An extension and revolving shelf, provided with vertical loops, *g*, at or under its periphery, to receive arms extending radially and in a line even with the surface of the shelf, substantially as and for the purposes set forth, in combination with the adjustable and reversible collar.

5. The combination with an adjustable and reversible stove-pipe collar, of a warming-closet or chamber, substantially as described.

6. A reversible and adjustable stove-pipe collar, so formed that its parts $b\ b^1$, not incircling the stove-pipe, will form supports for warming closets or chambers, substantially as described.

6. In combination with a revolving stove-pipe shelf and adjustable and reversible stove-pipe collar, the drier-arms *h*, and warming closet or chamber F, substantially as and for the purposes set forth.

92,353.—EDWARD L. PERRY and CHARLES MANHEIM, New York, N. Y.—*Rubber or Gutta-Percha Hose.*—June 6, 1869.

Claim.—Hermetically inclosing the canvas part of India-rubber or gutta-percha hose at the ends, either by folding over the said ends extensions of the lining or exterior covering, or by the employment of rubber or gutta-percha washers, the said inclosing parts being united in the process of vulcanizing, all substantially as specified.

92,354.—F. P. PFLEGHAR, New Haven, Conn.—*Reversible Knob-Latch.*—July 6, 1869.

Claim.—The arrangement of the latch-bolt G, in the socket F, so as to be reversed in the manner described, and held in position by the spring-catch *a*, in the tail-piece of the bolt, as and for the purpos set forth.

92,355.—ARTON M. POLSEY, Boston, Mass., assignor to F. H. FULLER.—*Method of Making Horse-shoe-Nails.*—July 6, 1869.

Claim.—A nail made by punching or cutting, from hot-rolled ribbed bars of metal a headed blank, substantially as described, and by elongating, hardening, and compressing the shanks of such blanks by cold-rolling, from the head to the point, thereby giving all parts of the nail so produced the peculiar qualities specified.

92,356.—NIELS POULSON, New York, N. Y.—*Stairs.*—July 6, 1869.

Claim.—A hollow casing or receptacle, into which any suitable material or composition of matter may be placed, serving as treads or platforms for stairs, constructed and arranged substantially as and for the purpose set forth.

92,357.—WILLIAM E. PRALL, Washington, D. C., assignor to himself and A. C. RAND, New York City.—*Steam Water-Elevator.*—July 6, 1869.

Claim.—1. The combination of the reservoir A, the generator A^2, and the connecting-pipe A^1, constructed and arranged substantially as set forth.

2. The arrangement of the reservoir A, the pipe D, and the pipe or conduit A^1, substantially as shown and described.

3. The combination of pipe D, generator A^2, and the pipe E, substantially as shown and described.

4. The combination and arrangement of the dis-

charge-pipe C, jet-pipe F, and pipe D, substantially as shown and described.

92,358.—A. QUESNOT, Bloomington, Ill.—*Artificial Stone.*—July 6, 1869.

Claim.—In the manufacture of artificial stone, the composition above described and set forth.

92,359.—CHARLES W. REEDER, Trenton, Mo.—*Farm-Fence.*—July 6, 1869.

Claim.—The parallel bars *a a*, in combination with the supports A A, substantially in the manner and for the purpose described.

92,360.—W. A. RHOADES, Lineolnville, Pa.—*Churning-Machine.*—July 6, 1869.

Claim.—1. The rod C, the semicircular perforated plates or disks D, and circular plate E, in combination with the cylindrical pivoted churn B, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the branched connecting-rod F, two crank-wheels G, shaft H, pulley I, band K, pulley J, shaft L, and heavy crank-wheel M, with each other, and with the churn B, C, D, E, substantially as herein shown and described, and for the purpose set forth.

92,361.—T. C. RICHARDS, New York, N. Y.—*Head for Screws.*—July 6, 1869.

Claim.—A rounded sheet-metal cap, provided with a depression or notch, *a*, formed to receive the screw-driver without cutting or breaking the metal for that purpose, and attached to a flat-headed screw, substantially as and for the purpose set forth.

92,362.—E. D. RICHARDSON, Chardon, Ohio.—*Yard-Mark and Knife.*—July 6, 1869.

Claim.—As an improved article of manufacture, a combined yard-mark and cutter, made and operating substantially as herein shown and described.

92,363.—F. C. RICHER, Gilmer, Tex.—*Oscillating Steam-Engine.*—July 6, 1869.

Claim.—The construction of the oscillating cylinder A, the pipes E F, ports *h*, hollow bed *d*, steam-chest G, valve H, and pumps I and J, all arranged substantially as herein shown and described.

92,364.—JOHN P. RIDER, Brooklyn, N. Y.—*Portable Bath-Tub.*—July 6, 1869.

Claim.—1. A portable bath, composed of a pliable and water-proof body, in combination with supporting-arms, which, while upholding said body, are independent of and have no direct connection with one another, substantially as and for the purposes set forth.

2. The series of pockets upon the sides of the bath-tub or basin, to receive the ends of the supporting-arms, by which the bath is upheld, substantially as shown and described.

3. The combination of the divided and hinged supporting-arms with the pliable and water-proof body of the tub, to which said arms are applied and held, substantially in the manner shown and set forth.

92,365.—JAMES RILEY, Chicago, Ill.—*Railway-Car Coupling.*—July 6, 1869.

Claim.—The draw-bars A B, bumpers P, jaws F, elongated catch L M, lever T, bar V, and lugs U, when constructed, combined, and arranged as described.

92,366.—CHARLES ROBINSON, Cambridge, Mass.—*Toy-Game.*—July 6, 1869.

Claim.—The construction and arrangement of the board A, with support B, pegs D, and ball G, with cord F, the parts being all combined together, and operating substantially in the manner and for the purpose set forth.

92,367.—HORACE A. ROBISON, Cleveland, Ohio.—*Weather-Strip.*—July 6, 1869.

Claim.—The weather-strip herein described, consisting of the molding A, with the two inclined plane sides A′ and A″, and having in its thick edge the wide, shallow groove *a*, deep, narrow groove *c*, parallel with side A′, and containing the rubber-strip *b*, all constructed and arranged in the manner and for the purpose set forth.

92,368.—THOMAS A. ROBINSON, Boston, Mass.—*Apparatus for Cutting and Shearing Metal.*—July 6, 1869.

Claim.—The improved hydraulic metal-cutter, constructed and operating in the manner described.

92,369.—NATHAN ROSE, Belmont, N. Y.—*Mill-Pick Handle.*—July 6, 1869.

Claim.—The handle A, provided with mortise *a*, in combination with the pivoted triangular block *b*, substantially in the manner and for the purpose described.

92,370.—NATHAN ROSE, Belmont, N. Y.—*Picks.*—July 6, 1869.

Claim.—1. The holder A, constructed as described, and provided with the hinged clamp D, substantially in the manner and for the purpose described.

2. A pick-holder, consisting of the holder A, provided with mortises *b b b′* and pick E, all constructed, arranged, and operating substantially in the manner and for the purpose specified.

92,371.—GEORGE W. RUSSELL, Rockford, Ill.—*Plow.*—July 6, 1869.

Claim.—1. A stubble-folding attachment to a plow, composed of the parts *d*, *h*, and *k*, in combination with the bolts *c c′* and plates *a a′*, the whole constructed and operating substantially as and for the purpose set forth.

2. Constructing the parts *a*, *d*, and *h* as herein described, and for the purpose specified.

92,372.—ANTHONY SCHARFF, Philadelphia, Pa.—*Whip.*—July 6, 1869.

Claim.—A whip, consisting of an outer wrapper, inclosing a strip of rattan, within which a wire is secured, as specified.

92,373.—CHRISTIAN SCHMIDT, Rock Island, Ill.—*Pump.*—July 6, 1869.

Claim.—The combination and arrangement of chambers 1, 2, and 3, 4, with partitions U U and S S^2, induction and eduction pipes R R^1 and Sx St, combined and operating substantially as described.

92,374.—CARL SCHORTAU, New York, N. Y., assignor to himself and A. L. BOGART, same place.—*Fluting-Machine.*—July 6, 1869.

Claim.—The within-described devices for raising the roller and adjusting the tension, consisting of the rods E E, bar F, eccentric lever G, nuts H H, and springs I I, in combination with the boxes D D, rollers C C, and frame A, B, and B′, substantially as shown, and for the purpose specified.

92,375.—D. A. SCOTT, Cincinnati, Ohio.—*Spring Bed-Bottom.*—July 6, 1869.

Claim.—The combination of the slats or disks A, and the twisted wire-cord B, when arranged as herein shown and described.

92,376.—SAMUEL B. SHAW, West Randolph, Mass.—*Beverage.*—July 6, 1869.

Claim.—1. The composition, or "citronale," as above specified.

2. The composition or yeast, as hereinbefore described, as engaged in the making of such beverage.

92,377.—S. W. SHELLER, Mount Carroll, Ill.—*Fly-String Cutter and Rounder.*—July 6, 1869.

Claim.—The combination of the blocks A B, hinged together, vertical knives *c c*, wedges *d d*, set-screw C, and rounder D, all constructed and arranged to operate substantially as set forth.

92,378.—ANDREW M. SHOENFELT and JOSEPH M. SHOENFELT, Waterside, Pa.—*Oiling-Device.*—July 6, 1869.

Claim.—1. The inclined plate B, provided with a point, *b*, arranged substantially as and for the purpose set forth.

2. The oiling-device, consisting of the box A, plate B, point *b*, spout C, wick D, and lid E, arranged to

operate substantially as and for the purposes set forth.

92,379.—CHARLES SINGER, South Bend, Ind.—*Rocking-Chair.*—July 6, 1869.

Claim.—1. The stand A, having rails B, the seat *c'*, and rockers C, fitted to the said rails, and the elastic bands M, combined and arranged substantially as specified.

2. The combination of the adjustable back I, seat *c'*, provided with the rockers C, the stand A, having the rails B, the bellows D, and its pipe E, and the bars F and G, all arranged substantially as herein shown and described, and for the purpose set forth.

92,380.—FRANKLIN H. SMITH and WILLIAM F. WOOD, North Hebron, N. Y.—*Invalid-Bedstead.*—July 6, 1869.

Claim.—The sleeve E, having the crank *a*, when adapted to turn loosely upon the shaft C, or to be locked rigidly to it by the pin *b*, in combination with the loose roller *d*, shaft C', bands or cords *c e f g*, jointed frame F, pawls and ratchets *j k*, and the bedstead, all arranged as described, whereby both ends of the frame F are adapted to be raised together, or one end only at a time, for the purpose specified.

92,381.—GEORGE C. SMITH, Matteawan, N. Y.—*Process of Making Suction Rubber-Hose.*—July 6, 1869.

Claim.—1. The above-described process for making suction-hose, substantially in the manner and for the purpose set forth.

2. Vulcanizing rubber or gutta-percha compounds, of different degrees of hardness, in and at the same heat, thereby making of it, as it were, one piece, substantially as and for the purposes herein set forth.

3. Suction-hose, formed as described, of strips of hard rubber or gutta-percha, of different degrees of hardness, wound either spirally or in a ring, combined with the usual material for making hose, and all vulcanized at one time, substantially as and for the purposes herein set forth.

92,382.—JOHN BURNS SMITH, Cohoes, N. Y.—*Mule for Spinning.*—July 6, 1869.

Claim.—1. The combination of the bifureated faller B with the vibrating faller *u*, and the rods *u'*, B^1 B^2, all constructed to operate in connection with each other, substantially as and for the purposes specified.

2. The series of adjusting holes *e e e*, when arranged in the outer fork of the building-faller B, in connection with the wires B^1 *u'* B^2, substantially as and for the purposes set forth.

92,383.—J. C. SMITH, Stoughstown, Pa.—*Railway-Car Coupling.*—July 6, 1869.

Claim.—The arrangement of the cam-lever H, with relation to the coupling-bars A B, which are secured to the cars by the loops C and bolts D, said lever being pivoted to the slotted end of the bar A, by means of the pin F, in such a manner that the projection I is adapted to be pressed down upon the beveled end of the spring-hook G, to disengage the coupling, as herein shown and described, for the purpose specified.

92,384.—VERNON E. SMITH, Lancaster, N. H.—*Water-Gate.*—July 6, 1869.

Claim.—The arrangement of the friction-rollers *e f*, with relation to the gate B, operated by the rack H and pinion I, the guide-face C of the discharge-spout D, and the bottom guide-bar *g*, as herein described, for the purpose specified.

92,385.—WILLIAM B. SMITH, Clayton, Ill., assignor to himself, REID WALLACE, and CYRUS FINLEY, same place.—*Grain-Cleaner.*—July 6, 1869.

Claim.—1. The arrangement of the blowers, screens, and scouring-apparatus, substantially as specified.

2. The arrangement of the chutes H, fan B, and screens, substantially as specified.

3. The spouts F G, apron S, fan A, and scourer V, all substantially as specified.

92,386.—D. G. W. SNYDER, Williamsport, Md.—*Railway-Car Coupling.*—July 6, 1869.

Claim.—1. The bent and slotted bar H, attached to a ear, for maintaining the coupling-link in a horizontal position, substantially as and for the purpose set forth.

2. The springs D F, made of flat bars of metal, bent into the form described, whereby additional strength is obtained, and the pressure is exerted on the slide C and on the coupling-pin, which is secured to the spring F, all constructed, arranged, and operating substantially as herein described.

92,387.—ENOS SNYDER, Providence, Pa.—*Railway-Car Replacer.*—July 6, 1869.

Claim.—1. The movable and adjustable replacers C C, constructed as described, and attached to a railroad-track, substantially in the manner and for the purposes herein set forth.

2. The combination of the replacers C, loops *d d*, pins *i i*, and bars E E, having flanges or hooks *e e*, all constructed and arranged to operate substantially in the manner and for the purposes herein set forth.

92,388.—SAMUEL SNYDER, Delaware, Ohio.—*Device for Turning and Loading Logs.*—July 6, 1869.

Claim.—1. A portable log-turner, consisting of the frame A, drum B, lever C, pawls *b* and *e*, and rope or chain D, all arranged and operating, in combination with the standards E, substantially as herein shown and described.

2. A portable log-loader, consisting of the frame A, drum B, lever C, spring-pawls *d*, *e*, and rope or chain D, all arranged and operating, in combination with the standards E and cross-bar G, substantially as herein shown and described.

92,389.—A. V. M. SPRAGUE and R. F. OSGOOD, Rochester, N. Y.—*Cotton-Seed Planter.*—July 6, 1869.

Claim.—1. The combination of the comb K and inclosing-cylinder E, with the seed-roller D, said parts being so arranged that an annular chamber is left between the periphery of the roller and the cylinder, for the retention of the seed, and the comb-teeth project from the outside of the cylinder, through the discharge-opening at the bottom, and rest against the roller, as herein set forth.

2. The arrangement of the cylinders E, seed-rollers D, combs K, drill-teeth I, and covering-rollers L, when the said parts are capable of lateral adjustment, in the manner and for the purpose specified.

92,390.—HARVEY B. STEELE, Winchester, Conn.—*Concrete Pavement.*—July 6, 1869.

Claim.—1. The pavement, composed of the ingredients set forth, when prepared and laid in the manner substantially as described.

2. The binders, or diagonally placed strips of wood, when used in combination with a concrete pavement, in the manner and for the purpose substantially as described.

92,391.—JOHN H. STEINER, St. Louis, Mo.—*Apparatus for Generating and Carbureting Gas for Lighting Railroad-Cars.*—July 6, 1869.

Claim.—1. A gas-generating apparatus, consisting of a cylindrical vessel, containing a gas holder and generator, substantially as herein described.

2. In combination with the cylinder A and gas-holder D, the air-chamber above the gas-holder, substantially as and for the purposes set forth.

3. In combination with the cylinder A, containing a generator and gas-holder, the carbureting-chamber C, substantially as herein described.

4. In combination with the carbureter, the condenser G, as and for the purpose described.

5. The combination of the cylindrical vessel A, the cylindrical vessel B, and gas-holder D, with the carbureter C, and condenser G, substantially as herein described.

92,392.—GEORGE STEVENSON, Zionsville, Ind.—*Harvester-Dropper.*—July 6, 1869.

Claim.—1. The gates *c c*, hinged to the dropper-fingers *b b*, as and for the purpose set forth.

2. The hinged gates *c c*, in combination with the pins *e e*, as and for the purpose set forth.

3. The grooves *m m*, made in the lower faces of the hinged gates *c c*, substantially as described.

4. The inclined outer fingers *b' b'*, as and for the purpose set forth.

5. The fingers *b b*, having their under surfaces beveled or made V-shaped, as and for the purpose set forth.

6. The combination of the bar *a*, fingers *b b*, *b' b'*, hinged gates *c c*, provided with grooves *m m* and pins *e e*, substantially as described.

92,393.—JOHN T. STOAKES, Champlain, N. Y.—*Breech-Loading Fire-Arm.*—July 6, 1869; antedated June 29, 1869.

Claim.—1. The spring *g*, with the hook *h*, attached to the hammer, with the pin *i*, substantially as and for the purposes set forth.

2. The safety-catch J, substantially as and for the purposes shown and specified.

3. The described arrangement, with relation to each other, of the forked wing *p*, upon the hammer E, the pin *v* in the stock, the pin *v* in the breech-piece C, and the eccentric retractor S, for the purpose of fully cocking the hammer and retracting the cartridge-shell, by the downward movement of the breech-piece, as herein shown and described.

92,394.—JOHN R. STRICKLAND, Sayville, N. Y.—*Compound for Cure of Dropsy.*—July 6, 1869.

Claim.—The aforesaid compound, prepared in the manner set forth, and for the purposes specified.

92,395.—CHARLES CARROL STRONG, Defiance, Ohio.—*Boring-Tool.*—July 6, 1869.

Claim.—The loose collar C, having a smooth periphery, when applied to the boring-tool A, between the cutter B and shoulder *b*, as herein described, for the purpose specified.

92,396.—M. SULZBACHER, New York, N. Y.—*Folding-Mattress.*—July 6, 1869.

Claim.—A series of mattresses, consisting of frames A, composed of corner blocks D, webbing B C E F, and springs G H, and upholstered at top, and flat at the bottom, and alternately hinged to each other above and below, whereby the sections may be folded uniformly on each other, and extended as contiguous mattress, and all parts are constructed and arranged to operate as described.

92,397.—WILLIAM ALLEN SUTTON, New York, N. Y., and EUGENE CROWELL, San Francisco, Cal.—*Railway.*—July 6, 1869.

Claim.—1. The combination of the metallic sleeves *b* and collars or protuberances *c* with the rope C, when applied so as to entirely incase said rope without destroying its flexibility, substantially as specified.

2. The combination, with the sprocket-wheel E, of the griper and depresser I, to the endless rope or chain, constructed and arranged for operation substantially as specified.

3. The automatic take-off or shifter J, to the endless rope or chain, for operation in relation to the sprocket-wheel E, essentially as herein set forth.

4. The combination of the switch or swinging-rail section A' with the crane L, substantially as and for the purposes specified.

92,398.—JOHN TALBOTT, Albany, Ga.—*Gun-Cap.*—July 6, 1869.

Claim.—A gun-cap, having a recess, D, and ring *c*, constructed and arranged to operate substantially as specified.

92,399.—HUGH THOMAS, New York, N. Y.—*Lubricator.*—July 6, 1869.

Claim.—The combination, with the oil can or reservoir, of the fixed handle for holding the reservoir, the cylinder, and plunger, for effecting compression of the air within the reservoir, and the plunger-rod, passing through the fixed handle, and furnished with a movable handle outside of the fixed one, substantially as herein described.

92,400.—HUGH THOMAS and ROBERT WALLACE, New York, N. Y.—*Clothes-Rack.*—July 6, 1869.

Claim.—A clothes-rack, consisting of a strip, A, carrying-hooks *a*, and having outwardly projecting ends D D', one or both of which is made adjustable in direction of the length of said strip, substantially as and for the purpose specified.

92,401.—J. G. THOMPSON, Stockton, N. Y.—*Seed-Sower.*—July 6, 1869.

Claim.—An improved seed-sowing machine, formed by the combination of the box A, adjustable slide B, having two or more sets or series of different-sized holes formed in it, spirally-looped wire D, suspended bar C, and lever I, with each other, said parts being constructed and operating substantially as herein shown and described, and for the purpose set forth.

92,402.—WILLIAM J. THOMPSON, Normal, Ill.—*Potato Digger and Picker.*—July 6, 1869.

Claim.—1. The arrangement, with the frame A, of the slotted standards I I, shaft K, and belt F, all substantially as and for the purposes set forth.

2. The shafts E and K, provided with collars, in combination with the endless belt F, constructed as described, and guides H, when used substantially as described.

3. In combination with the cutter P, scoop R, and belt F, the slotted receptacle G, upon the rear end of the frame A, as set forth.

4. In combination with the frame L, the cutter P and scoop R, when both are provided with the slotted standards, so that they can be regulated at will, substantially as specified.

5. The frame L, cutter P, and scoop R, in combination with the belt F, guides H, shafts E and K, slotted standards I, and wheel D, when all are arranged to form a potato-digger, as described.

92,403.—WILLIAM HENRY TOWERS, Boston, Mass.—*Coating Hoop-Skirt Wire.*—July 6, 1869.

Claim.—1. Coating or covering hoop-skirt wire with compositions, substantially such as herein described, so as to dispense with the necessity of fibrous covering.

2. The improved skirt wire or spring, formed by painting, enameling, japanning, or otherwise coating, substantially as described.

3. The process, herein described, of forming hoop-skirt wire by coating, and the passing between rollers, so as to imitate a woven fabric, such as herein described.

92,404.—MARSHALL TURLY and J. D. BAYLISS, Council Bluffs, Iowa.—*Stove-Drum.*—July 6, 1869.

Claim.—The stove-drum, constructed as described, of the chambers C D, connected by the tubes A, which contain the spiral wires D, and are surrounded by the tubes G, in such a manner as to form annular air-passages, all arranged as described, for the purpose specified.

92,405.—CARL WANDEL, Waldau, near Bernburg, North German Confederation, assignor to F. O. MATTHIESSEN and W. A. WIECHERS, New York City.—*Manufacture of Hydrate of Magnesia.*—July 6, 1869.

Claim.—The manufacture of hydrate of magnesia from sea-water, by the use of lime, substantially as described.

92,406.—CARL WANDEL, Waldau, near Bernburg, North German Confederation, assignor to F. O. MATTHIESSEN and W. A. WIECHERS, New York City.—*Manufacture of Granulated Sugar.*—July 6, 1869.

Claim.—The manufacture of granulated sugar, while in the centrifugal machine, by the injection of a current or currents of superheated steam or hot air against the wall of sugar therein, substantially as specified.

92,407.—R. A. WARNER, Columbus, Ga.—*Window-Sash Balance.*—July 6, 1869.

Claim.—The combination, with the sash and frame of the endless cords A, pulleys C D, and the guide-pulleys E, so arranged that the cord passes between

the sash and the casing, as herein shown and described.

92,408. — GEORGE WATT, Richmond, Va. *Plow.*—July 6, 1869.

Claim.—1. The coulter-edged mold-board B B′, constructed and operating as and for the purpose set forth.

2. The sole C, constructed as and for the purposes specified.

3. The arrangement of the landside-bar F, the point E, and share D, by means of which the sole C is securely protected from wear.

4. The combination of the frame A, supplied with the rounded throat A′, with the coulter mold-board B B′, the sole C, the point E, and share D, all substantially as and for the purposes described.

92,409. — GEORGE WATT, Richmond, Va. — *Clevis-Attachment for Plows.*—July 6, 1869.

Claim.—1. The block M, provided with vertical pivots O O, and a vertical series of perforations, N N, substantially as described, for the purposes set forth.

2. In combination with the clevis L M, constructed substantially as described, the plates G G, bolts H H′, and whiffletree-loop P, constructed and arranged to operate substantially as and for the purpose specified.

3. In combination with the clevis L M, constructed substantially as described, whiffletree-loop P, bolts H H′, and coupling G G′, the bolt I, and washers K, substantially as and for the purpose set forth.

92,410. — THEOPHILUS WEAVER, Harrisburgh, Pa.—*Corn-Sheller.*—July 6, 1869.

Claim.—1. In a hand-sheller jaw, of two blades N N′, the central semi-elliptical spiral cut Z, substantially as and for the purpose specified.

2. A sheller-jaw, provided with blades N N′, transverse blades B B′, strikes *h h′*, guides O O′, bent shaft P, all constructed and arranged substantially as herein set forth.

3. Constructing and arranging the tines L L′, substantially as herein shown and described.

4. Constructing the sections of the sheller-case W Q, and combining them with each other and with the handle-chair A M H, as herein specified.

5. The combination and arrangement of jaw N N′ P, with tines L L′, and case W Q, as and for the purpose herein set forth.

92,411.—DANIEL WIDMAYE, Lansing, Mich.—*Churn.*—July 6, 1869.

Claim.—The combination of the tub A, standard B, chamber *s*, frame D, wheels *o* and *r*, and belt *m*, all constructed and arranged to operate substantially as and for the purposes specified.

92,412. — ALBERT OLIVER WILLCOX, Jr., Port Richmond, N. Y.—*Velocipede.*—July 6, 1869.

Claim.—1. The frame, consisting of the perch and bars D and E, combined and arranged substantially as described and shown.

2. Connecting the part E, of the frame, which incloses the wheel B, to the perch by swivel-joints, so that it can turn on the perch, substantially as set forth.

3. The baggage-receptacle N, combined with the perch of a velocipede, substantially as shown.

4. Combining, with a velocipede, a saddle-seat, whose surface is elastic and yielding, substantially as set forth.

92,413.—R. WILSON, Rees Corners, Md.—*Revolving Dining-Table.*—July 6, 1869.

Claim.—The combination of the detachable stationary leaves G, circular central revolving-top C, drawers F, or equivalent, and pivoted or hinged arms H, with each other and with the frame A B, substantially as herein shown and described, and for the purpose set forth.

92,414.—JAMES A. WISNER and MONSON HOYT, East Saginaw, Mich.—*Lock for Handcuffs.*—July 6, 1869.

Claim.—The combination and arrangement of the conical screw-bolt *b*, bars *c*, catch-springs *d*, and notched arm A, all constructed and operated substantially as and for the purpose set forth.

92,415.—EMERY ANDREWS and WILLIAM TUCKER, Portland, Me.—*Match-Machine.*—July 13, 1869.

Claim.—1. The wedges or bars *v*, attached to the cross-head, and operating as and for the purposes described.

2. The arrangement of the ratchet-wheel *z*, cam-bar D, and clutch H, as herein described.

92,416.—ROBERT ANDREWS, Milwaukee, Wis.—*Finishing and Dressing Sheep-Skins for Leather.*—July 13, 1869.

Claim.—1. The method of dressing, finishing, making, and preparing sheep-skins, of whatever description, with the aid and assistance of the materials herein named, compounded as herein described.

2. The leather that is made out of such skins by such a method, and with such materials so compounded, disclaiming all other things but the leather, and the method of making it with the materials compounded as herein described.

92,417.—ALBERT D. ANGELL, Coldwater, Mich. —*Uterine Supporter.*—July 13, 1869.

Claim.—1. The adjustable funnel-formed pessary O P, supported loosely on the tripod N *m*, over the outlet of the sink K, from which depends the narrow-necked sac or pouch M, substantially as described, and for the purposes aforesaid.

2. In combination with the above-named parts, the devices whereby the pessary is made adjustable in height and direction, consisting of the strap R, shifting-bar *u*, stud *e*, and catch Q, substantially as described.

3. In combination with the strap R, the shiftable and ventilated rubber bag T, substantially as described, and for the purpose before explained.

92,418.—ARTHUR BARBARIN, New Orleans, La. —*Railway-Car Seat.*—July 13, 1869.

Claim.—The combination of the slotted straight bars A with a railroad-car seat, when the two are conjoined, as herein described, and the former is supported by the guide-brackets E *e c′*, and the latter is provided with the strips C, and all the parts are constructed and operate substantially as herein described.

92,419. — HAMILTON BATES and DANIEL L. BATES, Dayton, Ohio.—*Drill.*—July 13, 1869.

Claim.—1. The improved automatic feed-devices, consisting of the ring O, lever P, pawl R, and projection or cam *k*, upon the bevel-gear K, all constructed and arranged to operate substantially as and for the purpose shown.

2. The within-described improved drill-press, consisting of the frame A, B, C, and H, mandrels D and E, balance-wheel F, hand-wheel N, shaft I, gear and pinion K and L, and crank M, in combination with the automatic feed-devices hereinbefore described, substantially as and for the purpose specified.

92,420.—L. A. BRINGIER, Ascension Parish, and N. B. TRIST, New Orleans, La.—*Cane-Scraper.*—July 13, 1869.

Claim.—1. The scraper herein described, when provided with a bracket, *d d′ d″*, in combination with the vertical standard G and the lever H, when these several parts are constructed, and arranged, and operate substantially as herein described, for the purpose set forth.

2. The above combination, in combination with a suitable frame, to which the parts are secured, substantially as herein described.

92,421.—EDWIN J. BROWN, Carroll Parish, La. —*Machine for Making Levees.*—July 13, 1869.

Claim.—The combination of a rotating cutter, provided with radiating knives G, with an excavating and throwing-up wheel, provided with radiating arms F, to which are connected shovels *b*, and covered by a casing, J, when these parts are constructed substantially as herein described, and are operated by the means specified, for the purposes set forth.

92,422.—Myron B. Champion, Sturgis, Mich.—*Rotary Harrow.*—July 13, 1869.

Claim.—In a harrow that is convertible from a truck to a harrow, and *vice versa*, the combination of the hinged journal-heads B, carrying the harrow-wheels, the swivel-pins *e*, and drag-bars D, so that in either of its conditions, of truck or harrow, the drag-bars will maintain a uniform position in the line of draught or resistance, as described and represented.

92,423.—Jonas Clark, Lowell, Mass.—*Cigar-Tip.*—July 13, 1869.

Claim.—The cigar-tip herein described, constructed in the manner and of the materials substantially as specified.

92,424.—James B. Cleveland and Henry C. Guilderslein, Haekensack, N. J.—*Machine for Setting, Fitting, and Tempering Spring-Plates.*—July 13, 1869.

Claim.—The adjustable double former A and A^2, Figs. 1, 3, 4, having an open back or space, B, and flanges, *r*, in combination with an adjustable convex bed, constructed in two parts, A′ and A″, all arranged and operating in the manner and for the purpose substantially as above set forth.

92,425.—William Compton, Newark, N. J.—*Means for Refreshing Horses while in Harness.*—July 13, 1869.

Claim.—1. A hollow perforated bit, combined with a flexible tube, for conveying water to the bit, substantially as set forth.

2. The flexible tube, having perforations in its side, combined with a bridle-bit or other portion of the harness, substantially as and for the purpose set forth.

92,426.—John G. Conlon, New Orleans, La.—*Dumping-Car.*—July 13, 1869.

Claim.—The mechanism herein described, in connection with a dumping car, in which there are two distinct compartments, by reason of the construction, as herein described, and the floors of these compartments vibrate, and are supported on axes, as set forth, that are placed underneath, and at or about the centers of the same, for the purpose set forth.

92,427.—P. M. Consuegra and Ramon Antiguedad, New York, N. Y.—*Manufacture of Tobacco Paper.*—July 13, 1869.

Claim.—The within-described process of treatment of tobacco for the production of paper, the same consisting in the direct introduction of the dry tobacco into a carefully strained and actively boiling solution of lime in water, with the subsequent washing and pulping, the whole being conducted in the manner and for the purposes herein set forth.

92,428.—John Crandell and P. W. Smith, Chicopee, Mass.—*Curtain-Fixture.*—July 13, 1869.

Claim.—As a new article of manufacture, the brace *b*, constructed as herein described, and for the purpose specified.

92,429.—Henry C. Dart, New York, N. Y.—*Beer-Cooler.*—July 13, 1869.

Claim.—1. The series of horizontal corrugated chambers, placed one above the other, in combination with the inlet pipes and cocks, and outlet-pipes, arranged in the manner and for the purposes set forth.

1. The hooks *i* and eyes *e*, united to the interior surfaces of the corrugated metallic sheets, and set together, as and for the purposes set forth.

3. The trough *k*, fitted with horizontal pipe within it, having a longitudinal incision, to equalize the flow of the beer, which runs over the edge of the trough, substantially as specified.

92,430.—Benjamin F. Dickey, Marshall, Mich.—*Automatic Gate.*—July 13, 1869.

Claim.—The arrangement and combination of the rocking-shaft and step-plate E F, lower hinge pivot-strap *d′*, and upper stationary center hinge *d e*, with a gate, B, and hanging-post A, and with the connecting-rods C, and wheel-irons D, the several parts being operated in connection with or without the staple-iron *i*, and studs *j*, and arranged relatively with each other, and with the gate and post, substantially as and for the purpose set forth.

92,431.—Henry Dodge, Washington Mills, N. Y.—*Machine for Grinding the Cutters of Mowing-Machines.*—July 13, 1869.

Claim.—1. The slotted semicircular base C *c*, as and for the purpose herein described.

2. The double-jawed clamp *m m*, worked by a single screw at the center, and having releasing-springs *o*, as and for the purpose herein described.

3. The hinged sickle-holder F *m n*, adjustable standards H H, traversely adjustable base D *d e*, and semicircular base C *e*, all constructed and arranged as and for the purpose described.

92,432.—Michael F. Doran, Philadelphia, Pa.—*Spool.*—July 13, 1869.

Claim.—A winding or unwinding spool, marked substantially in the manner and for the purpose herein set forth.

92,433.—J. J. Doughty, Lake City, Minn.—*Spring for Steadying the Motion of Millstones.*—July 13, 1869.

Claim.—1. The combination with the pinion, or wheel and shaft upon which it is mounted, as described, of the arms *f* and the rubber springs and boxes in which the same are held, constructed, and arranged, upon the exterior of the said wheel, in the manner and for the purposes herein shown and specified.

2. In combination with the parts claimed in the preceding clause, the clutches *k*, for preventing the backward movement of the pinion, under the arrangement and for operation as herein shown and set forth.

92,434.—John A. Eberly and Henry Wechter, Reamstown Station, Pa.—*Horse Hay-Fork.*—July 13, 1869.

Claim.—The arrangement and combination of the arms A A′ with their respective hooks or combined tines F F′ or B B′, operated by the links and collar D D E, hook arrangement G, and pulley O, all connected and operating substantially in the manner and for the purpose specified.

92,435.—Ezra Emmert, Franklin Grove, Ill.—*Harvester.*—July 13, 1869.

Claim.—1. The combination, as set forth, with the flexible endless apron, of the transverse metal strips h^2, bent up into hooks, at their front ends only, to carry forward the butts of the grain, as described.

4. The combination, as set forth, with the elevating conveyer, of the elastic oscillating grating, constructed, arranged, and operating as and for the purposes specified.

3. The combination, substantially as set forth, of a continuously moving carrier, with an oscillating stop-rake, to intermit the delivery of the grain to the binders.

4. The combination of a continuously moving carrier, an elastic grating, and a stop-rake vibrating between the bars of the grating, substantially as specified.

5. The combination of a continuously moving carrier with a stop-rake, automatically and intermittently operated, for the purpose specified.

6. The combination, as set forth, of the elevating carrier, with the binders' stands so arranged both in front and rear thereof, that the binders work with their faces toward the stubble.

7. The combination, as set forth, of the conveyor, with the binders' stands, so arranged both in front and rear of the conveyer and of the driving-wheels, that the binders work with their faces toward the stubble.

8. The combination, substantially as set forth, of an elevated frame, and a conveyer suspended below said frame, with binders' stands also suspended below said frame, on each side of the conveyer.

9. The combination of a supporting roller with a binder's foot-board flexibly suspended from the main frame, substantially in the manner described.

10. The combination, substantially as set forth,

with the binders' stands, of the pockets to carry the bands.

11. The combination, substantially as set forth, with binders' stands, of a reciprocating receptacle.

12. The combination, substantially as set forth, of a conveyer discharging the grain laterally to the path of the machine of a receptacle reciprocating transversely to the conveyer.

13. The combination, substantially as set forth, with the receptaclo which delivers a gavel to each binder in succession, of the binders' stands, located in front and rear of the conveyer, and on the grain-side of the receptacle.

14. The combination, substantially as set forth, of a binder's stand with a reciprocating binding-table.

15. The arrangement of a receptacle to transverse over the pockets for tho bands, substantially in the manner described.

16. The combination, substantially as set forth, of an intermittently reciprocating receptacle and a stop-rake, automatically operated by the receptacle, to intermit the discharge from the conveyer into the receptacle.

17. The combination, with binders' stands, of a dumping-cradle, oscillating on an axis parallel to the path of the machine, with the binders' stands so arranged that the binders face the cradle.

18. The combination, substantially as set forth, of a reciprocating receptacle, with a dumping-cradle oscillating on an axis parallel with the line of movement of the conveyer.

19. The combination, substantially as set forth, of a dumping-cradle and binders' stands, with a receptacle reciprocating between the stands and cradle.

92,436.—Henry Fairbanks, St. Johnsbury, Vt.—*Automatic Grain-Weighing Scale.*—July 13, 1869.

Claim.—1. The arm or extension B′, with the cross-pin *b′*, or an equivalent laterally extended surface near the top, adapted to alternately lift the notched lever D, and to depress the rocking-lever E′, and its connections, at each weighing operation, substantially as and for the purposes herein set forth.

2. The weighted lever E E′ E², and the connected weight or constant force E³, arranged to be set by the depression of the beam B, to be held by the lever D, and ultimately released by the rising of the beam B, and to turn forcibly on such release, substantially as and for the purposes herein set forth.

3. The spring C, arranged as represented, and adapted to carry up the scale-beam to the position for weighing correctly, and also to hold down the notched lever D, with a force graduated in accordance with the amount of depression of the scale-beam, as and for the purpose described.

4. The thrusting-piece G g^1 g^2, with its cross-bar G¹, or its equivalent, constructed and arranged as represented, and adapted to operate relatively to the arms n^1 n^2, which operate the grain-spout N, substantially in the manner and for the purpose herein set forth.

5. The combination and the arrangement of the thrusting part g^1 g^2, deflecting or tilting ridge A³, arms n^1 n^2, with the notched lever D *d′*, rocking-lever E E′ E², and scale-beam B *b′*, all adapted for joint operation, substantially in the manner and with the effect herein set forth.

6. The spring-catches H′ *h*′ H² *h*², arranged relatively to the arms n^1 n^2, and to the forks g^1 g^2, substantially as and for the purposes herein set forth.

92,437.—Elias T. Ford, Stillwater, N. Y.—*Potato-Digger.*—July 13, 1869.

Claim.—1. The digging and separating cylinder of tines K, formed by a continuation or lengthening of the arms or tines K K, as they radiate from the hub C in a cylindrically spiral form or shape, with the branches *v v* and tube or sleeve L, as described.

2. The separating-cylinder of bars, formed by a continuation or lengthening of the same, as they radiate from the hub C, and surrounding their front extremities with the cutting circular plate *i i*, armed with teeth or shears, and its intermediate bars *v v*, extending to the rear in a cylindrically spiral inclination or form.

3. The central draught-bar E, with oval tube Q, shaft D, rear tube *t*, with frame or yoke H C, ratchet-standard R, with springs *d*, lever M, with fulcrum-standard X, and brace-bar *m*.

4. The combination of the four-wheel truck, as the base of adjustment and operation of the several parts, by the use of the lever M, together with tho draught-bar E, shaft D, tube *t*, with yoke A C, yoke or bar N, arms P P, sections F F, knives *z z*, with plane or sickle edges, the auxiliary plows C C, with double edges, and yoke or arms *s s*, as described and for the purpose specified.

92,438.—Elias T. Ford, Stillwater, N. Y.—*Carriage-Wrench.*—July 13, 1869.

Claim.—1. The socket D, cross-bar H, arms F, and screw J, arranged and operated as described, and for the purpose set forth.

2. The frame, composed of the guide-arms F F, and cross-head C, when used in connection with the double socket D, cross-bar A, and screw J, the whole constructed and operated substantially as described, and for the purpose set forth.

92,439.—Andrew Goetzinger, Cincinnati, Ohio.—*Bung-Cutter.*—July 13, 1869.

Claim.—1. The cutters B and C, whose holders, E and F, slide in oblique ways, J, in a fixed stock, as and for the purpose stated.

2. The arrangement of the converging cutters B C, sliding and oblique bars E F, oblique ways J J, links K L, sleeve M, and handle R, substantially as and for the purpose set forth.

3. In combination with the parts B C, E F, J J, M, and R, the spindle G *g g′ p′*, pin *p*, and tail-screw, as set forth.

4. In combination with the cutters B C, holders E F, guide J, sleeve M, and handle R, the bung-holding devices T U, substantially as represented.

92,440.—E. J. Gordon, Greenville, Mich.—*Plaster-Sower.*—July 13, 1869.

Claim.—The within-described combined roller and plaster-sower, consisting of the roller C C, supporting the frame A A and B B, the hopper E, with its adjustable bottom *e*, the vibrating-bar F, levers G and I, and corrugated ring H, all constructed and arranged to operate substantially as and for the purpose specified.

92,441.—John M. Griswold, Auburndale, Mass.—*Mosquito-Screen.*—July 13, 1869.

Claim.—As an improved insect screen or guard, the device above described, consisting of the two frames *g h*, covered with a suitable netting, when the same are provided with the studs *i i*, and combined with the channels *f f*, made within the facings *d d*, or independent strips secured thereto, the arrangement and operation of the whole being as before explained.

92,442.—H. A. Grover, North Cohocton, N. Y.—*Fence.*—July 13, 1869.

Claim.—The arrangement, with the posts A and rails B, of the intermediate blocks *a a*, battens C, loops *c c*, and keys *d d*, the whole operating as herein set forth.

92,443.—Edson Hartwell, Hubbardston, Mass.—*Rocking-Chair.*—July 13, 1869.

Claim.—1. The forked standards B, when made and combined with the chair, as shown and described.

2. The combination of the pieces E, E, and F, substantially as and for the purposes set forth.

3. The combination of the side projections *f* with the rounds *g*, substantially as described.

92,444.—William H. Henderson and William H. Snider, Lena, Ill.—*Feed-Rack for Addressing-Machines.*—July 13, 1869.

Claim.—The combination, with the galley, of the detachable perforated feed-bar, constructed and applied as set forth.

92,445.—Gardner Herrick, Albion, Mich.—*Sad-Iron Heater.*—July 13, 1869.

Claim.—The arrangement and combination of the base A, deflector D, radiator C, and slotted shield-cover E, with each other, and with a suitable central

burner, B, when said burner is fed from a reservoir connected therewith, and its flame directed and applied substantially in the manner and for the uses set forth.

92,446.—Joseph M. Hoadley, Derby, assignor to Weed Sewing-Machine Company, of Hartford, Conn.—*Needle-Setter for Sewing-Machine.*—July 13, 1869.

Claim.—The needle-adjuster herein shown and described, and formed of a single piece of wire, having a point, *a*, notch *c*, and bent portion *b*, the latter serving as a means for adjusting the distance between the point and the notch, and also as a handle.

92,447.—Charles Hœfinghoff, Cincinnati, Ohio, assignor to himself, Charles C. Winchell, and John T. Sargent, same place.—*Coal-Box.*—July 13, 1869.

Claim.—1. A cast-iron coal-box, A B D, with lid F and hinged cover C, for admitting and removing the coal, substantially as shown.

2. The combination of the rack or stand G with the coal-box, either with or without casters, substantially as shown and described.

92,448.—J. L. Hood, Floyd County, Ga., assignor to himself, J. F. Martin, and J. S. Black.—*Double-Footed Plow-Stock.*—July 13, 1869.

Claim.—1. The within-described plow-stock, consisting of the draught-beam A, the side-beams C and C′, the bolts *c c*, and blocks D D, &c., the plow-feet E E, and support-rods G G, all constructed and arranged substantially as and for the purpose shown.

2. The side-beams C and C′, in combination with the bolts *c c* and *c*, and blocks D D, &c., substantially as and for the purpose specified.

92,449.—Benjamin F. Horn, Boston, Mass.—*Ash-Sifter.*—July 13, 1869.

Claim.—1 The drum-shaft, as made, with the transverse groove, (arranged near one end of the drum,) and with the long journal and head to extend beyond the other end of such drum, as set forth, the same being as specified.

2. The combination and arrangement of devices for holding the mouth-piece or door of the sifting-drum in place on the mouth of the drum, such devices consisting of the two hooked lugs, the stud, and the two turn-buttons, the whole being to operate as specified.

92,450.—James M. Hotchkin, Prattsburgh, N. Y.—*Potato-Digger.*—July 13, 1869.

Claim.—The construction and arrangement of the digger B, rods D, chains E, and balls F, when used in combination, as and for the purpose set forth.

92,451.—Elijah Humphreys, Samsville, Ill.—*Fence-Gate Post.*—July 13, 1869.

Claim.—1. The brace D, provided with the gauge-holes *i i*, and auxiliary brace E, in combination with the post A, substantially as and for the purposes described and set forth.

2. The brace D, provided with the pin *g*, in combination with the blocks or posts *h h*, and keys *m m*, as and for the purposes specified.

92,452.—John W. Hyatt, Jr., Albany, N. Y.—*Process for Coating and Beautifying the Surface of Billiard-Balls, Knife-Handles, &c.*—July 13, 1869.

Claim.—1. A ball or other object, which is coated with collodion, substantially as described.

2. The process of applying a coating of collodion to balls and other objects, consisting in first priming the object to be coated with an adhesive substance, and then dipping or molding the object, substantially as described.

3. The application of heat and pressure to an object coated with collodion, for the purpose and substantially as described.

92,453.—W. T. Jaquith and Robert Calhoun, Allegheny, Pa.—*Sash-Cord Sheave.*—July 13, 1869.

Claim.—A cylindrical, perforated, and grooved sheave, having exterior longitudinal corrugations, substantially as described, as a new article of manufacture.

92,454.—Lemuel P. Jenks, Boston, Mass., assignor to H. A. Hall, same place, and Joseph A. Minott, New York City.—*Curry-Comb.*—July 13, 1869.

Claim.—In curry-combs, the metallic teeth shown, when the same are in combination with and held by an elastic front, and are provided with heads, held immovably between the front and the back of the comb, all substantially as described.

92,455.—Thomas W. Johnson, New York, N. Y.—*Apparatus for Concentrating Extracts of Bark and other Liquids.*—July 13, 1869; antedated June 26, 1869.

Claim.—The open drum C, constructed of disks *a*, and traverses *b*, in combination with the tank A, substantially as shown and described.

92,456.—Julius H. Jones, Charlton, Mass.—*Scroll-Gate for Water-Wheels.*—July 13, 1869.

Claim.—1. The gate A, with its flaring end shield or guard, and covered inner end, and ways *a a*, substantially as described.

2. The described gates, spring-connections, and operating-mechanism, substantially as set forth.

92,457.—Isaac Keith, West Sandwich, Mass., assignor to himself, Hiram Keith, and Isaac N. Keith, same place.—*Dumping-Car.*—July 13, 1869.

Claim.—1. The combination and arrangement of a platform, *a*, and its two trucks, *b b*, (composing a long car,) with one or more tip-cart bodies, B, and with supporting-wheels *d* and runners *e*, guide rails *l* and studs *k*, or their equivalents, arranged substantially as described.

2. The combination of the four holding chains *m*, or their equivalent, with each tip cart body, the long car-platform, and their supporting runners, wheels, guides, and studs, as set forth.

92,458.—August Kindermann, Cleveland, Ohio.—*Churn.*—July 13, 1869.

Claim.—1. The rotary dasher *a*, when constructed as described, with arms *e. e*, and *e′*, floats *d*, said arms *e′* and floats being provided with breakers *b*, as and for the purpose set forth.

2. In combination with the dasher, constructed as described, the breakers *b*, arranged as described.

92,459.—C. H. Knox, Mount Pleasant, Iowa.—*Washing-Machine.*—July 13, 1869.

Claim.—The combination of the washer H with the clamp G, journal E, nut K, and pinion D, said clamp and nut being arranged to turn on right and left hand screws, and clamp the washer between them, as specified and shown.

92,460.—Henry Laurence, New Orleans, La.—*Velocipede.*—July 13, 1869.

Claim.—1. The adjustable auxiliary wheels or casters A and A^2, mounted on the vibrating-arms B and B^2, attached to and connected with the velocipede, substantially in the manner and for the purpose above described.

2. The device and mechanical contrivance for actuating the pivoted vibrating arms B and B^2, and the wheels A and A^2, by means of the vibrating steering-handle *s s*, with the bent levers or bell-cranks *s u v*, and *s* u^2 v^2, mounted on and connected with the forked standard H, substantially in the manner and for the purpose above set forth, and connected with the vibrating-arms B and B^2, by means of the flexible band or chain *y*, the vibrating-arm g^2, the cross-pin *m*, the sheave or pulley *x*, and the connecting-rods *o* and o^2, substantially in the manner and for the purpose above set forth.

92,461.—Alfred Lawton, Philadelphia, Pa., assignor to Francis N. Lawton, same place.—*Apparatus for Raising Coal.*—July 13, 1869.

Claim.—1. The raising of coal or other granular material by means of a bucket or other suitable vessel, arranged to slide in a shaft, or its equivalent, which extends so far below the ground or platform, on which is deposited a mass of coal or other material to be raised, that the latter will of itself pass into the bucket, all substantially as set forth.

2. In combination with the said shaft, or its equiv-

alent, the opening *e*, in the same, the inclined plane *f*, and movable door *h*, arranged in respect to the ground or platform on which the coal is deposited, substantially as and for the purpose specified.

92,462.—PETER MAYO, Richmond, Va.—*Machine for Making Plug Tobacco.*—July 13, 1869.

Claim.—1. The revolving endless trough C, constructed with sides, adapted to open or be pressed apart to release the strip or bar, substantially as described.

2. In combination with the revolving endless trough C, and compressing-roller D, the scrapers L L′ L″, and brush M, employed and operating substantially as set forth, for the purposes named.

3. In combination with the revolving endless trough C, the table G, and the steam or spray pipe O, arranged and operating as described, for the purpose specified.

4. In combination with the revolving-trough C, constructed in sections, with sides adapted to open or be pressed apart, as described, the tables *a* and *g*, and flanges or guides E, F, *g*, arranged substantially as represented and described, for the purposes specified.

5. In combination with the revolving-trough C, the gearing *c‴*, H, K, for connecting said trough with the driving-shaft J, and imparting a positive motion thereto from said shaft, as described.

6. The tongue or wedge P, arranged and operating substantially as described, to free the strip or bar from the bottom of the revolving-trough, and cause it to pass on to a stationary table, as set forth.

7. The tongue or wedge P, constructed tapering in width to adapt it to force apart the sides of the revolving-trough, to release the bar or strip, substantially as described.

8. The rotary knives V, one or more, mounted eccentrically in a slotted drum, T, and operated by said drum, thereby causing them, in their rotation, to protrude at the proper moment to sever the plug or lump, and then withdraw within said drum, so as to be protected thereby, and to cleanse themselves.

9. The spring-scrapers Y, arranged within the drum T, and employed to cleanse the knives V, as they are drawn into said drum, substantially as described.

10. The knives V, mounted loosely and separately on their shaft, and employed, in combination with a drum, T, provided with a plurality of slots, *t*, for their reception, as described, for the purpose of adapting the apparatus to be adjusted to cut different lengths of plug or lump.

11. In combination with the stud-shaft W of the knives, the standard X, slotted as described, to adapt said knives to project a greater or less distance, as desired.

12. The cutting-apparatus R T V, connected with the forming-mechanism by gearing S U, as represented and described, for the purpose specified.

92,463.—GEORGE L. MCCAHAN, Baltimore, Md.—*Saw-Mill.*—July 13, 1869.

Claim.—1. The vertically movable journal-box P, constructed to operate in connection with lever L and spring Q, substantially as and for the purposes set forth.

2. The combination of the vertically movable journal-box P, with shaft G, grooved friction-wheels E F, lever L, belt K, and pulleys R M N, when constructed to operate as and for the purposes set forth.

92,464.—JAMES H. MCCONNELL, Newcastle, Pa., assignor to himself and J. R. RICHARDSON.—*Cooking-Stove.*—July 13, 1869.

Claim.—1. In combination with a cooking-stove, the pan A, constructed as described, and provided with an extension, B, substantially as and for the purposes herein set forth.

2. In combination with the pan A and extension B, the plate C, constructed as described, and for the purposes set forth.

3. The combination of the pan A, extension B, and cover D, all substantially as and for the purposes herein set forth.

4. The combination of the pan A, extension B, and boiler E, substantially as shown and described.

92,465.—WILLIAM NEEDHAM and JAMES KITE, Vauxhall, England.—*Apparatus for Depurating Liquids.*—July 13, 1869.

Claim.—1. Securing filtering-paper from breakage under high pressure, by the use of plane diaphragms and textile fabrics, applied substantially as herein set forth.

2. Forming continuous supply and discharge conduits, by simple contact of the frames, substantially as described and shown.

92,466.—JOHN ORM, Paducah, Ky.—*Circular-Saw Mill.*—July 13, 1869.

Claim.—The device herein described, for guiding and controlling the lateral motion of a circular-saw mill-carriage, consisting of the parts *m*, *n*, R, P P, in combination with the feeding guide-bar F, when the same are constructed to operate substantially in the manner and for the purpose set forth.

92,467.—AMOS T. PEIRCE, Fair Haven, Mass.—*Bowling-Alley.*—July 13, 1869.

Claim.—1. The construction of a bowling table or alley with a pit, B, having an inclined bottom leading into an inclined trough, E, which trough is provided at its depressed end with a spring-stop, R, and an elevator, N, whereby balls which have been bowled at the pins will return toward the front end of the table or alley, and may be raised and deposited into a receptacle, C, substantially as described.

2. The spring-stop R, constructed with a ledge, *r*, and applied to the depressed end of a ball-trough or conveyor, E, in combination with an elevator, N, substantially as described, and for the purposes set forth.

3. The elevated receiving-trough C, provided with a tilting-lip, *c*, in combination with a ball-elevating box, N, substantially as and for the purposes described.

4. The vertically movable suspension-board G, having the pins *a* connected to it by cords *b*, and springs *b′*, in combination with the vertically movable perforated centering-board H, said boards being suspended, guided, and operated substantially as and for the purposes described.

5. The combination of setting-up devices, constructed so as to operate substantially as described, with ball returning and lifting devices; said parts being connected to a pulley, *q*, or its equivalent, in such manner that the two operations of setting up the pins *a* and lifting the balls can be effected at one and the same time, substantially as described.

6. Pins *a*, which are hung from a setting-up board, G, in combination with a vertically movable perforated centering-board, H, substantially as described.

92,468.—BENJAMIN D. REED, Westfield, Mass.—*Butter-Knife Rest.*—July 13, 1869.

Claim.—The combination of the upright forked rest A and shank B, with spring-tongue C, the parts being arranged and constructed so that the forked rest A can be turned horizontally, when the device is set upon a plate or dish, substantially in the manner and for the purpose set forth.

92,469.—JACOB REESE, Pittsburgh, Pa.—*Method of Making Bands for Shingle-Bundles.*—July 13, 1869.

Claim.—1. A machine cut and punched shingle-strip or bale-fastening, made substantially in the manner described, from sheet as distinguished from hoop iron.

2. The combination, substantially as described, of the vibratory cutter *n*, gauge *n′*, and adjustable punches *s s*, with the stationary cutter *b′*, provided with holes *s′ s′*, for the purposes hereinbefore set forth.

92,470.—JOSHUA REGESTER, Baltimore, Md.—*Rotating Bell and Bell-Wheel.*—July 13, 1869.

Claim.—1. Fastening the bell to its yoke by means of the keys *c c*, substantially as described, and for the purpose set forth.

2. The groove in the hub of the bell, in combination with the groove in the yoke, and with the keys *c c*, substantially as described.

3. The combination of the metal hub, having sockets, the wooden spokes, and the overlapping socket-

ed flanged felloes, the same constituting an improved bell-wheel, as set forth.

92,471.—George L. Richardson and James C. Moody, Brunswick, Me.—*Picker-Cushion for Looms.*—July 13, 1869.

Claim.—The ring A, with flange *a*, nails *e*, and projections *d*, also having nails, when applied to a picker-cushion, as herein set forth.

92,472.—Horace T. Robbins, Boston, Mass.—*Umbrella-Frame.*—July 13, 1869.

Claim.—The supports *i*, in combination with the ribs *g*, and stretchers *f*, for the purpose of strengthening the frames of umbrellas and parasols, substantially as described.

92,473.—Cyrus Roberts and John A. Throp, Three Rivers, Mich.—*Horse-Power.*—July 13, 1869.

Claim.—1. The arrangement of the grease-plate E upon the bed-plate, between the upper gears and bevel-wheels, substantially as and for the purpose set forth.

2. The combination of the frame, the bed-plate, the bevel-wheel, and the haugers, with the longitudinal line-shaft and its pinion, all constructed and arranged as set forth, for joint operation.

3. The pivoted boxes *d*, in combination with the line-shaft D and bevel-wheels C^1 d^2, substantially as and for the purpose set forth.

4. The combination, as set forth, of the bed-plate, the open-bottomed hangers, and the pivoted boxes, with line-shaft, all these parts being constructed for joint operation, as described.

5. The combination of the thrust-brace F, the tension-brace G, and the holding-down brace H, intersecting the thrust-brace, all constructed for joint operation, substantially as set forth.

92,474.—Cyrus Roberts and John A. Throp, Three Rivers, Mich.—*Horse-Power.*—July 13, 1869.

Claim.—1. A line-shaft, extending outward at the rear of a horse-power, supported in a box or bearing below the bed-plate, and a bearing on the rear axle substantially as described, and for the purpose of enabling the shaft to be hung at any desired angle, as set forth.

2. A hinged rear frame, carrying a tumbling-rod, connected with the line-shaft by a pivoted coupling, substantially as described, and for the purpose of enabling the angle of the tumbling-rod and line-shaft to be varied, as set forth.

3. The combination of the frame, the bed-plate, and the diagonal braces C^2, connecting the frame and bed-plate, all constructed for joint operation, substantially as set forth.

4. The combination of the frame, the thrust-brace H, the tension-rod H^1, the chain H^3, and the fastening-stakes h^2 h^4, all constructed for joint operation, substantially as set forth.

5. The combination, substantially as set forth, of a rigid thrust-brace and a flexible tension-brace.

92,475.—Cyrus Roberts and John A. Throp, Three Rivers, Mich.—*Horse-Power.*—July 13, 1869.

Claim.—1. The combination of the frame, the longitudinal line-shaft, and the inclined bed-plate, all constructed and arranged substantially as set forth, for joint operation.

2. The combination, with the bevel-wheel, of the adjustable friction-roller, arranged above the bevel-pinion and line-shaft, and the adjustable side-roller, as constructed and arranged for joint operation, as set forth.

3. The combination, with the bevel-wheel E, of the vibrating friction-roller e^4, and adjustable stop, as set forth.

4. The combination of the hinged frame F, rod *f*, and catch *f'*, with the frame of a four-wheeled horse-power, so arranged as to rest upon two wheels when in operation, substantially as set forth.

5. The adjustable transverse braces G G', for securing the machine in position when in operation, substantially as described, constructed, and arranged.

92,476.—Samuel S. Roberts, Elizabeth, Pa.—*Coal-Loading Apparatus.*—July 13, 1869.

Claim.—1. A dumping frame or tipple, *a*, adjustable so as automatically to dump the coal from the car at any desirable elevation, and provided with hooks, *c*, which, engaging a fixed part of the frame, prevent the tipple and car from swinging forward, and also provided with a hoisting-apparatus, substantially as described.

2. A chute or screen, *d*, adjustable so as to be raised or lowered at either end separately, or at both ends together, in combination with a tipple, *a''*, constructed and operated substantially as and for the purposes set forth.

92,477.—William Robson and George W. Robson, Cincinnati, Ohio.—*Still for Alcoholic Spirits.*—July 13, 1869.

Claim.—1. The described double distillation, first, with the ordinary steam-distillery, and, secondly, with the finishing-still L, of copper, heated by fire, or by fire and steam combined.

2. The close low-wine tank or reservoir I, between the steam-distilling worm-tub and the copper or finishing still, to receive the low-wine from the steam or other primary distillation, and to deliver the same into the said finishing-still.

3. While disclaiming the general principle of introducing purifying or flavoring matters between the still and condenser, we claim the construction and arrangement of the drum K, and removable colanders *k k*, as and for the purposes herein shown and described.

4. The low-wine worm F, reservoir I, finishing-still L, high-wine worm P', tester or separator Q, and low and high wine receivers S and T, with their described or equivalent accessories, the whole being combined and operating substantially as set forth.

92,478.—Henderson Ross and David F. Agnew, Pittsburgh, Pa.—*Furnace for Manufacturing Iron and Steel.*—July 13, 1869; antedated June 30, 1869.

Claim.—The extension of the water-chamber above the water-level, said water-chamber being constructed, arranged, and operating substantially in the manner and for the purpose herein described and set forth.

92,479.—Charles B. Sawyer, Fitchburgh, Mass., assignor to himself and Frank G. Allen, Providence, R. I.—*Dough-Kneader.*—July 13, 1869.

Claim.—The improved kneading-machine herein described, consisting of the revolving-pan H, the mixers E and G, and the crank-shaft D, with the necessary frame-work and supports, the whole arranged and operating substantially as set forth, for the purposes specified.

92,480.—Thomas Shaw, Philadelphia, Pa.—*Apparatus for Shotting Metals.*—July 13, 1869; antedated April 30, 1869.

Claim.—The blowing of molten metals in a fountain into the air, whereby they are shotted, in the manner and for the purpose substantially as set forth.

92,481.—Joseph Shearer and M. B. Armstrong, Timbersville, Ill.—*Cotton-Seed Planter.*—July 13, 1869.

Claim.—1. In combination with the adjustable bed-piece or frame A, two ridging-plows, arranged in front of the drill-tooth, and a seed-distributer.

2. The rake F, in combination with the ridging-plows C C and drill-tooth D, substantially as set forth.

3. In combination with a device for drilling or planting seed, an adjustable scraper or rake, supported by means of elastic or yielding rods, or their equivalents.

4. In combination with a device for drilling or planting seed, a rake or scraper, for covering the seed, made adjustable, and located between the drill-tooth and roller.

5. Supporting the rake or scraper of a seed-drill against backward strain by connecting it with the shanks of the ridging-plows.

6. The combination, in a seed-drill, of two ridging-plows, a drill-tooth, a rake, and a roller.

92,482.—Corelli W. Simpson, Bangor, Me.—*Book-Holder.*—July 13, 1869.

Claim.—A book-holder, constructed with bar A, spring-clasps B B, with the holding-device as constructed, with the lever *b*, springs *c*, and arms *f g*, and arranged to operate substantially in manner as and for the purposes specified.

92,483.—Albert Sinclair, West Waterville, Me.—*Broom.*—July 13, 1869.

Claim.—The rubber cylinder *a*, when applied to a broom, substantially as and for the purposes herein described.

92,484.—Christian Smith, Bellaire, Ohio, assignor to himself, August Briel, and Godfrey Rusck.—*Process of Tanning Skins.*—July 13, 1869.

Claim.—The within-described process for tanning leather, substantially as set forth.

92,485.—William H. Smith, Newport, R. I.—*Velocipede.*—July 13, 1869.

Claim.—1. Clutch-pulleys *a a*, applied to the axle A′ of the driving-wheel A, and operated by means of cords and pulleys, and reciprocating treadles, which are applied to adjustable guides *b*, substantially as described.

2. The adjustable treadle-guides *b b*, pivoted to axle A′, at their lower ends, and connected at their upper ends by a slide, *d*, and screw *d′*, to a segment, D, substantially as described.

3. Spring *g*, applied to the steering-lever, substantially as described.

4. The spring *t*, applied between the reach E and pivoted standard H, substantially as set forth.

92,486.—Enos Stimson, Montpelier, Vt.—*Door-Spring.*—July 13, 1869.

Claim.—1. The combination and arrangement of slotted ratchet D, spring E, hook F, and link G, in manner and for the purposes substantially as herein set forth and described.

2. The combination and arrangement of slotted ratchet D, spring E, hooks *i i*, and crank-bar H, substantially as herein set forth and described.

92,487.—Paul Emil Louis Wilhelm Stockmann, Keppel street, Russell Square, England.—*Tent.*—July 13, 1869; patented in England September 21, 1868.

Claim.—1. The tent-frame, composed of feet *c* d^3, uprights *a d*, longitudinal tubes or rods *b c*, and stretchers or braces *f g*, combined and arranged substantially as shown and described, for the purposes set forth.

2. The tent covering, composed of the double roof *i j* and separate sides *k k*, combined and arranged substantially as shown and described, for the purposes set forth.

3. The feet *c* d^3, constructed as shown and described, in combination with the posts or uprights *a d* of a tent-frame, as and for the purpose set forth.

4. The side covers *k*, partially covering the vertical walls of the tent, and suspended by hooks k^2 k^2, or their equivalent, substantially as herein shown and described.

5. The combined arrangement of the fastenings k^1, i^3, and *j′*, with the side coverings *k*, outer covering *i*, and under covering *j*, substantially as and for the purposes set forth.

92,488.—David M. Strain, Jr., Des Moines, Iowa.—*Clothes-Pin.*—July 13, 1869.

Claim.—The tapered pin A, with a hole, B, in the small end, and a slot, C, in the large end, to be used in connection with the ring D, and a line, wire, or rod, for the purposes specified.

92,489.—B. F. Sturtevant, Boston, Mass.—*Pressure-Blower.*—July 13, 1869.

Claim.—1. A central outlet-blower, having its deflecting-plates extended over the ends of the fan-wheel blades, and between them and the blower-case, substantially as and for the purpose specified.

2. A compounded blower, made up of one or more blowers, having central inlet and delivery passages, diaphragms, and deflecting-plates, extending over the ends of the fan-wheel blades, combined with a tangential delivery-blower, substantially as described.

92,490.—Benjamin F. Sturtevant, West Roxbury, Mass.—*Blast-Apparatus.*—July 13, 1869.

Claim.—An air-blast apparatus, consisting of the combination, with a rotary blower, of the heater or cooler, constructed and arranged for mutual operation together, substantially as described.

92,491.—Robert F. Tompkins, New York, N. Y.—*Machine for Cutting Bead-Miters.*—July 13, 1869.

Claim.—The knife or cutter D, adjustable fences *h h*, with the angular guides or slides *m m*, frame B, guide-plates *l l*, when all are constructed and arranged to operate for the purposes hereinbefore set forth and described.

92,492.—William F. Trautman, Llewellyn, Pa.—*Extension-Ladder.*—July 13, 1869.

Claim.—1. The pivoted frame I and ropes R R′, arranged and operating substantially as described, for the purpose of bracing the ladder when extended, as set forth.

2. The catches T and springs *r*, in combination with the upper section A and ropes R R′, for the purpose of preventing end motion of the ladder when placed in position, substantially as described.

3. The combination of the sockets S S′, straps F F′, pins N N′, and sections A B, when arranged to operate substantially as described, and for the purpose of forming a step-ladder, in the manner set forth.

92,493.—Elbridge G. Turner, New Bedford, Mass.—*Signal-Lantern.*—July 13, 1869.

Claim.—The combination of lantern A′, red light B′, sliding-eye C′, screw-hooks D′ D′, sockets E′ E′, handles F′ F′, lamp G^2, and screw-cap H^2, all operating as and for the purpose set forth.

92,494.—William Van Anden, Poughkeepsie, N. Y.—*Machine for Making Railroad-Chairs.*—July 13, 1869.

Claim.—The pins *c c*, when formed of unequal length, and arranged as described, for the double purpose of keeping the spike-holes open during the process of swaging, and for forming a recess in the solid metal, as and for the purpose set forth.

92,495.—John M. Walker, Rossville, Pa., assignor to himself and John C. Hollinger, same place.—*Horse Hay-Fork.*—July 13, 1869.

Claim.—The within described hay-fork, consisting of the tines A, shank B, ears C, bar E, catch G, and dowel L, when constructed and arranged substantially as and for the purpose specified.

92,496.—G. A. Watkins, Cavendish, Vt.—*Machine for Pressing the Seats and Backs of Chairs and Settees into their Frames.*—July 13, 1869.

Claim.—1. The rising and falling or reciprocating table B, operated by the screw C, or an equivalent means, in connection with the adjustable lid or top G of the frame A, all constructed and arranged to admit of the inserting or pressing the frame E within the frame D, and, simultaneously therewith, of the clamping and straining of the seat-fabric F between the said frames, substantially as shown and described.

2. The yielding guide-pins *a e*, when arranged and used in connection with the parts above described, for the purpose specified.

3. The movable clamps H, or their equivalents, attached to the lid or top G, and arranged, in relation with the opening *d*, for holding the inner frame E to the under surface of the lid or top G, substantially as set forth.

4. The combination of the lid or top G, rising and falling table B, movable clamps H, and the guide-pins *a e*, all arranged to operate in the manner substantially as and for the purpose specified.

92,497.—J. Bertram Webster, Stockton, Cal., assignor to himself, W. E. Greene, and Henry E.

WINSLOW, same place.—*Composition for Tobacco-Substitute.*—July 13, 1869.

Claim.—The composition above described, for the purpose set forth.

92,498.—GEORGE WELLS, Bethel, Conn.—*Work-Table Implement and Spool of Thread Combined.*—July 13, 1869.

Claim.—1. The combination, with a thread-cutter composed of a plate or stock provided with one or more cutting-edges, of a reversible spring, whereby the same is adapted to be secured to a spool of thread, substantially as herein described and shown.

2. The combination, with a thread-cutter and reversible spring, adapted to be attached to a spool, of a cutting-blade, similar to the blade of a knife, arranged to operate substantially as described and shown.

3. The combination, with a thread-cutter, adapted to be secured to a spool, of a thread-retainer, *a*, substantially as described and shown.

4. The combination, with a thread-cutter, of a projecting-plate, P, formed as an ear-spoon or stiletto, substantially as and for the purposes specified.

5. The combination, with a thread-cutter adapted to be secured to a spool, of a worsted needle-threader, *s*, substantially as described and shown.

6. The combination, in one implement, of the blade B, projecting plate P, reversible spring H, and stock C, the latter provided with the cutting-edges *c c c' c'*, thread-retainer *d*, and needle-threader *s*, substantially as herein described.

92,499.—GREENLEAF A. WILBUR, Skowhegan, Me.—*Car-Starter.*—July 13, 1869; antedated December 4, 1868.

Claim.—The sectional cog-wheels, carrying double pawls of described construction and operation, and which gear into double ratchet-wheels on the axis, the whole being moved by the sliding-frame, with its ratchet-bars and attachments, substantially as described, and for the purpose set forth.

92,500.—D. H. WILGUS and S. M. DENNY, Harveysburgh, Ohio.—*Harvester.*—July 13, 1869.

Claim.—The treadle-lever E, arm *p*, rod *j*, shipper *h*, and clutch *c*, arranged and operating in combination with deliverer M and apron H, substantially as and for the purpose described.

92,501.—JOSEPH WITMER, Niagara, assignor to himself and TOBIAS WITMER, Williamsville, N. Y.—*Trestle.*—July 13, 1869.

Claim.—1. The hoops D, arranged below the beam A, and encircling the upper ends of the diverging legs B, with the beam A between them, substantially as and for the purpose described.

2. The arrangement and combination of the beam A and the legs B B with the hoops D D, and braces C C, and the tenon or iron ring or clasp *c*, and the key *e*, for the purposes substantially as herein set forth.

92,502.—THOMAS B. WORRELL, Frankford, Pa.—*Door-Lock.*—July 13, 1869.

Claim.—Two or more interlocking bars, J, having recesses *h*, in combination with the locking-bolts B, the said bars and bolts being constructed and arranged substantially as described, and operating in relation to each other as above set forth.

92,503.—ELIAS M. WRIGHT, Castile, N. Y., assignor for one-half to GARDNER HERRICK, Albion, Mich.—*Three-Horse Equalizer.*—July 13, 1869.

Claim.—The pivoted eam-bar A, having equalizing curves, *i*, in combination with the connecting clevis C, and draught-chains D and D', when constructed, arranged, and used in connection with a three-horse team, and with a plow or other object to be drawn, substantially as and for the purpose set forth.

92,504.—JAMES ARMSTRONG, Bucyrus, Ohio.—*Post-Auger*—July 13, 1869.

Claim.—1. The machine for boring post-holes, provided with the mechanism for transporting it over the ground, and the mechanism for giving it rotary motion, all arranged as described, for the purpose specified.

2. The post-hole auger, constructed of the parts *f* and *f'*, and hinged together, substantially as and for the purpose described.

3. The combination, with the auger constructed as described, of the sleeve Q, handle *r*, and slide *q'* for operating the slide, substantially as and for the purpose described.

4. In combination with the auger, constructed as described, the ratchets and pawls *d e*, rack O, toothed wheel P, sleeve Q, angular slide *q'*, and hand-lever *r*, all arranged and operating as described, for the purpose specified.

5. The combination, with the wheels B, of the spring-bolts b^1, spring-catches b^2, and pins b^4, substantially as and for the purpose described.

6. The guiding-wheel C, constructed as described, in combination with the toothed wheel E and frame A, substantially as and for the purpose described.

7. The sweep *u*, provided with the joint *w*, with means for connecting the horse to the frame for drawing the machine over the gound, substantially as and for the purpose described.

8. The table I, provided with means, as described, for connecting it to frame A, and for adjusting it so as to present the auger in a vertical position, substantially as and for the purpose described.

92,505.—GEORGE ATKINS, Sharon, Pa.—*Blast-Furnace.*—July 13, 1869.

Claim.—A blast-furnace, provided with gas-pipes B, which lead from its upper part into tuyeres *a*, at the lower part of the furnace, and with the blast-pipes C, all arranged substantially as described, to utilize the gases that escape from the ore or fuel, as set forth.

92,506.—SAMUEL AULT, Bridgetown, near Cannock, England.—*Plastering-Trowel.*—July 13, 1869; patented in England November 2, 1868.

Claim.—The improvements in plastering-trowels, hereinbefore described, and illustrated in the accompanying drawing: that is to say, making, on the bottom of the holder of plastering-trowels, a tapering dovetail or connecting plate, and making, on the upper side of the plate of the said trowels, a correspondingly tapering hollow dovetail or seat, to receive the said dovetail or connecting-plate, for the purpose of enabling the holder to be readily connected to or disconnected from the trowel-plate, substantially as described and illustrated.

92,507.—HENRY AXTELL, Yreka, Cal.—*Wire-Cutter.*—July 13, 1869.

Claim.—The improved wire-cutter, constructed as described, of the pivoted parts A B, provided respectively with the cutting-edges *d e*, arranged eccentrically to each other, and on a line with the side of the tool, as herein described, for the purpose specified.

92,508.—JOHN A. BAILEY, Detroit, Mich.—*Excavating-Machine.*—July 13, 1869.

Claim.—1. The combination of the scoop with the pistons, working in cylinders by means of water or other fluids, when directly connected thereto, for effecting the to and fro movement of the scoop, substantially as specified.

2. The combination, with the cylinders C, of the guides E, and arm on slides D, when arranged substantially as specified.

3. The combination of the cylinders, arms, and slides, with the walking-beam, substantially as specified.

4. The combination of the walking-beam, supporting the scoop and its operating devices, with the cylinders L and L^1, or their equivalents, arranged to impart the vertical movements thereto, support the weight of the same and the operating mechanism, and for the axis of oscillation of the whole, substantially as specified.

5. The combination, with the scoop and slide D, of the lever *b d*, arm *e*, catch *f*, and adjustable stud *h*, all substantially as specified.

92,509.—THOMAS BARNES, Wayne, Mich.—*Fence.*—July 13, 1869.

Claim.—The panels, provided with the inclined slots G, in the transverse strips, combined with the posts having the studs H, as specified.

92,510.—Jeremiah Barney, Perry's Mills, N. Y.—*Turbine Water-Wheel.*—July 13, 1869.

Claim.—1. The buckets D, constructed as described, with their upper portions vertical and their lower portions extending spirally downward, the former projecting beyond the latter, and all arranged and operating as described, for the purpose specified.

2. An improved water-wheel, formed by the combination of the wheel B, casing C, provided with an outwardly projecting flange upon its upper edge, buckets D, spout E, and stationary casing F, with each other, substantially as herein shown and described, and for the purpose set forth.

92,511.—Isaac J. Baxter, Peekskill, N. Y.—*Coal-Stove.*—July 13, 1869.

Claim.—1. In combination with a stove, for heating tailors' "irons," the corrugated plates I, more or less in number, arranged substantially as described.

2. The construction, arrangement, and combination of the ash-pit B, fire-box D, top E, and oven F, substantially as and for the purpose herein shown and described.

92,512.—John T. Bennett, Lenora, Minn.—*Wagon-Brake.*—July 13, 1869.

Claim.—The plate *n*, ring *z*, grooved pulley *o*, cord *m*, rods *h* and *i*, band *j*, sliding on the reach *k*, pivoted levers *p p*, rods *q q*, brake-bar *a*, brake-shoes *b*, guide-plates *d*, springs *e*, and rods *g g*, all combined, arranged, and operating as set forth and shown.

92,513.—John Carey, Victoria, Mo.—*Spring-Fan Attachment.*—July 13, 1869.

Claim.—The combination of the fan B, with the duplicate propelling or clock mechanism, the stock A, &c., and clamp D, arranged substantially as specified.

92,514.—Erastus H. Clark, Appleton, Wis.—*Saw-Buck.*—July 13, 1869.

Claim.—The saw-buck A, when provided with the jaw C and clamps G H, all the parts being constructed, arranged, and operating substantially as and for the purposes described.

92,515.—P. J. Clark, West Meriden, Conn.—*Lantern.*—July 13, 1869.

Claim.—The guard-wires of the lantern, when formed in pairs, each pair being composed of one wire, bent at the center *b*, to form shoulders *c*, to which the cap or canopy is secured, by means of the hooks *a*, fitting under said shoulders, whereby the pairs of guards are adapted to be expanded, to accommodate lantern globes of different diameters, as herein set forth and shown.

92,516.—Edward Clarkson, Carbondale, Pa.—*Pipe-Cutter.*—July 13, 1869.

Claim.—The arrangement of the threaded tubular extension C, the thumb-nut E, and cutter I, with relation to the parts A B of the stock, and the feeding-screw G, as herein described, for the purpose specified.

92,517.—E. H. Clinton, Iowa City, Iowa.—*Grain-Binder.*—July 13, 1869.

Claim.—1. The combination of the shaft C, wheel D, pins d^1 d^2, slides E and F, drop-pins c^1 f^1, inclines e^2 f^1, three-armed plate H, pivoted stops h^1, and springs h^2, with each other, substantially as herein shown and described, for the purpose of giving motion to the various parts of the apparatus at the proper times, as set forth.

2. The combination of the connecting-bar I, gear-wheel J, gear-wheel L, forked arm M, forked block T, short crank U, connecting-bar V, hooked arm W, and spring-plate Y, with each other, and with the vertical plates K and N, and needle S, for the purpose of forming the loops of the knot, substantially as herein shown and described.

3. The combination of the connecting-bar F′, gear-wheels D′ E′, crank B′, connecting-bar A′, and hook Z, with each other, and with the gear-wheel J, hooked block T, and spring-plate Y, in connection with the needle S, for forming the bow of the knot, substantially as herein shown and described.

4. The combination of the connecting-bar G′, crank H′, shaft I′, coiled spring J′, crank K′, connecting-bar L′, and knife M, with each other, and with the slide F, for the purpose of cutting off the twine at the proper time, substantially as herein shown and described.

5. The combination of the connecting-bar O′, connecting-iron P′, and slotted plate Q′, having a projecting pin attached to its forward end, with each other, and with the crank K′, substantially as herein shown and described, for the purpose of detaching the bow of the knot from the hook Z.

92,518.—W. W. Cole and T. McGhee, Eudora, Kans.—*Potato-Digger.*—July 13, 1869.

Claim.—1. The combination of the plow E *e′*, constructed as described, frame F, and adjustable connecting-rods G, with each other and with the axle B, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the knives P and knife-bar R, with the frame F and revolving fingers or arms L, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the adjustable standard S, lever R, and long loop or staple T, with each other, and with the axle B and frame F, substantially as herein shown and described, and for the purpose set forth.

92,519.—Joreph H. Davis, Chilicothe, Mo.—*Adjustable Bracket.*—July 13, 1869.

Claim.—1. An adjustable bracket, A, pivoted to the strip B, so that it can be transversely and longitudinally adjusted, substantially as herein shown and described.

2. The combination of the bracket A, cam *g*, and cams *j k*, with the strip B, screw C, notched pin F, and nut *h*, all combined and operating substantially as herein shown and described.

92,520.—M. E. Davis, Folsom, Cal., administratrix of the estate of M. C. Davis, deceased.—*Can-Opener.*—July 13, 1869.

Claim.—1. The combination of the radial arm A, having the center-pin B, with the handle D, supporting the cutter E, and adjustably arranged thereon, substantially as and for the purpose specified.

2. The cutter E, arranged to be thrust through the metal in a direction perpendicular thereto, and adjusted to the inclined position relatively to the same when cutting, substantially as and for the purpose specified.

92,521.—Edward Dorr, Rockford, Ill.—*Horse-Rake.*—July 13, 1869.

Claim.—1. The combination of the hinged rake-teeth, constructed as described, with the pivoted spring-shoes, constructed and operating as described.

2. The combination, substantially as set forth, of spring-shoes and hinged rake-teeth with elevating-belts, working between and vibrating with the teeth.

3. The combination of hinged rake-teeth and elevating-belts with the elevating-mechanism operated by the driver, as set forth.

4. The combination of the elevating-belts with sprocket-wheels, acting on their under surfaces between their supporting-pulleys, substantially as set forth.

5. The combination, substantially as set forth, of the driving-wheels, the main frame, and the hinged teeth, and carrying-belts in front of the frame, with the rigid tongue or perch, the steering-wheel, the driver's stand, and the lifting-lever in rear of the main frame, for the purposes specified.

6. The combination of inclined gathering-teeth and endless belts or conveyers with a main frame, mounted on wheels and propelled from behind, substantially as set forth, to discharge the gathered crop, simply by backing the machine.

92,522.—Samuel A. Fite, Philadelphia, Pa., assignor to himself and John Mansur, same place.—*Necktie-Retainer.*—July 13, 1869.

Claim.—The necktie or collar holder, constructed as described, of the curved wire A B C, the curved spring-wires F F, and the curved spring G, both ends of G and the outer ends of F being connected

to the spring parts C of the wire A, by means of the hoods E, all arranged as described, for the purpose specified.

92,523.—William Gadd and John Moore, Manchester, Great Britain.—*Loom*—July 13, 1869.

Claim.—1.—The combination of the shell-cams, the bowls *e g*, and the radius-link *h*, with the main shaft *a*, and the lay, for the purpose of operating the latter, substantially as herein shown and described.

2. The combination of the ratchet-wheel *i*, pawl *l*, pulleys *j*, straps *k k*, springs *h h e e*, and cords *d d*, with the warp-beam *b*, substantially as described, for the purpose specified.

92,524.—William H. Goodale, Colton, N. Y.—*Gate.*—July 13, 1869.

Claim.—1. The combination of the bar F with the grooved under side of the top bar *b'*, of the gate B, and with the pulley E, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the bar H with the bar F, pulley E, and projecting end of the bar *b'*, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the weight I with the projecting end of the bar *b'*, with the pulley E, and with the bar F, substantially as herein shown and described, and for the purpose set forth.

4. The arrangement of the pulley D with the bar F, post C, and top bar *b'* of the gate, substantially as herein shown and described, and for the purpose set forth.

92,525.—George R. Groot, Cincinnati, Ohio.—*Carriage-Spring.*—July 13, 1869.

Claim.—The combination of the saddle-clips E, and half-elliptic spring F, with the side or parallel springs D and body or box C of a three-spring carriage, whether said saddle-clips E be placed above or below the upper parts or halves of the said side-springs D, and whether the ends of the said spring F be made with or without scrolls, substantially as herein shown and described, and for the purpose set forth.

92,526.—Homer Hamilton, Youngstown, Ohio.—*Blast-Heating Furnace.*—July 13, 1869.

Claim.—1. The air-heating apparatus, consisting of the divided base-pipe H, and of the upright pipes C and G, all arranged in such manner that the air will pass from one compartment of the base-pipe, through all the vertical pipes, into the other compartment of the base-pipe, substantially as herein shown and described.

2. Forming the rounded enlargement on the upper end of each pipe, G, to prevent friction of the air, as specified.

3. So constructing an air-heating apparatus that the air is, in a thin sheet, exposed to the heated surface of a pipe, as specified, the said air surrounding the pipe or tube in which it was conducted to the upper end of the heated pipe, as set forth.

92,527.—H. T. Hartman, Norwood, Va.—*Fire-Escape Ladder.*—July 13, 1869.

Claim.—1. The combination and arrangement of the frame H, supporting-braces L, extension parts B and C of the ladder and supporting-braces S, with each other, substantially as herein shown and described, and for the purpose set forth.

2. The combination and arrangement of the crank-shafts E and M, ropes F and P, pulleys G and R, and bail I, with the supporting-frame H, and with the lower section B of the ladder, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the life-car U, constructed as described, the rope V, and roller or pulley W, with the extension parts B and C, of the ladder, substantially as and for the purpose herein set forth.

92,528.—Richard C. Hemmings, New Haven, Conn.—*Velocipede.*—July 13, 1869.

Claim.—1. In combination with a single-wheel velocipede, the reach C, with its guide-pulleys *e e*, and traverse-wheel B, arranged substantially as and for the purposes herein shown and described.

2. The combination of the traction-wheel A with the traverse-wheel B, substantially as and for the purposes herein shown and described.

92,529.—Isaiah Henton, Shelbyville, Ill.—*Cultivator.*—July 13, 1869.

Claim.—The combination of the pivoted levers P, pivoted cross-bar R, and chains Q, with each other and with the pivoted bars I and plow-beams E, substantially as herein shown and described, and for the purpose set forth.

92,530.—M. C. Heptinstall, Enfield, N. C.—*Fire-Tong.*—July 13, 1869.

Claim.—The combination with tongs having the recess *b* in one prong, and the projection *c* on the other, of the plate *d*, when secured thereto by the pivot-bolt *f* and a screw, *e*, substantially as specified.

92,531.—Henry O. Hooper, Diamond Springs, Cal.—*Door-Clamp.*—July 13, 1869.

Claim.—The arrangement of the clamps C C, carrying the wheels F, and connected with the supporting bed-pieces B B, by means of the tongues and grooves, the right and left screw-rod D, the worm-wheels E, and the screws *c c*, formed on the central shafts F, all operating in the manner described, for the purpose specified.

92,532.—Jabez Jenkins, Philadelphia, Pa.—*Hatchet.*—July 13, 1869.

Claim.—The hatchet, when constructed as herein shown and described, as a new article of manufacture.

92,533.—William H. Joeckel, New York, N. Y.—*Black Board.*—July 13, 1869.

Claim.—An endless black-board, consisting of the prepared belt D, fitted around rollers, substantially as described.

92,534.—F. Jones, Burlington, Iowa.—*Combined Collar and Hames.*—July 13, 1869.

Claim.—The groove or recess *a*, formed on the under side and along the inner edges of the hames B B, one side of the collar A being secured therein, and the other attached to the flat under surface of said hames, as and for the purpose specified.

92,535.—J. E. Jones, Wiretown, N. J.—*Elastic Tackle-Block.*—July 13, 1869.

Claim.—The tackle-block, having its cheeks, above the journal B, slotted to receive the elastic cushions E, which are adapted to be compressed between the arms *a* of the strap D, and the upper end of the slot, all arranged as described, for the purpose set forth.

92,536.—J. R. McAlister, Heuvelton, N. Y.—*Carriage*—July 13, 1869.

Claim.—1. Suspending the front part of the box, body, or bed of a vehicle, by means of braces, and rings or straps attached to the upper part of the front spring, all substantially as and for the purpose shown and described.

2. The stay-rod *d*, in combination with the spring braces and rings, substantially as and for the purpose shown and described.

92,537.—Joseph Melick, New Germantown, N. J.—*Vapor-Burner.*—July 13, 1869.

Claim.—The upward or downward projecting cap *e*, formed on the vapor-burner, substantially as described, to close effectually over or into the wick-tube, as set forth.

92,538.—Edwin Norton, Brooklyn, N. Y., assignor to himself and O. W. Norton, same place.—*Spice-Can.*—July 13, 1869.

Claim.—The combination, with the body A and perforated removable cap B, of paper disks C, or disks of other similar substance, when arranged substantially as specified.

92,539.—Thomas O'Neill, New York, N. Y.—*Outhaul for Booms.*—July 13, 1869.

Claim.—Connecting the sliding-dog B of the out-

haul, on the outer end of the boom, by means of a rope or chain, F, with a sliding-dog, D, arranged on the inner part of the boom, at the under side of the same, so that the outhaul can be operated from deck, as specified.

92,540.—Moses A. Page, La Crosse, Wis.—*Washing-Machine.*—July 13, 1869.

Claim.—The combination of the tub A, with its revolving upright rollers B, arranged around the interior circumference, with the frame C carrying the pendent rubbers H, arranged to operate with relation to the rollers B, as herein shown and described.

92,541.—S. T. Peat, Florence, N. J.—*Auger-Handle.*—July 13, 1869.

Claim.—The metallic holder A, cast in one piece, with the horizontal hole *a*, for the passage of the auger-handle, the vertical passage *b*, for the reception of the auger-shank, and with the interior angular grooves *d e*, adapted to receive the trunnions *f* of the adjustable jaw C, all constructed, arranged, and operating as described, for the purpose specified.

92,542.—William F. Pough, Esopus, N. Y.—*Ice-Planer.*—July 13, 1869.

Claim.—1. The combination, with the frame A, of the cutters C, when arranged in sets of two or more, and otherwise, substantially as specified.

2. The arrangement of the cutters C, slides D, and adjusting-screws E, substantially as and for the purpose specified.

3. The cutters, connected to the sliding-blocks D, as described, and maintained in the said connection by the cross-bars B, uniting the runners, substantially as specified.

92,543.—George F. Reinhardt, Lincoln, Ill.—*Combined Drum and Oven.*—July 13, 1869.

Claim.—1. In combination with a heating-drum, the oven D, constructed with the apertures F and G, substantially as shown and described.

2. Passing the smoke and products of combustion through the oven, substantially as described.

3. The arrangement of the pipes F′, N, and N′, in combination with a combined oven and heating-drum, substantially as set forth.

92,544.—Louis Ringler, New York, N. Y.—*Ironing-Machine.*—July 13, 1869.

Claim.—1. An ironing-machine, consisting of the hollow cylinders B C, one revolving in a fixed position or bearings, and the other having a lateral motion at one end in the slotted frame, by means of a cord, *d*, lever E, and spring *c*, substantially as herein shown and described, to operate as set forth.

2. The seam-ironing attachment, consisting of the collar *e*, which has the projecting lug *f*, adjustable to a fixed position on the cylinder C, by means of the set-screw *g*, substantially as herein shown and described, to operate as set forth.

92,545.—C. C. Rowell and John Belknap, St. Johnsbury, Vt.—*Watch-Makers' Lathe.*—July 13, 1869.

Claim.—The combination of the nut *i* and jaw A, with a ball and socket joint, substantially as and for the purposes herein shown and described.

92,546.—Morris Saulson, Troy, N. Y.—*Coal-Scuttle.*—July 13, 1869.

Claim.—The combination of the removable cover H, with the body A of the scuttle, substantially in the manner herein shown and described, and for the purpose set forth.

92,547.—Joel E. Simpson, Malden Bridge, N. Y.—*Car-Coupling.*—July 13, 1869.

Claim.—1. The connecting-links F, provided with the enlarged pointed and slotted ends and the pivoted T-heads, and combined with the spring-jaws E, substantially as specified.

2. The right-angular spring-jaws E, arranged within the caps C, as described, to slide on the interior surfaces of the same, so that the drawing-force upon the links shall be mostly or wholly sustained by said caps, as herein shown and described.

92,548.—Felix Sims, Ridgeville, assignor to himself and James N. Templer, Portland, Ind.—*Feed-Cutter.*—July 13, 1869.

Claim.—The feed-cutter, constructed as described, of the feed-box B, when its bottom, *b′*, is inclined laterally from one side to the other, the pivoted concave knife C, attached to the handle D, and held in contact with the sharpening-plate F, and the mouth of the feed-box, by means of the spring E bearing against said handle, all arranged as described, for the purpose set forth.

92,549.—William Stanfield, Flora, Ill.—*Sash-Balance.*—July 13, 1869.

Claim.—In raising windows, substituting for the single-pulley wheel the shafts *e e′*, arranged as described, and furnished each with one pulley within the window-frame and one without the same, to which the sash-operating cords are attached, so as to allow the line of direction of the weight of the sash and the power applied thereto to be in a direct line, as herein shown and described, for the purpose specified.

92,550.—W. B. C. Stirling, Batavia, Ohio, assignor to himself and Dale O. Cowen, same place.—*Recording Desk or Table.*—July 13, 1869.

Claim.—The combination of the right and left screw G, and nuts E F, with the hinged adjustable tables C, and frame A of the table or desk, all constructed substantially as herein shown and described, and for the purpose set forth.

92,551.—Leland D. Vermilya, Dayton, Ohio, and William S. Reyburn and Edmond A. W. Hunter, Philadelphia, Pa.—*Lightning-Rod.*—July 13, 1869.

Claim.—The lightning-rod A, consisting of the core *a*, of angle iron, inclosed by the copper strip *b* applied thereto, and twisted with it at the same operation, so as to fit perfectly every portion of the surface of said core, and form a tight joint at the contiguous edges of the copper, as herein set forth, as a new article of manufacture.

92,552.—Charles G. Wilson, Brooklyn, N. Y.—*Cork-Extractor.*—July 13, 1869.

Claim.—An improved machine for extracting corks, formed by the combination of the series of spring-plates C D E, barbed bar H I, rack or racks *f′*, toothed lever J K, guides G, and support F, having a conical opening formed in it, with each other, substantially as herein shown and described, and for the purpose set forth.

92,553.—William Wilson, Jr., Raymond, Ill.—*Portable Field-Fence.*—July 13, 1869.

Claim.—1. An improved portable fence, formed by the combination of the panels A, supporting-braces G, coupling-boards B, whether rigid or hinged, pins C, and keys D and E, with each other, said parts being constructed and arranged substantially as herein shown and described, and for the purposes set forth.

2. The fence, when any desired panel is adapted to be converted into a gate, by means of the hinged coupling-bars B, latch-board I, catch A, pins C, and keys D and E, substantially in the manner herein shown and described.

92,554.—Henry Wolfkill, Mill Creek post-office, Pa.—*Velocipede.*—July 13, 1869.

Claim.—1. The large and small pulleys *e f*, *c d*, and *g h*, arranged as described, on the shafts H G and axle C, to receive the chains I J, and permit their adjustment, in the manner herein set forth, for the purpose specified.

2. The steering-levers E, pivoted to the front axle B, when notched, as shown, to engage with the guide-shafts *b*, arranged as herein set forth, for the purpose specified.

92,555.—Henry York, Smith's Landing, N. J.—*Steering-Apparatus.*—July 13, 1869.

Claim.—The arrangement, upon the tiller D, of the uprights C C, tiller-blocks *f f*, and drums B B, carrying the cog-wheels *d d*, adapted to engage with the pinion *b*, upon the shaft *a* of the steering-wheel, also

having its bearings in the uprights, whereby a traveling steering-gear is produced, as herein shown and described.

92,556.—Wilson Ager, Washington, D. C.—*Grain-Cleaner.*—July 13, 1869.

Claim.—1. The combination of the stones, the screen, and the grain-elevators F, or the equivalents of said devices, substantially as set forth.

2. The stones, the screen, and the grain-elevators, or their equivalents, in combination with a blast of air, substantially as set forth.

3. So arranging the machine that the weight of the grain kept within the screen will regulate the amount of scouring, or the extent to which the kernels are decorticated, substantially as set forth.

4. The adjustable slides, or their equivalents, for the purpose of discharging the grain at a greater or less distance from the shaft, substantially as specified.

5. The continuous self-feed and discharge, in connection with the cylindrical screen revolving on a horizontal shaft, substantially as set forth.

6. Passing the grain and the blast in opposite directions through the horizontal cylindrical screen, substantially as s et forth.

92,557.—William P. Alcorn, New Wilmington, Pa.—*Wagon-Brake.*—July 13, 1869.

Claim.—1. The lever F, in combination with the tooth-segment *f* and tooth-bar *d*, substantially in the manner and for the purpose described.

2. The plate *d'*, provided with tooth-projection *e*, in combination with lever F, cog-segment *f*, and tooth-bar *d'*, all arranged and operating substantially in the manner and for the purpose set forth.

3. A wagon-brake, consisting of the lever F, cog-segment *f*, tooth-bar *d'*, rods *b' b''*, lever *e*, cross-bars E, provided with stops *a a* and cross-rod *a'*, all combined, arranged, and operating substantially in the manner and for the purpose set forth.

92,558.—Edwin Allen, Norwich, Conn.—*Envelope-Gummer.*—July 13, 1869; antedated July 3, 1869.

Claim.—The arrangement of a soft and elastic or flexible packing around the outside of the spout to the gum-box or hopper, and so as to project below it, substantially as specified, and for the purpose herein set forth.

92,559.—S. W. Andrews and L. Godfrey, Greeneville, Tenn.—*Cockle-Separator.*—July 13, 1869.

Claim.—1. The arrangement of the incline I, hinged bale *e*, hopper G, and rollers C D, for the purpose of rendering the "feed" adjustable, substantially as described.

2. The arrangement and combination of the rollers C D, cog-rim *o*, screen F, and arm *f*, substantially as and for the purpose specified.

92,560.—Cornelius Aultman and Joseph Allonas, Mansfield, Ohio, assignors to C. Aultman and H. H. Taylor, same place.—*Horse-Power.*—July 13, 1869.

Claim.—1. The combination of the wedge-shaped plate *k*, the standard d^1, provided with a wedge-shaped face, k^1, and the bolt k^2, substantially as and for the purpose set forth.

2. The combination of an elastic or yielding connecting rod or shaft with the horse-power, for the purpose set forth.

3. The combination of the sheath M with the torsion rod or shaft M', for the purpose set forth.

4. The combination, with the universal joint of the driving-shaft, of the removable ribbed thimble L, which serves to connect the two parts of the joint with the pivots intersecting each other, and also to prevent straw and other substances becoming entangled with said joint, as described.

92,561.—William R. Axe, Rockton, Ill., assignor to Samuel J. Goodwin, Beloit, Wis.—*Paint-Mill.*—July 13, 1869.

Claim.—In a grinding-machine, having the hopper H, with corrugated base flange *h*, and cross-bar I, the described construction and arrangement of the concavo-convex lower disk G, having the grooved surface *g*, the shaft *e*, fixed to the cross-bar I, and rotating the hopper, the hollow shaft D, fixed to and rotating the disk G, the motive-apparatus $a\ a^1\ a^2$ B, the detachable step M, held at one end by the hook *m*, adjustable at the other by the screw *n*, and supporting, in an open socket, *r*, at or near its center, the shaft C, which is cut away to fit the socket, together with the supporting-frame A *b*, all combined and adapted to operate in connection with each other, substantially as and for the purposes set forth.

92,562.—Isaac R. Barbour, deceased, Hannibal, Mo.; William G. Barbour, administrator.—*Furnace-Grate.*—July 13, 1869.

Claim.—1. The combination of the cut-off grate C and main grate B, substantially as set forth.

2. The slotted bearings *g*, of the gudgeons of the main grate, substantially as and for the purposes set forth.

92,563.—Stephen V. Barns, Whitney's Point, N. Y., assignor to himself and Isaac G. Dundore, same place.—*Siding-Gauge.*—July 13, 1869.

Claim.—The combination of the graduated bar A with a stationary pointed leg, B, at one extremity, and the movable pointed leg C and set-screw D at the other extremity, and with the bail E between, all as herein shown and described.

92,564.—Frederick S. Barus, New York, N. Y.—*Low-Water Indicator.*—July 13, 1869.

Claim.—The combination and arrangement of the bucket *g*, vessel H, and weights E, whereby to operate the cock N, by means substantially as shown and described, and in the manner set forth.

92,565.—Benjamin F. Bee, Harwich, Mass., assignor to New York Tap and Die Company.—*Machine for Cutting Milling Tools.*—July 13, 1869; antedated July 10, 1869.

Claim.—1. The combination, in one machine, of the following instrumentalities, viz: the mandrel, to hold the blank, the pitch-wheel and index, the revolving cutting-arbor, the cutter-carriage, the profile-guide, and the directing-instrument, the whole constructed to operate substantially as before set forth.

2. The combination of the above-specified combination with adjusting-mechanism for varying the position of the mandrel relatively to the cutter-arbor, substantially as before set forth, the whole constructed to operate substantially as described.

3. The combination of the combination recited in the first claim, with adjusting-screws, to vary the position of the mandrel laterally to the cutter-carriage, substantially as before set forth, the whole being constructed to operate substantially as described.

4. The combination of the combination recited in the first claim, with mechanism for turning the blank-mandrel, substantially as before set forth, the whole constructed to operate substantially as described.

5. The combination of the combination recited in the first claim, with mechanism for causing the index to move laterally when it is moved longitudinally, substantially as before set forth, the whole constructed to operate substantially as described.

6. The combination of the said blank-mandrel, pitch-wheel, and index, revolving cutter-arbor, cutter-carriage, and directing-instrument, with a profile-guide of larger dimensions than the profile of the blank, the whole constructed to operate substantially as before set forth.

7. The combination of the said cutter-arbor, cutter-carriage, profile-guide, and directing-instrument, with mechanism to move the directing-instrument automatically over the said guide, the whole constructed to operate substantially as before set forth.

8. The combination of the directing-instrument and the mechanism for moving it automatically, by means of a flexible connection guided by pulleys, the whole constructed to operate substantially as before set forth.

92,566.—Charles H. Beeman and Edwin G. Beeman, North Fairfax, Vt.—*Churn.*—July 13, 1869.

Claim.—The arrangement of the churn C, with

partition D, lid F, bars E E, cross-bar G, button H, and staples *c* and *b*, all upon the standards B B, provided with the hooks *a a*, substantially as set forth.

92,567.—Alexis Belaieff, St. Petersburgh, Russia.—*Die for Forming Threads on Bolts.*—July 13, 1869.

Claim.—Forming the threading-dies *b c* of an oval shape in cross-section, substantially as shown and described, and for the purpose set forth.

92,568.—Edwin Bennett, Baltimore, Md., assignor to himself and William T. Gillender, Philadelphia, Pa.—*Machine for Cleaning Sand.*—July 13, 1869.

Claim.—1. The horizontally arranged washing-trough A, provided with a screen, C, and a washing-device, in combination with the horizontally arranged trough E, provided with a conveyer, F, and a screen-bottom chute, D, substantially as described.

2. The arrangement of the influx-spout *g*, and the efflux-spout *g'*, in combination with the horizontal trough E, a conveyer, F, and a screen-bottom chute, D, substantially as described.

3. The tube G, or its equivalent, applied to the conveyer F, arranged horizontally, and combined with a sand-washing machine, substantially as described.

4. The receiving-chamber *e*, in combination with a tube, G, or its equivalent, a trough, E, and a conveyer, F, substantially as described.

5. The inclined plane *e'*, over which the sand is discharged from the trough E, having its highest point above the axis of the conveyer E, substantially as described.

92,569.—S. L. Bignall, Chicago, Ill.—*Tube-Well.*—July 13, 1869.

Claim.—A tube-well, A, provided with a point, G, and wings C, said wings being provided with lips E, for loosening the earth, and with flanges D, for packing the walls of the hole, as set forth.

92,570.—Andrew C. Black, Kaukauna, Wis.—*Lamp-Crane.*—July 13, 1869.

Claim.—A lamp-crane, consisting of an arm or lever suspended from the ceiling of a room by a swivel-joint, so as to be capable of movement around an entire circle, and having a wheel on one end to facilitate its motion, and supporting the lamp at any desired point on the other end, substantially in the manner and for the purpose hereinbefore set forth.

92,571.—George W. Blake, New York, N. Y.—*Air-Trap for Steam and other Enginery.*—July 13, 1869.

Claim.—1. The combination of the three-leaved buckling-spring B, air-shaft A, valve U, and opening spring *e*, all constructed and arranged substantially as shown and described, for the purpose set forth.

2. The valve-box or plug D, resting by its flange *f* against the outer end of the nozzle E, and screwing at its inner end *g* into the hook of the nozzle, in combination with the cavity *m*, formed around the hollow portion of said plug, and openings *h*, made in the sides of the latter, substantially as shown and described.

92,572.—James M. Blanchard, Washington, D. C.—*Steam-Gauge for Heat and Pressure.*—July 13, 1869.

Claim.—A steam-gauge or pressure-indicator, combining in its construction the following elements, viz: A steam-chamber, B, arranged outside of but communicating with the steam-space of the generator; a close chamber, C, containing air or other gaseous substance, which does not liquify in cooling, placed within said chamber B, and a bent pipe, E F, of glass or of metal and glass, containing mercury or any suitable liquid to indicate the expansion of the air or gas; and a scale, to show the pressure, substantially as set forth.

92,573.—L. P. Bradley, New Haven, Conn.—*Tape-Measure.*—July 13, 1869.

Claim.—The arrangement of the spring-cylinder B, within a case, A, combined with the knob D, arranged through the bearing of the cylinder, so as to operate the bar *f*, the whole operating in the manner herein set forth.

92,574.—John Braun, Philadelphia, Pa.—*Method of Propelling Sleds.*—July 13, 1369.

Claim.—1. The vibratiug frame or chair C, hung to a sled, and having its seat above the axis on which it vibrates, in combination with pointed rods I I, operated by the movement of the seat, as specified.

2. The curved and pointed propelling-rods I and I', when hung loosely to the cranked portions *h*, of rock-spindles F and F', for the purpose described.

3. The combination, substantially as herein described, of the rocking-frame B, with the crank-spindles F and F', for the purpose specified.

4. The arms *m*, of the propelling-rods I', for the purpose set forth.

5. The arms K, hinged at their lower ends to the sled, and having handles at their upper ends, in combination with the pointed rods J, hung to the arms, all as set forth.

92,575.—Alexander G, Brawner, Frankfort, Ky.—*Levee.*—July 13, 1869.

Claim.—The described levee, consisting of an impenetrable partition set in a trench, such trench being filled and the partition embanked by suitable material when the posts of the central core extend above the embankments, and form the supports for a fence upon the same, all substantially as described

92,576.—Peter Buckley, Vienna, N. J., assignor to himself and Edwin Bulgin, same place.—*Chair.*—July 13, 1869.

Claim. The method of forming the loop, and constructing the seat and back of the chair with rattan or other material, substantially as herein shown and described, and for the purposes set forth.

92,577.—Edmund F. Burrows, Mystic River, Conn.—*Mast-Hoop.*—July 13, 1869.

Claim.—1. The arraugement of the saddle A', with reference to the gaff-jaws, and the rope C[1], for aiding in raising the hoops, substantially as set forth.

2. The arrangement of the eye-bolts, to which the upper ends of the suspending-ropes are attached, with reference to the pivot-bolt upon which the saddle turns, substantially as shown, and for the purpose set forth.

92,578.—George Burson, East Palestine, Ohio.—*Method of Retarding the Growth of Strawberry-Vines.*—July 13, 1869.

Claim. The herein-described treatment of strawberry plants, for the purpose set forth.

92,579.—Clark T. Bush, Middleburgh, N. Y.—*Iron-Fence.*—July 13, 1869.

Claim.—1. The combination and arraugement of post A, (provided with recess,) rails *r r*, and metal links L L, as shown and described.

2. The kerfed rails *r r*, band B, and key *k*, when said several parts are arranged as shown and specified.

3. The combination and arrangement of the herein-described posts A A, rails *r r*, pickets P P, and braces *b*, substantially as described.

92,580.—John S. Butler and Andrew J. Stucker, Silver City, Idaho T.—*Reciprocating-Bellows.*—July 13, 1869.

Claim.—1. The combination, with the chamber A, provided with the reservoir D, of the alternately-acting pumps or bellows E E, substantially as and for the purpose described.

2. The arrangement, with reference to each other, of the several parts of the improved blowing apparatus above described, sbstantially as set forth.

92,581.—Philander Byrns, Mindoro, Wis.—*Hand Garden-Cultivator.*—July 13, 1869.

Claim.—The combination of the barrow A, pivoted frame B, cultivators *c c c*, water-tank D, provided with sliding door *d*, lever *a*[1], pipes B' B', and sprinkler E, all combined, arranged, and operating substantially in the manner and for the purpose described.

92,582.—JOHN CARR, Emerald Post Office, Ohio.—*Fence.*—July 13, 1869.

Claim.—A portable fence, having braces A, cross-bar B, bottom-board C, rails D, and pivot-pins *a*, constructed and arranged substantially as specified.

92,583.—DANFORD CHAFFEE, Rome, Pa.—*Straw-Cutter.*—July 13, 1869

Claim.—1. The combination of the bar H, levers J J^1 J^2, and bar K, carrying the cutting-knife L, all constructed as described, and for the purposes set forth.

2. The combination and arrangement of the standards A A, box C, hinged part E of bottom, spring F, inclined roof G, inclined bar H, connecting-levers J J^1, and J^2, cutting-knife L, guide N, and with or without the stationary knife L, all constructed and operating substantially as and for the purposes herein set forth.

92,584.—JULES A. CHERON, New York, N. Y.—*Portable-Pump.*—July 13, 1869.

Claim.—The pump *h* and pipe *m*, within the air-vessel *l*, and fitted with the valves *i k n o*, as specified, in combination with the suction-pipe *f*, delivery-pipe *s*, and tank *d*, with the opening *e*, the apparatus being set on wheels, so as to be portable, as set forth.

92,585.—WILLIAM COGGESHALL, Springfield, Ohio, and JOHN W. STANLEY, Chicago, Ill.—*Pulverizing and Mixing-Cylinder.*—July 13, 1869.

Claim.—The cylinder D, provided with annular flanges G, stationary rods or bars H, flights *h*, rollers F, all arranged to operate substantially as described, and for the purposes specified.

92,586.—ALBERT A. DAVIS and BENJAMIN F. WALKER, Lowell, Mass., assignors to B. F. WALKER and M. R. FAVOR.—*Lubricating-Device for Spindles.*—July 13, 1869.

Claim.—A separate and independent oiling-device with each spindle of a speeder or other roving-frame, when constructed and arranged to operate as and for the purpose specified.

92,587.—STEPHEN S. DAVIS, Edgerton, Wis.—*Compound for Curing Piles.*—July 13, 1869; antedated June 30, 1869.

Claim.—The above-described compound, when made of the ingredients and substantially in the proportions herein set forth.

92,588.—HERVEY B. DENNY, Washington, D. C.—*Copy-Holder.*—July 13, 1869.

Claim.—1. The holder consisting of the frame C *c*, rollers A B, spring or springs D, and handle or handles *a b*, adapted to operate substantially as described, for the purpose specified.

2. The wire of bar E, or its equivalent, arranged substantially as described, for the purpose set forth.

3. The rod or arm F, connected to the holder in any desired manner, and to the base or fastening by a horizontal hinge, *g*, as represented and described, for the purpose stated.

4. The clamp H, consisting of a pair of hinged jaws, provided, on their opposing faces, at their lower end, with spurs *h'*, and pressed apart above their hinge by a spring *h''*, in combination with the base-plate G, as and for the purposes specified.

92,589.—COELLESTIN DIERINGER and MORRIS LINDAMANN, Cincinnati, Ohio.—*Automatic Fan.*—July 13, 1869.

Claim.—In combination with suitable mechanism for imparting motion to the fan, the balance-wheel P, adjustable winch or crank C, connecting-arm V, with adjustable nuts N and fan-frame G, having a governor or adjustable weight, E, and sliding weights F, for regulating the motion of the fan, when all the parts are arranged to operate substantially in the manner as herein described.

92,590.—JOHN DOOLEY, St. Paul, Minn.—*Combined Plow, Cultivator, and Marker.*—July 13, 1869.

Claim.—1. An adjustable plow, cultivator, and marker, having cultivators *s*, plowshare *n*, and marker B, constructed and arranged substantially as and for the purposes specified.

2. In combination with an adjustable plow and cultivator, nut and screw H, when working in the slotted standard, as described, and the perforated rods *v*, arranged and operating substantially as and for the purposes specified.

92,591.—JOHN B. DOUGHERTY, Rochester, N. Y.—*Shingle-Machine.*—July 13, 1869; antedated June 30, 1869.

Claim.—1. The swinging-frame C, with carriage-ways *r*, and having the head-block or carriage G sliding thereon, all constructed to operate in the manner and for the purpose substantially as set forth.

2. The combination of friction-rollers R and *i*, jaws J, and carriage G, with the rails or ways *r*, in the manner substantially as described.

92,592.—ROBERT DUTCH, Jersey City, N. J.—*Railway-Car Axle.*—July 13, 1869.

Claim.—The combination and arrangement of the divided axles A A, each with two flanges *c d*, in combination with the coupling-tubes F F, having heads *k k*, substantially as and for the purpose herein specified.

92,593.—JOHN EARLE and ALFRED B. STEEL, Philadelphia, Pa.—*Printing Revenue-Stamps, &c., in Two or More Colors.*—July 13, 1869.

Claim.—In combination with two or more engraved plates, made and fitted together as described, and from which printing is to be done, by a single impression, in two or more colors, the separately inking of said plates by means of "forms," to prevent their vertical sides or walls from being covered with the ink, or causing blurred impressions, substantially as set forth.

92,594.—WILLIAM B. ELTONHEAD, Philadelphia, Pa.—*Gold-Washing Machine.*—July 13, 1869.

Claim.—The combination of the revolving shaft B, having arms or agitators B^1, and scraper or rake B^2, with the vessel A, either singly or in series, having the auxiliary bottom A^1, and the door A^2, all constructed to operate in the manner and for the purpose substantially as described.

92,595.—JOHN FARREL, New York, N. Y.—*Door of Burglar-proof Safes.*—July 13, 1869.

Claim.—Packing the joints at the junction of the door with its frame, substantially as and for the purpose specified.

92,596.—ELIAS T. FORD, Stillwater, N. Y.—*Paper-Making Machine.*—July 13, 1869.

Claim.—1. The forming a vacuum inside of the perforated cylinder B, by means of the air-chamber W *g*, as described in the above specification.

2. The perforated cylinder B, with interior suction-box W, carrying the wire-cloth A without friction and wear, in the manufacture of paper, as described, and illustrated in the drawings.

3. The intermediate couch-roll D *c*, for the purpose specified.

4. The rubber packing *z z* and recesses *b z*, *b z*, the metallic plates I I, and plunger-packing G, with their metallic caps V V.

5. The combination of the perforated cylinder B with the inside section-box W *g*, plungers C C, metallic caps V V, with their interior packing G; also the side rubber packing *z z*, with the metallic caps I I, and the double couch-rolls D *c* D, as herein set forth and described, substantially as and for the purpose specified.

92,597.—J. G. FOSTER, Nashua, N. H.—*Counterpoise Gun-Carriage.*—July 13, 1869.

Claim.—1. The combination of the traverse-carriage A and the gun-carriage C, the two being connected by the parallel arms I, by which the gun is made to move in the arc of a circle, substantially as and for the purpose set forth.

2. The counterpoise-shaft D, arranged to support the chassis B, and passing through the center of motion of the traversing-carriage A, whereby the gun can be freely traversed in any direction, whether in or out of battery, substantially as described.

3. The combination of the chassis B, traverse-carriage A, and gun-carriage C, with the parallel arms

I, when arranged to operate substantially as herein described.

4. The combination of the chassis B, rotating shaft D, mounted in a sliding step, V, and the counterbalance or weights W, when constructed and arranged to operate substantially as described.

5. So arranging the counterbalance-weights that they shall come into operation, and be taken up, successively, substantially as and for the purpose herein described.

6. The application of the brake O, or its equivalent, to the counterpoise-shaft D, for the purpose of regulating the movement of the gun, as set forth.

92,598.—J. B. FRANTZ, Cleveland, Ohio.—*Telegraph Fire-Alarm.*—July 13, 1869.

Claim.—The herein-described circuit-breaker, consisting of the insulating plate A, insulated notched arc B, lever E, and point *c*, as constructed and arranged in combination with the mechanism H, and operated thereby, in the manner substantially as and for the purpose set forth.

92,599.—D. R. FRASER, Chicago, Ill., assignor to himself and P. W. GATES, same place.—*Balance Slide-Valve for Steam-Engines.*—July 13, 1869.

Claim.—1. The self-adjusting device D D^2 with its other parts, constructed and adapted for sustaining the valve E, in the manner substantially as described.

2. The construction of the valve so that it may be suspended upon rollers arranged upon external flanges D^2, in the manner substantially as described.

3. The combination and arrangement of the anti-friction rollers *g'*, jaws G, on valve E, shelves D^2, and disk D, substantially as described.

4. The combination, with the slide-valve E, of the counterbalancing-device D and anti-friction rollers *g'*, all constructed and arranged substantially as described.

92,600.—J. G. GASTON, Cincinnati, Ohio.—*Paper-Perforator.*—July 13, 1869.

Claim.—The metallic blades or plates A, having their teeth B constructed in form and shape substantially as herein shown and described, for the purpose of perforating sheets of postage-stamps and similar articles, as set forth.

92,601.—WILLIAM H. GIBBS, Cincinnati, Ohio.—*Bottle-Stopper.*—July 13, 1869.

Claim.—The combination and arrangement of the rubber A, or its equivalent, frame B C *c*, wire F, and holding-ring G H, substantially as described.

92,602.—DAVID GORE, Carlinville, Ill.—*Saw for Cutting Hedge for Plashing.*—July 13, 1869.

Claim.—The saw B, connected to the handle A, this being curved to the form indicated in the drawings, and having a grip, C, substantially in the manner set forth.

92,603.—MAHLON GREGG, Rochester, N. Y.—*Turbine Water-Wheel.*—July 13, 1869.

Claim.—1. The gate E, applied directly to the exit-ports of a water-wheel, in combination with an inlet-gate, for the purpose set forth.

2. The gate B, having its edge formed in the shape of two or more inclined planes, resting on suitable bearings, and having a screw-gear in the edge of one or more of them, in combination with the screw *a'*, as and for the purpose set forth.

3. The annular gate B, when placed between the direction-chutes and the water-wheel C, substantially as described.

4. The curved buckets of central-discharge wheels, toward the center downward, whereby the water, after entering horizontally, passes through and leaves them in a natural curve.

92,604.—GEORGE V. GRIFFITH, Fort Wayne, Ind.—*Machine for Bending Plow-Handles.*—July 13, 1869.

Claim.—The combination of the lever B with the pressure-roller *g*, by means of the radial arms *f*, pivoted in the lever B, and with the formers A, all constructed and arranged to operate substantially in the manner described.

92,605.—EDWARD HALE, Jr., St. Louis, Mo., assignor to himself and JOSHUA ALEXANDER, same place.—*Means of Attaching Artificial Teeth to their Base-Plates.*—July 13, 1869.

Claim.—A base for artificial teeth, provided with a channel, *a*, and perforations *b*, for the reception of the vulcanite, by which the teeth and plate are united, substantially as described.

92,606.—DAVID HAM, Iowa City, Iowa.—*Mode of Attaching Rubber Tires to Carriage-Wheels.*—July 13, 1869.

Claim.—The application of an elastic and movable band A to the rim F of a velocipede-wheel, B, when secured by lacers C and eyelets D, or their equivalents, so as to be easily attached to the wheel and quickly removed, when required, as herein described and for the purposes set forth.

92,607.—THOMAS U. HAMILTON and HENDRICK H. HAMILTON, Panama, N. Y.—*Device for Propelling Carriages.*—July 13, 1869.

Claim.—1. Springs C, cog-wheel D, provided with pawl and ratchet, beveled gear E, in combination with the pinion F and dog H, when all are used substantially in the manner and for the purpose set forth.

2. The cog-wheel I when used to connect the two springs, and to impart motion to the wheel K, substantially as set forth.

3. The wheels K and L, in combination with the shafting-axle M and slides P, when used substantially as described.

4. The lever N, whose arm or rod O is used to throw the wheels L in and out of gear, for the purpose of reversing the motion, substantially as described.

5. The slides P, when used to hold the wheels L in gear, substantially as specified.

6. The springs C, wheels D, E, F, K, and L, slides P, lever N, and rod O, and cog-wheel I, when arranged and combined so as to form a mechanism for propelling vehicles, substantially as set forth.

92,608.—EDMUND A. HARVEY, Wilmington, Del.—*Thill-Coupling.*—July 13, 1869.

Claim.—1. The slotted or oblong holes in each of the lugs or jaws of the ordinary clip, each hole terminating, at one or both ends, with a bevel or inclined plane, for the purpose described.

2. The bolt, with or without an inclined plane inside the head, in combination with a key or keys, with or without washers attached.

3. The clip and bolt, with keys, as described, in combination with a gum or metallic spring, as and for the purposes described.

92,609.—JAMES HATCH, San Francisco, Cal.—*Variety Molding-Machine.*—July 13, 1869.

Claim.—1. Constructing the guards of variety molding-machines with the socket *f* and bonnet *o*, substantially in the manner and for the purpose set forth.

2. The clamp herein set forth, provided with the shoe *l*, Fig. 4, when all the parts are constructed to operate substantially in the manner and for the purposes set forth.

3. The guides A and B, constructed and arranged relative to the cutter, substantially as set forth.

92,610.—ANDREW GEORGE HUTCHINSON, Stoneycroft, near Liverpool, Great Britain, assignor to THOMAS ROWLAND and HENRY ROWLAND.—*Burglar-Alarm.*—July 13, 1869.

Claim.—1. The combination of the pivoted lever D, catch *a*, and alarm, all substantially in the manner and for the purpose described.

2. The button *b'*, in combination with the catch *a*, lever D D', and the alarm, all substantially as herein specified.

3. A portable burglar's alarm, constructed substantially in the manner and for the purpose described.

92,611.—JOHN W. JARBOE, Green Point, N. Y.—*Composition Wagon-Body.*—July 13, 1869.

Claim.—A wagon or vehicle-body, having its sides, back, and dash-board made of paper, treated with water-proof material, substantially as specified.

92,612.—Barton H. Jenks, Bridesburgh, Pa.—*Shuttle-Box-Operating Lever for Looms.*—July 13, 1869.

Claim.—The box-lever D, or its equivalent, provided with the yielding extension D^1, acted upon by the counterbalancing weight B, applied upon the arms D^2 of said extension, substantially as and for the purposes described.

92,613.—Charles A. Judd, Milwaukee, Wis.—*Weather-Strip.*—July 13, 1869.

Claim.—The weather-strip for doors and windows, formed of the rubber strip B and metal strip A, when the same are arranged as described, and the united strip folded upon itself, substantially as and for the purpose set forth.

92,614.—Albert Kane and Nelson Kane, Newport, N. Y.—*Harrow.*—July 13, 1869.

Claim.—1. In combination with a harrow-frame, the runners, so hinged to it that when it is to be conveyed to or from the place where it is to be used, said runners can be lowered to the ground, and, at the same time, and by the same mechanism and operation, the harrow is raised; and when the harrow is to be used, said runners can be raised and the harrow lowered, by the same mechanism and operation, substantially as herein described and represented.

2. In combination with the harrow-frame and the runners, the hinges in the runners, and the guides on the frame, so that the front or curved parts of the runners shall be turned backward from the front of the harrow when they are raised, substantially as described.

3. In combination with the frame and runners, the crank-rods or axles, and the lever, for raising or lowering one upon the other, substantially as described.

4. In combination with the lever and crank-rods, for raising or lowering one part upon the other, the hook and catch, and their equivalents, for holding the runners up upon the frame, substantially as described.

5. The combination of drag-bar and rail with the mechanism by which they are made adjustable, substantially as described.

92,615.—John E. Kauffelt, Shrewsbury, Pa.—*Atmospheric Tanning-Apparatus.*—July 13, 1869.

Claim.—The described combination and arrangement of an apparatus, C, for forcing atmospheric air, the coiled, convoluted, or folded pipe *d*, the cylinder D, inclosing the pipe *d*, and connected with the exhaust-pipe of a steam-boiler; the pipes *e*, *e'*, *e''*, and the vats and leaches A B, substantially as and for the purposes set forth.

92,616.—John L. Kreider, Chestnut Level, Pa.—*Automatic Check-Row Corn-Planter.*—July 13, 1869.

Claim.—1. The pulley-wheel 5, or its equivalent, on the outer rim of a wheel or spoke, to adjust and regulate the same to the seeding or dropping apparatus, by means of a mark or furrow, for checker-planting in or between the furrows.

2. The arrangement of the box-hub 6 with its sleeve 10, with or without the notched ring 7, for extending the radius of the spokes 4 5, in combination with the pulley-wheels, constructed substantially in the manner and for the purpose specified.

3. The arrangement of the drum X, with its double row of pins *x*, in combination with the half-circular cam J, with its lever-arm *j* and connecting-rod K, to operate the single or double pair of slide-valves O Q, in the manner and for the purpose set forth.

4. The star-cam L, in combination with the click M, springs *m n*, and valve P, with its tongue and lip operated by the joint action of the combined valves O Q, at certain fixed intervals, in the manner and for the purpose described.

5. The lever-guide pole F, when connected to the end of an ordinary rigid pole E, substantially in the manner and for the purposes specified.

92,617.—Robert H. Lecky, Allegheny City, Pa.—*Exhaust Device for Locomotive Smoke-Stacks.*—July 13, 1869; antedated June 29, 1869.

Claim.—The combination of the sleeve A with the inverted cone B, said sleeve and cone being constructed and arranged with relation to each other substantially as herein described.

92,618.—John N. Leonard, Rockville, Conn.—*Spool Show-Case.*—July 13, 1869.

Claim.—The suspended trays F, in combination with revolving-beam A, cover J, and hollow shaft K, operated and arranged substantially as described.

92,619.—John N. Leonard, Rockville, Conn.—*Apparatus for Displaying Spools of Silk, Cotton, &c.*—July 13, 1869.

Claim.—The combination of hollow columns A A with spur-wheels C C, with the revolving base B, cap D, column G, and base J, all as described.

92,620.—Leon Lindquest, Pittsburgh, Pa.—*Chair.*—July 13, 1869.

Claim.—The combination of the chair and rocking-chair, when arranged with the adjustable backs A and B, writing-table M, springs L, on the legs E, and revolving-seat D, all portable, as herein described, and for the purposes set forth.

92,621.—Samuel T. Lount, Rathbone, West Va.—*Pump for Continuous Discharge.*—July 13, 1869.

Claim.—1. A pump having but one water-passage, in which are combined three or more pistons, F F^1 F^2, with valves, when so constructed that the intermediate one operates in a direction opposite to that of the two extreme ones, substantially in the manner and for the purposes specified.

2. The combination and arrangement of the shaft S, cam-wheel C, rods B B^1 B^2, cylinders A A^1 A^2, pistons F F^1 F^2, and valves *a* a^1 a^2, when constructed to operate substantially as and for the purposes herein set forth.

92,622.—William B. Mack, Detroit, Mich.—*Steam Water-Heater.*—July 13, 1869.

Claim.—The construction and arrangement of the tapering corrugated pipe E, embouchure-nozzle G, and check-valve C, with the steam-casing E, and steam and water casings D A, when the same are connected with steam and water supply-pipes P H, substantially in the manner set forth.

92,623.—Charles Maguire, Chicago, Ill.—*Cooking-Stove.*—July 13, 1869.

Claim.—The dome A, provided with hinged leaves B, an opening R, to allow the stove-pipe E to pass through, and with pipes G F, to conduct odor and smoke into a chimney, the pipe G being arranged to slide in the vertical part of pipe F, and the dome to raise and lower by means of the looped rod H', pulley H, and chain or rope L, as described.

92,624.—W. Mallerd, Bridgeport, Conn., assignor to himself and John Barr, same place.—*Mop.*—July 13, 1869.

Claim.—In combination with the scrubber E and drier L, with the holder A and C, formed in two parts, the scraper *d*, as shown and described.

92,625.—John F. Mallinckrodt, St. Louis, Mo.—*Brick-Machine.*—July 13, 1869.

Claim.—1. The pinion *b*, spur-wheel C, provided with cam-groove c^2 and tappet c^1, the rollers D, guide G, and hopper E, when provided with a sand-box, F, at each side, and all constructed, arranged, and operating substantially as and for the purposes set forth.

2. The flier H, with its head-board h^1 and ribs h^2, vibrating on the shaft *h*, and operating to throw the clay into the mold, substantially as set forth.

3. The cam-groove c^2, pin *k*, rod K, rack *k'*, when combined with the pinion h^3 and flier-shaft *h*, substantially as set forth.

92,626.—Jeremiah A. Marden, Boston, assignor to Charles E. and John H. Abbott, Malden, Mass.—*Prison-Bar.*—July 13, 1869.

Claim.—The iron prison-bar, constructed as described, and for the purpose set forth.

92,627.—James R. Maxwell and Ezra Cope, Cincinnati, Ohio.—*Steam-Lift and Force-Pump.*—July 13, 1869.

Claim.—1. The separate throttle or regulating valves *b b'*, arranged to control the flow and quantity of steam admitted through separate passages to each end of the steam-cylinder, substantially as described.

2. The cylindrical slide-valve C, with passages *x y*, to convey the steam to opposite ends of the steam-cylinder, substantially as described.

3. The valve C, with the openings I I, constructed and arranged with reference to the chamber C', and the induction and eduction ports thereof, substantially as described.

4. The arrangement of the piston-head and pump-ram, and the main steam-valve, moved direct by pressures of steam, admitted through separate passages into each end of the steam-cylinder, and controlled by separate throttle or regulating valves, substantially as specified.

5. The arrangement of the pumping-engine A B, the pump and ram O M, the base N, and pump F, with reference to each other, substantially as described.

92,628.—William K. Miller, Canton, Ohio.—*Pitman-Connection.*—July 13, 1869.

Claim.—In combination with the conical bearing and journal, and through screw-bolt, for drawing and holding them together, a scalloped or turreted nut, and a key for preventing said nut from turning on said screw-bolt, substantially as described.

92,629.—William K. Miller, Canton, Ohio.—*Grain-Separator.*—July 13, 1869.

Claim.—1. The arrangement and location of the secondary fan-blower, in relation to the grain-board *b* and the shoe C, so that the blast from said fan shall strike the grain, chaff, &c., as it falls from said grain-board into the shoe or upon the riddles, as and for the purpose described.

2. In combination with the laterally-vibrating shoe, the vertically-reciprocating shoe-rake *i*, as and for the purpose herein described and represented.

3. In combination with the vibrating-shoe and reciprocating shoe-rake, the revolving shoe-rake *j*, acting in connection therewith, as and for the purpose substantially as described.

92,630.—J. G. Millholland, Harrisburgh, Pa.—*Balanced Cylindrical Slide-Valve.*—July 13, 1869.

Claim.—1, The construction and arrangement of the longitudinally sliding cylindrical valve I, circumferential groove *t*, and the two bearing-surfaces *i i'*, as described.

2. The arrangement of the series of ports D D', E, on all sides of the valve chamber, substantially as specified.

92,631.—Levi Moore, Baraboo, Wis.—*Animal-Trap.*—July 13, 1869.

Claim.—1. In animal-traps, the tilting-floor B, post L, springs C, lever D, rock-shaft E, cord F, drum G, and pawl H, arranged and operating substantially as and for the purposes set forth.

2. The door I, latch J, in connection with the post L, or other tripping-device, attached to the tilting-floor, when arranged and operating substantially as and for the purposes set forth.

92,632.—Albert More, Moresville, N. Y.—*Hand Seed-Planter.*—July 13, 1869.

Claim.—1. The construction of the double-chambered seed-rod, or slide D, substantially as and for the purpose set forth.

2. The combination and arrangement of the seed-boxes A^1 and A^2, and the double-chambered slide D, substantially as and for the purpose set forth.

3. The combination of the plunger E, lips C^1 and C^2 of the drill C, and elastic band, or spring *c'*, substantially as and for the purpose set forth.

4. The arrangement of the partitions a^1 and a^2, with reference to the inclined bottoms of the seed-boxes and the double-chambered slide D, substantially as shown and described.

5. The arrangement of the scraper *a*, with reference to the double-chambered slide D, substantially as and for the purpose set forth.

6. The combination and arrangement of the seed-boxes A^1 and A^2, double-chambered slide D, and spout B, substantially as and for the purpose set forth.

92,633.—Edmund L. Morse, St. Louis, Mo.—*Apparatus for Ageing Spirits.*—July 13, 1869.

Claim.—1. The combination of air-pump B, pipe *b*, vessel C, pipe *e*, heater D, having the coil-pipe inclosed, with pipe *d*, and still A, and coil A', when used for purifying liquors, in the manner substantially as described.

2. The combination of the air-pump, B, pipe H, and tube G, for the purpose substantially as described.

92,634.—Walter Murray, Chicago, Ill.—*Boots and Shoes.*—July 13, 1869.

Claim.—1. The spring C, having its rear end attached rigidly to the heel, and having its front end secured to the sole by means of the spur *f* and the slot *d*, substantially as and for the purpose set forth.

2. The inner heel A, constructed and applied, as shown and described, for the purpose of giving greater curve to the sole, as set forth.

92,635.—William J. Nichols, Buffalo, N. Y.—*Carbureter for air and Gas.*—July 13, 1869.

Claim.—1. The arrangement, within the case A, of a series of incline plates, which are covered with cloth, or other suitable material, said plates open at one end, and provided with receptacles, *x*, at the opposite ends, substantially as shown and described.

2. Passing the liquid through the reservoir in a pipe, the lower end of which is open, and which extends down near the receptacles in the upper inclined plate, so as to form a liquid seal, and an automatic feed of the liquid over the plate, substantially as herein set forth.

92,636.—Walker Olds, Albany, Ill.—*Brick-Machine.*—July 13, 1869.

Claim.—1. The combination of the pug-mill shaft B, segmental head D, and adjustable segmental heads E E, for giving an oscillating rotation to the shaft E', substantially as and for the purpose set forth.

2. The reciprocating molds G, in combination with the oscilliating-segments F, and plungers N and N^2, substantially as described.

3. In combination with the press-heads K, and arms K^2, the lever L, rods L^1, and knife L^2, substantially as set forth.

4. In combination with the knife L^2, rods L^1, and lever L, the wooden pins L^3, substantially as and for the purpose set forth.

5. In combination with the shaft B and press-heads N, the cam N, beams O, arms O^1, springs O^2, and wrist-pins M^1, and bosses M^2, substantially as set forth.

6. In combination with the reciprocating-molds G, the slotted vertical posts A^2, and set-screw G^2, substantially as described.

7. The combination of the reciprocating-molds G, and press-heads N, and plungers N^2, arranged to operate substantially as set forth.

8. The reciprocating-molds G, when so arranged as to receive the clay in the center of the machine, and to discharge the bricks alternately on each side of the press, as set forth.

9. The combination of the press-heads N and Q, and parts Q^1, Q^2, Q^3, and Q^4, substantially as herein set forth.

10. In combination with the reciprocating-molds G, and plungers N^2, the boards R, reciprocating-points R^1, and oscillating-arms R^2, substantially as set forth.

92,637.—Frank Osborne, South Hanson, assignor to himself and W. Herbert Keene, East Bridgewater, Mass.—*Instrument for Cutting Pegs from Boots, &c.*—July 13, 1869.

Claim.—1. An instrument for cutting pegs from boots or shoes, provided with a removable knife, E, substantially as described.

2. The slotted-socket C, and block D, in combination with the knife E, and rod A, with its screw-

thread *a*, operating substantially as described, for the purpose set forth.

92,638.—NATHANIEL OTIS, Charles City, Iowa.—*Lightning-Rod.*—July 13, 1869.

Claim.—Constructing a lightning-rod of a single oblong strip of copper, with a point upon its end, by forming said pointed strip into a hollow tube, substantially as shown and described.

92,639.—WILLIAM S. PADDOCK, Albany, N. Y.—*Elastic Tip for Furniture, &c.*—July 13, 1869.

Claim.—The centrally-perforated elastic cover or cap A, in combination with a centrally-perforated metallic washer B, and an independent screw, *c*, substantially as herein shown and described.

92,640.—C. C. PARSONS, New York, N. Y.—*Process of Purifying Alcohol and other Spirits.*—July 13, 1869.

Claim.—1. The use of paraffine in the purification of alcohol or other distilled spirits, substantially as set forth.

2. The process of purifying alcohol or other distilled spirits, by treating the same in the manner and by the means herein described; that is to say, first forming at the requisite temperature an intimate mixture or solution of the paraffine and alcohol, then reducing the strength of the alcohol with water at the same temperature, and then reducing the temperature of the alcohol, and agitating it to separate and agglomerate the particles of the paraffine, and filtering it, substantially as set forth.

92,641.—R. F. PATTON, Quiney, Ohio.—*Corn and Cotton Cultivator.*—July 13, 1869.

Claim.—1. The draught-beam A, provided with the lugs or eyes *a a*, &c., both in front and in rear, in combination with the cross-bar B, substantially as and for the purpose shown.

2. The cultivator or harrow-bars C C and E E, when so constructed as to permit of their being pivoted at their center to the cross-bar B, and attached at either end to the eyes or lugs *a a*, &c., upon the draught-beam A, substantially as shown and for the purpose specified.

3. The handles F F, brace *f*, quadrant G, and set-screw *g*, all combined and arranged substantially as and for the purpose shown.

4. The within-described agricultural implement, consisting of the draught-beam A, provided with the eyes or lugs *a a*, &c., cross-bar B, harrow or cultivator bars C C and E E, handles F F, brace *f*, quadrant G, and set-screw *g*, all constructed and arranged substantially as and for the purpose shown and described.

92,642.—OLIVER L. PAYNE, Batavia, Ill.—*Clamp.*—July 13, 1869.

Claim.—The machine or press herein described and shown, and having upon its bed or frame the graduated and tabular scale, substantially as specified.

92,643.—J. E. PENCILLE, Lockport, N. Y.—*Bedstead.*—July 13, 1869.

Claim.—The removable nuts *g*, formed each with an internal longitudinal screw-thread, and made plain on the outside, when used in connection with the cross-pieces *k s*, and screws *d*, and so fitted as to adapt themselves to the position of the screws, as herein set forth.

92,644.—NOAH POMEROY, Hartford, Conn.—*Dead-Beat Verge for Clocks.*—July 13, 1869.

Claim.—A dead-beat verge, constructed substantially as described, and for the purpose specified.

92,645.—WILLIAM OSCAR REIM, Springfield, Ohio.—*Ship's Cargo-Indicator.*—July 13, 1869.

Claim.—A gauge so constructed as, when placed on a ship's side, to admit water to indicate the displacement effected by the cargo, and to retain its water and continue a reliable indicator when removed from the ship's side and carried to any convenient place for observation, substantially as described.

92,646.—WOODSON RICE, London, Ohio.—*Shock-Tier.*—July 13, 1869.

Claim.—The corn-compress described, consisting of the stakes A B, and strap C, when combined as described, and operated in the manner and for the purpose set forth.

92,647.—ISAAC P. RICHARDS, Whitinsville, Mass.—*Spindle-Bolster.*—July 13, 1869.

Claim.—The improvement in bolsters, which consists in constructing the wall of the oil-reservoir, B, next to the bearing, with its face *a a* inclined to the axis of the spindle, substantially as described, for the purpose specified.

92,648.—JOHN B. ROOT, New York, N. Y.—*Direct-Acting Engine Valve-Gear.*—July 13, 1869; antedated July 3, 1869.

Claim.—The arrangement and combination of the sliding-bar J, lever I, and beams H, with the valves G and G′, for operating said valves by the travel of the piston B, substantially as set forth.

92,649.—CLEMENT RUSSELL, Massillon, Ohio.—*Shaft-Coupling.*—July 13, 1869.

Claim.—A "tubling-rod" coupling, composed of the two bearing-plates and two journaled sockets or heads united together, as represented, so as to have a yielding motion, and the journals thereof covered, in the manner and for the purpose described.

92,650.—CLEMENT RUSSELL, THOMAS H. RUSSELL, and WILLIAM K. MILLER, Massillon, Ohio.—*Thrashing-Machine.*—July 13, 1869.

Claim.—1. The combination of the ratchet-lever and dog, with the shaft and cam-arms working in connection with the hinged concave, for raising, lowering, adjusting, and holding said concave, substantially as described.

2. The shield or cover *c*, for shielding the joint in the coupling-rod, as set forth.

3. The three hitching-points *b*, *a*, and *i*, in combination with the driving-gear, arranged and supported substantially as herein described and represented.

92,651.—GEORGE SANGER, Beloit, Wis.—*German Erasive Soap.*—July 13, 1869.

Claim.—The soap, consisting of the above-enumerated ingredients, in about the proportions set forth, and prepared substantially in the manner herein described and specified.

92,652.—GEORGE SANGER, Beloit, Wis.—*Chemical Olive-Soap.*—July 13, 1869.

Claim.—The soap, consisting of the above-enumerated ingredients, in about the proportions set forth, and prepared substantially in the manner herein described and specified.

92,653.—GEORGE SANGER, Beloit, Wis.—*Combined Scouring and Fulling Soap.*—July 13, 1869.

Claim.—The combined scouring and fulling soap, consisting of the above-enumerated ingredients, in about the proportions specified, and prepared substantially in the manner herein described and set forth.

92,654.—GEORGE SANGER, Beloit, Wis.—*Detersive Soap.*—July 13, 1869.

Claim.—The soap, consisting of the above-enumerated ingredients, in about the proportions set forth, and prepared substantially in the manner herein described and specified.

92,655.—GEORGE SANGER, Beloit, Wis.—*Fulling-Soap.*—July 13, 1869.

Claim.—The soap, consisting of the above-enumerated ingredients, in about the proportions set forth, and prepared substantially in the manner herein described and specified.

92,656.—GEORGE SANGER, Beloit, Wis.—*Process for Refining Tallow.*—July 13, 1869.

Claim.—The herein-described process of refining tallow, substantially as and for the purpose specified.

92,657.—Leonhard Schmidt and Fred. E. Held, Chicago, Ill.—*Stenciling-Apparatus.*—July 13, 1869.

Claim.—1. A stencil-apparatus, consisting of the frame A, made up of the oblong hinged frames *a*, *b*, and *c*, box *e*, and detachable handle *p*, when constructed and arranged substantially as described, for the purpose set forth.

2. The combination of the frame A with the box B, provided with the compartments *r*, when constructed and arranged substantially as and for the purpose set forth.

92,658.—Peter J. Schmitt, Carlinville, Ill., assignor to Siegel, Schmitt & Co., same place.—*Grain-Drill.*—July 13, 1869.

Claim.—1. Attaching the flukes to the drill-frame, in such wise that those flukes which move in the direction to which they are impelled by the soil-resistance shall cause the other flukes to move in the opposite direction, to produce a zigzag from a right line setting, or a right line from a zigzag setting, substantially as described.

2. Connecting the flukes to the bars H^1 and H^2, the alternate flukes being connected with the same bar, or any similar attachment, by which, in operating the flukes to a right or zigzag line, those flukes moving against the resistance of the soil may be raised out of ground, substantially as and for the purposes set forth.

3. The manner of locking the bar E and the flukes in their setting by the lever I, slide K, and spring-lever L, substantially as set forth.

4. The attachment of the pole C, or other draught-device, to operate the flukes, substantially as set forth.

5. The rock-bar E, formed of a wooden body, E′, metallic journals e^1, and arranged with staples e^2, substantially as set forth.

92,659.—James Selby, Peoria, Ill.—*Corn-Planter.*—July 13, 1869.

Claim.—1. The seed-tube E, with the partition *f*, and its rear inclined plate G, constructed and arranged substantially as and for the purpose described.

2. The lever or valve F, pivoted upon the outside of the seed-tube, and having its lower end bent to adapt it to the inclined face of the plate G, and arranged to operate substantially as described.

3. The combination of the tube E, valve F, and slide C, when constructed and arranged to operate substantially as described.

92,660.—William G. Semple, Cincinnati, Ohio.—*Cooking-Stove.*—July 13, 1869.

Claim.—1. The convertible four and six hole cook-stove, substantially as set forth.

2. The elevated and open-bottomed addition O P, to replace the rear top-plate B of an ordinary four-hole cook-stove, in the manner described.

3. The skeleton-plate O, boxed or elevated plate P, flue-strips R Q′, deflecting-plate I, and damper K, the whole being arranged and operating as set forth.

4. The arrangement of hinged damper-handle U, and rack V, for the objects herein designated.

5. In combination with the strips E E′, and R R′, or their equivalents, the deflector I and damper K, formed and arranged as and for the purposes set forth.

92,661.—John W. Shehan, San Francisco, Cal.—*Lamp.*—July 13, 1869.

Claim.—1. In combination with a double lamp-globe, arranged to contain a fluid, the supply-pipe C, substantially as herein described.

2. In combination with the double-globe B, the safety-tube E and cup F, substantially as and for the purposes set forth.

92,662.—John D. Shepard and Richard W. English, Buffalo, N.Y., assignors to John D. Shepard.—*Hinge.*—July 13, 1869.

Claim.—A hinge, having its leaves provided with the two projections or inclines *h*, and the two shoulders *g*, arranged to rock against the rear edges of the flanges *a*, substantially as described, whereby the hinge is rendered automatically double-locking, as set forth.

92,663.—Daniel Sherwood, Lowell, Mass., assignor to Woods, Sherwood, & Co.—*Toast-Rack.*—July 13, 1869.

Claim.—As a new and improved article of manufacture, a toast-rack, constructed of twisted wire, substantially in the manner described and specified.

92,664.—Charles J. Shuttleworth, Springville, N. Y.—*Horse-Power.*—July 13, 1869.

Claim.—The general arrangement of the bevel-gear wheels H H, wheel and pinion E E′, and pinion I, with the gear-frame, axis C, and said driving-gear, substantially as set forth.

92,665.—Elihu Smith, Albany, N. Y.—*Cooking-Stove.*—July 13, 1869.

Claim.—1. The arrangement of a movable boiler upon the top of the stove, constructed and used in the manner and for the purposes substantially as described.

2. The elevated boiler upon the extended and cross-flues, having the cross-flue *k*, as a part and support of the same, constructed substantially in the manner and for the purpose above set forth.

3. The superficial oven, constructed substantially as above described, in combination with the upright and cross flues, above represented and described.

4. The extension-top plate B, in combination with my movable boiler and railway, substantially as above described.

92,666.—Gilbert H. Smitson, Ripley, Ohio.—*Artificial Honey.*—July 13, 1869.

Claim.—The within-described process for manufacturing artificial honey, when composed of the ingredients and substantially in the proportions herein set forth.

92,667.—David Stewart, Kittanning, Pa.—*Manufacture of Iron.*—July 13, 1869.

Claim.—1. Partially purifying and partially converting, and intensely heating molten cast iron while it is subdivided into small particles or globules, prior to the mixing of the same with a metallic oxide, for the purpose of forming a "concrete bloom" or ingot by a single operation, as herein described.

2. The tubes or pipes A B, block C, blast-pipes *f*, chutes *e*, and receiving-vessel D, in combination with bloom or ingot molds, the whole operating substantially as herein described and for the purpose set forth.

92,668.—Daniel Swank, Newton, Iowa.—*Apparatus for Propelling Carriages.*—July 13, 1869.

Claim.—1. The crank-axle B, in combination with the plates C, when attached in the manner described, forked arms D, and rods E, when used in the manner specified.

2. The forked arms D, when their prongs are cut like screws upon their ends, and made to secure the plates C, as set forth, and have their end slotted, so as to receive the connecting rods E, in the manner and for the purposes described.

3. The double levers F, and double slotted-rod H, in combination with the handles H and braces or supports I, when used in the manner and for the purpose set forth.

4. The crank-axle B, forked arms D, plates C, rods E and H, levers F, and handles H, when all are arranged and operated in the manner and for the purpose specified.

92,669.—James M. Taylor, Lexington, Ky., assignor to Charles Parker, Meriden, Conn.—*Cartridge-Loader.*—July 13, 1869.

Claim.—The arrangement of the hollow rammer B in its support C upon the base A, the whole constructed and operating substantially as set forth.

92,670.—H. Uhry, New York, N. Y.—*Stair-Rod.*—July 13, 1869.

Claim.—1. The combination of the hollow button B, screw-eye T, and rod A, constructed and arranged as shown.

2. The hollow button C, having a glass top or

face, for the purpose of seeing the screw-eye when it is inserted therein.

92,671.—H. Uhry, New York, N. Y.—*Stair-Rod.*—July 13, 1869.

Claim.—The combination of the cap B, pin P, and screw-eye T, with the rod A, arranged and operating in the manner set forth and shown.

92,672.—H. Uhry, New York, N. Y.—*Stair-Rod.*—July 13, 1869.

Claim.—The combination and arrangement of the rod A, screwed eye T, and thimble B, operating as shown, and for the purpose set forth.

92,673.—Zdeuko Ritter Von Wessely, New York, N. Y., assignor to Providence Tool Company, Providence, R. I.—*Breech-Loader.*—July 13, 1869.

Claim.—1. The combination of the vibrating breech-block with the vibrating hand-lever and the vibrating hammer, the two latter working on a common pivot, the combination being and operating substantially as set forth.

2. The combination, substantially as set forth, with the hammer, of the eccentrically recessed vibrating breech-block, which recess causes the cocking of the hammer to be completed by the opening of the breech.

3. The combination of the breech-block, hammer, hand-lever, main-spring, and sere, the combination being and operating substantially as set forth.

4. The combination of the sliding striker, recoil-spring, recessed breech-block, vibrating hammer, main-spring, and hand-lever, the combination being and operating substantially as set forth.

5. The combination of the hand-lever, main-spring, and hammer, with the collar *g*, and solid pin *f*, as set forth.

6. The combination of the breech-block, striker, and recoil-spring, with the hammer, the main-spring, and its adjustable stop *h*, as set forth.

7. The combination of the trigger with the stop-wedge, operating as set forth, to prevent accidental explosions.

92,674.—Samuel D. Vose, Milwaukee, Wis.—*Stove-Cover.*—July 13, 1869.

Claim.—The method of constructing a cover for stoves by making the outer part B in the form of a ring, and the inner part O in the form of a separate circular plate, capable of expanding and contracting by itself, these parts being riveted or connected so as to form, when finished, a portable cover, as herein described.

92,675.—Jacob Waldron, North Creek, N. Y.—*Milk-Safe.*—July 13, 1869.

Claim.—The arrangement of the octagon frame B *b c*, with wire screen on sides and bottom, a series of shelving, *d d*, supporting-tubes *e e*, and rods *i i*, with the braces C C, and pivoted shelf A, all as shown and described.

92,676.—Nathan Washburn, Worcester, Mass.—*Mode of Repairing Plumbago Crucibles used in Melting Steel.*—July 13, 1869.

Claim.—The employment of a composition, as set forth, or its equivalent, in the form of a mortar, and plastering it on the injured crucible, and working it when thereon, so as to expel the air from the said repairing medium, and bring the crucible to its normal or required thickness, and impart to it a smooth outer surface, as specified.

92,677.—Adam Weaber, Philadelphia, Pa.—*Apparatus for Making Molds for Metal Castings.*—July 13, 1869.

Claim.—1. Moving at one and the same time both the sand and the pattern to the flask by the forward motion of the piston, when the said pattern is attached to the piston-head, so as to be withdrawn from the sand by the direct return-stroke of the said piston, all the said parts being constructed and arranged to operate substantially as and for the purposes specified and set forth.

2. In combination with the case E and platform A, arranged as described, the two racks *e' e'*, the pinion *e''*, the crank *e'''*, and the clutch-blocks e^4, the said parts being arranged and combined to operate together, substantially as and for the purpose described.

3. The spring-extension O of the treadle O', in combination with the clutch N, and hand-lever P, constructed and arranged substantially as described, for the purpose of enabling the attendant to interlock the said clutch N with the pinion M, as occasion may require, as described.

4. The construction and relative arrangement of the clutch N, spring O, treadle O', and piston-rod D', whereby the said piston-rod, as it reaches its lowest position, presses the said treadle downward, and thus causes the said spring to draw the said clutch out of connection with the rotating pinion M, substantially as described.

92,678.—William Weusthoff, Dayton, Ohio.—*Grain-Drill.*—July 13, 1869.

Claim.—The circular rack E and pinion F, in combination with the wheel-shaft A, substantially as and for the purpose shown.

92,679.—William Weusthoff, Dayton, Ohio.—*Grain-Drill.*—July 13, 1869.

Claim.—Suspending the funnel B or its equivalent upon or from the seed-wheel shaft A, substantially as and for the purpose herein shown and described.

92,680.—William Weusthoff and Charles Schmidt, Dayton, Ohio.—*Seed-Wheel for Grain-Drill.*—July 13, 1869.

Claim.—The within-described expansible seed-wheel, consisting of the sections *b b*, *b'*, and *b'*, and disks C and C, all constructed and arranged to operate substantially as and for the purpose shown.

92,681.—William Weusthoff and Charles Schmidt, Dayton, Ohio.—*Seed-Wheel for Seeding-Machines.*—July 13, 1869.

Claim.—1. The employment of the sheet-metal casing C upon the corrugated surface of the seed-wheel, substantially as and for the purpose shown.

2. The within-described seed-wheel, consisting of the grooved wheel and collar B and *b*, casing and drum C and D, cylindrical piece E, or its equivalent, and the casing F, all constructed and arranged to operate substantially as shown, and for the purpose described.

92,682.—William C. Whipple, New Haven, Conn.—*Drilling-Machine.*—July 13, 1869.

Claim.—1. In combination with the threaded mandrel C and its fixed pulley D, the open nut *a*, and its pulley E, of a larger diameter than the pulley D, so as to operate substantially as set forth.

2. In combination with the above, the sliding-rod L, with its trip P, so as to operate the latch H, substantially as set forth.

92,683.—Jesse Windward, East Cambridge, Mass.—*Manufacture of Glue from the Pith of Horns.* July 13, 1869.

Claim.—1. The within-described process of preparing the piths of horns, substantially as and for the purpose described.

2. As a new article of manufacture, glue prepared from the piths of horns, substantially as set forth.

92,684.—Michael Winter, New York, N. Y.—*Tobacco-Cutting Machine.*—July 13, 1869.

Claim.—The roller G, arranged in relation to the throat-piece F, endless chain B, and its driver E, substantially as and for the purpose or purposes herein set forth.

92,685.—Ludwig Wolff, Chicago, Ill.—*Apparatus for Rectifying and Flavoring Spirits.*—July 13, 1869.

Claim.—1. A device for flavoring spirits, consisting of a hollow column or cylinder, A, provided with a closely fitting cover, E, and one or more perforated baskets I, when constructed and arranged to be operated in connection with a still, substantially as herein described.

2. A device for flavoring and refining spirits, con-

sisting of a hollow column or cylinder, A, provided with a closely fitting cover, E, and one or more perforated baskets I, and one or more rectifying baskets J, when constructed and arranged to be operated in connection with a still, substantially as herein described.

92,686.—JOHN P. ZELLER, South Bend, Ind.—*Cultivator.*—July 13, 1869.

Claim.—1. The arrangement of the bar A, stationary buttons B B, and movable buttons C C, substantially as and for the purposes set forth.

2. The arrangement of the bar A, vertical pins *a a*, and beams D D, the latter having the plow-beams E E, plows F F, and braces G G, all substantially as shown and described.

3. The arrangement of the beams D D, brackets *b b*, bars H H, and chain I, all substantially as shown and described.

4. The arrangement of the brackets *e e*, bar J, handle K, arms L L, and chains *d d*, all substantially as shown and described.

5. The combination of the bar A, buttons B C, beams D D, plows F F, connecting-bars H, brackets *e e*, bar J, handle K, arms L L, and chains *d d*, all constructed and arranged as described, on an adjustable carriage, so that said carriage may be used with any other agricultural implement, if properly constructed, substantially as herein set forth.

92,687.—RODNEY M. WHIPPLE and AUGUSTIN I. AMBLER, Chicago, Ill.—*Steam Petroleum-Gas Generating-Apparatus.*—July 13, 1869.

Claim.—1. The oil-chamber A, piston C, and steam space B, so arranged as to use steam for the combined purpose of heat and pressure, in the manufacture of gas from petroleum, substantially as shown.

2. The generator, as constructed, with a steam space round the cylinder, when combined with perforated plates and porous substances, substantially as shown, and for the purpose set forth.

3. The follower C, when used with a cylinder constructed substantially as shown, and for the purpose set forth.

4. The receiver K, the follower and rod, with the weights and guides, when used in combination with a gas-generator, substantially as shown, and for the purpose set forth.

92,688.—MARCUS P. NORTON, Troy, N. Y.—*Hand-Stamp.*—July 13, 1869; antedated June 10, 1869.

Claim.—1. The combination of the central frame-piece A, constructed in one piece, and containing the recesses G and D and H, substantially as described, with the post-marking device F, and with the postage-stamp canceling-device G, in the manner and for the purposes substantially as herein described and set forth.

2. The arrangement and combination of the operating-handle B with the central part or piece A, containing the post-marking device F and the postage-stamp canceling-die G, by means of the connecting-piece E and ferrule *e*, substantially as herein described and set forth.

3. The arrangement of the post-marking device F and the postage-stamp or canceling die G upon the face or lower part of the central frame-piece A, constructed as described, in the manner and for the purpose substantially as described and set forth.

92,689.—DANIEL W. ATHERTON, Detroit, Mich.—*Velocipede.*—July 20, 1869.

Claim.—The combination of the axle A, wheels B and M, frame C, brake-wheel D, standards E, I, *l*, and *m*, countershaft F, pulleys G, H, and *f*, cranks J, belts *g* and *j*, boxes *a*, reach *b*, hollow standard *c*, brake *d*, seat *e*, crank-shaft *h*, saddle L, spring *k*, foot-cranks N, guiding-lever *n*, mud-shield O, step P, and bar-rest *p*, when constructed and arranged substantially as herein described, and so as to be operated by one or two persons at the same time, as herein set forth.

92,690.—CHARLES S. BAILEY, New York, N. Y.—*Centrifugal Hulling-Mill.*—July 20, 1869.

Claim.—1. The hulling-knives or cutters F′, constructed with shoulders upon their ends, substantially as herein shown and described, and secured in radial grooves in the faces of the disks A′ B′ by the ring-plates G′, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the shaft N and magnetic bars or arms O with the hopper I, substantially as herein shown and described, and for the purpose set forth.

3. The revolving carrier P Q, constructed as described, in combination with the hopper I, revolving tube or cylinder U, revolving shaft B, and disks A′ and B′, as and for the purpose set forth.

4. The combination of the scraper E′ and internally grooved rim C′, with the disks A′ B′, constructed as herein shown and described, and for the purpose set forth.

92,691.—PHINEHAS BALL and BENAIAH FITTS, Worcester, Mass.—*Fluid-Meter.*—July 20, 1869.

Claim.—1. The rotating valve H, with its charge and discharge ports and bevel-gear, substantially as described.

2. The valve-seat, with its ports *w w*, *v v*, and passages x^1 x^2 x^3 x^4, in combination with the valve H, and operating substantially as set forth and described.

3. The cap *m*, secured by soft metal and other packing, and by cap *n* and set-screw *t*, all combined and arranged and operating as set forth.

4. The disks G G, having projecting pins, in combination with the slotted connecting-rods F *f*, the slots *o o o o* being so formed as to give to the piston a varying velocity, in proportion to the opening through the ports, substantially as described.

5. In combination with the cylinders and their pistons, piston-rods, and disks, substantially as shown, the rotary shaft, so constructed as to receive its motion from the piston-rods, communicating it to the valve, substantially as shown and described.

92,692.—HENRY C. BARTLESON, Toledo, Ohio.—*Hemmer for Sewing-Machines.*—July 20, 1869.

Claim.—1. The frame A, provided with the orifice *a*, lips *b b*, toe *e*, graduated bar *d*, elastic spring-guide *l*, and the stationary convolute *k*, attached to the said graduated bar *d*, when arranged and operating substantially as and for the purposes herein specified.

2. The combination of the foregoing named parts, consisting of the frame A, with its attachments sliding within and upon the frame B and its attachments, when arranged and operating substantially in the manner described, set forth, and shown.

92,693.—SAMUEL K. BASSETT, Galesburgh, Ill.—*Mechanism for Starting Sewing-Machines.*—July 20, 1869.

Claim.—The combination and arrangement of slide H, piece F, lever E, arm D, springs R and L, and plate A, substantially as described, and for the purpose set forth.

92,694.—C. J. BILLINGHURST, McArthur, Ohio.—*Mounting Pictures.*—July 20, 1869.

Claim.—1. The block C and the rabbeted frame D, in combination with the adjustable hooks *f*, substantially as and for the purposes herein shown and described.

2. Imparting to the hook *f* a vertical and a lateral motion simultaneously, substantially as and for the purposes set forth.

3. The wires *g*, block *h*, thumb-piece *i*, and the vertical piece *j*, in combination with a machine for mounting photograph pictures, arranged substantially as described.

92,695.—EBENEZER BLACKMAN, Norwalk, Conn.—*Lamp-Burner.*—July 20, 1869.

Claim.—The sliding-plate E, provided with a thin piece of leather, and the spring-lever G, when arranged to operate as herein described, and for the purpose set forth.

92,696.—GEORGE N. BOWMAN, Pottsville, Pa.—*Hydrant.*—July 20, 1860.

Claim.—1. A hydrant, consisting of a casing, B C; a stock, D D′, constructed in separable sections, and provided with a screw-thread, for connection

with the supply pipe or main; a valve-chamber, G, at the point of connection of its sections; a screw-cap, E, a discharge-nozzle, F, and a waste-aperture, *d*, a buoyant elastic main valve, H, a waste-slide, M, and a rod, I, for opening the main valve and operating the waste-slide; all constructed and arranged substantially as herein described, for the purposes set forth.

2. In combination with the buoyant valve H, the rod I, constructed with the disk I and stop *i*, the button J, spring K, and catch *j l*, all constructed and arranged to operate substantially as and for the purpose described.

92,697.—Henry C. Briggs, Fishersville, N. H., assignor to D. Arthur Brown & Co., same place.—*Wind-Wheel.*—July 20, 1869.

Claim.—1. The wings, connected with the governor, through the medium of the sliding-shaft F, arranged within the shaft A, and connected to the vanes by the adjustable rods E, substantially as and for the purpose specified.

2. The combination with the shaft F and vanes of the adjustable rods E, substantially as specified.

3. The arrangement of the vanes C, arms D, flanged head B, and hoop I, substantially as specified.

92,698.—T. E. C. Brinly, Louisville, Ky.—*Plow.*—July 20, 1869.

Claim.—1. The construction of the share or point E, with its groove or recess *e*, substantially as and for the purpose specified.

2. The helve or standard C, and the mold-boards D, when so arranged as to be capable of being used as a furrow-turning plow, or as a subsoil-plow, substantially as shown, and for the purpose set forth.

3. The construction of the mold-board and share, shown in Figs. 5, 6, and 8, they having the prolongations thereon, as shown, and the thickened portions extending along the under and upper surface thereof, substantially as and for the purpose set forth.

92,699.—Austin Burt, Detroit, Mich.—*Composition Core or Form for Making Castings.*—July 20, 1869.

Claim.—The employment of lime, in any of its known forms, as one of the ingredients from which to make cores or forms, for the purposes herein described.

92,700.—Thomas B. Carroll, Indianapolis, Ind.—*Fruit and Clothes Drier.*—July 20, 1869.

Claim.—1. The cones K K and L L, when constructed with the partitions M and the cover Y Z, and otherwise made and used substantially as herein set forth.

2. The revolving dampers *a w w b*, when constructed and used substantially as herein set forth.

3. The combination of the said cones K K and L L, and the cover Y Z, and the revolving dampers *a w w b*, in one device for the purpose, in the way substantially as herein set forth.

92,701.—Ezra Caswell, Lyons, N. Y., assignor to himself and Philip Ganse, Jr., same place.—*Tub.*—July 20, 1869.

Claim.—1. In combination with the tub A, rabbeted on its upper edge, the cover B, provided with the flange *b'*, the rod D, the eye-bolt E, and its nut, the supports C, eye-bolt F, nut I, and the bar H, all arranged substantially as herein shown and described, for the purpose specified.

2. The toggle-bars L N, in combination with the frame J K M and cover B of the tub, substantially as and for the purpose set forth.

92,702.—W. V. Cecil, Monmouth, Ill.—*Brick-Kiln.*—July 20, 1869.

Claim.—The ear I, when formed of the two plates C and D, with cold air space between them, in combination with openings *a*, ledges *b*, levers V, and rods X, all constructed and arranged as and for the purpose herein set forth.

92,703.—Hannah F. Chase, Boston, Mass.—*Vegetable-Masher.*—July 20, 1869.

Claim.—1. The arrangement of the ribs and the supporting-disk with the vessel A or the foraminous bottom thereof, in manner as specified.

2. The bottom supporter, made as described, viz, of the disk and peripheral and parallel ribs, disposed as specified, such being for use with the vessel A, having strainer foraminous bottom, and for use with an expresser and a masher, or either, as set forth.

92,704.—Edward S. Cheney and George P. Perry, Providence, R. I.—*Enameled Hat.*—July 20, 1869.

Claim.—The improvement in the manufacture of hats, which consists in the application of a coating of enameling-compound, substantially as described, upon a suitable foundation, and developing such composition by heat, as herein set forth, for the purposes specified.

92,705.—William Clissold, Dudbridge Works near Stroud, England.—*Machine for Feeding Wool, &c., to Carding and other Machines.*—July 20, 1869.

Claim.—1. The bars B, forming the bottom of the box, when moved both longitudinally and vertically, substantially in the manner and for the purpose herein shown and described.

2. In combination with the above, the transversely sliding toothed plate N, as and for the purpose set forth.

3. The rotating comb H, in combination with a fixed grid, I, and roller K, and with the moving bars B, all made and operating substantially as and for the purpose above set forth.

4. The arrangement of the stripper L and curved shield I*, with reference to the rotating comb H, and grid I, as herein described, for the purpose specified.

5. The combination of the box A, bars B, toothed drum H, grid I, stripper L, roller K, and plates M N G, all arranged and operating substantially as herein shown and described.

92,706.—Ezra Cole, Fairfield, Mich.—*Attachment for the Ends of Swingle-Trees.*—July 20, 1869.

Claim.—The eock-eye or hook, when constructed in the manner and for the purposes set forth.

92,707.—Robert Conarroe, Camden, Ohio, assignor to himself, Howard Young, William Kenworthy, Jesse Jacoby, and David J. T. Smyers, same place.—*Ditching-Machine.*—July 20, 1869.

Claim.—1. The arrangement of the caster-wheel, elevators, driving-wheels, and framing, substantially as and for the purpose specified.

2. The arrangement of the journals of the chain-wheel *b*, and suspending-frame in elongated bearings, substantially as specified.

3. The arrangement of the suspending-arms *h*, *k*, trough, and shaft, *i*, all substantially as and for the purpose specified.

4. The arrangement of the draught-rod *l* with the tongue, substantially as specified.

92,708.—Robert R. Croasdale and Peter Rink, Reaville, N. J.—*Adjustable Step-Ladder.*—July 20, 1869.

Claim.—The adjustable step-ladder, which consists of the steps A A, of which each has two pairs of tenons, of the double side-bars B C, slotted brace-frame D, up and down adjustable cross-bar *b*, and connecting-rod E, all combined and arranged substantially as herein shown and described.

92,709.—Elon C. Denio and George K. Babcock, New Hartford, N. Y.—*Construction of Spading and other Forks.*—July 20, 1869.

Claim.—The raised projection upon the back or resisting part of a fork or hook, substantially as and for the purpose specified.

92,710.—John Doyle, Hoboken, N. J.—*Curtain-Fixture.*—July 20, 1869.

Claim.—The shell or case A, provided with the two parallel flanches *b b*, having the space or opening *c* between them, and provided with inclined outer edges, in combination with the slide B, fitted within the shell or case, the cap *h*, and the screw *g*, all arranged to operate substantially in the manner as and for the purpose set forth.

92,711.—C. K. EDWARDS, New York, N. Y.—*Range.*—July 20, 1869.

Claim.—1. The arrangement of the fire-pot A, for adjustment relatively to the front and rear of the range, and the adjustable dampers B C, all substantially as specified.

2. The arrangement, with the cooking-range herein described, of the radiators G H and heating-chambers I K, all substantially as specified.

92,712.—HENRY FARMER, Pontiac, Mich.—*Potato-Digger.*—July 20, 1869.

Claim.—1. The combination of the rake-head T, pivoted in the endless chains U, with the guides V, and hinged guide-rods W, working on suitable drums, as and for the purpose set forth.

2. In combination with the above, the shaft P, rotated by the traction-wheel, through its ratchet *c*, engaging with the pawl *h* of the spur-wheel O, rotating the pinion *p* of said shaft, through the intermediate gear *p'*, hung in the forked lever *q*, the shaft R rotating in the vibrating-frame S, and carrying the drums *r*, rotated by the endless chains U, from the drums Q, on the shaft P, when constructed, arranged, and operating substantially as and for the purposes specified.

3. The arrangement of the rock-shaft F, the arms *f*, the axles G, the gauge-wheels H, the lever I, and the quadrant *i*, as and for the purpose above described.

4. The combination and arrangement of the tongue J, the chain *k*, the hounds K, the drum L, the shaft M, the pawl-lever N, the ratchet *l*, and the spring-pawl *m*, as and for the purpose above mentioned.

5. In combination with the foregoing parts, the frame A, axle B, traction-wheels C, seat-frame D, and grated shovel E, when constructed, arranged, and operating substantially as herein described, and for the purposes specified.

92,713.—J. R. FINLEY, Delphi, Ind.—*Harvester-Rake.*—July 20, 1869.

Claim.—1. The rotating band A, with the upright studs F, in combination with the bell-crank H, substantially as described.

2. The bell-crank or elbow-lever H, in combination with the gaveling-attachment L, with its slotted crank K and axis-bar M.

92,714.—WILLIAM J. FUNK, Portland, Oreg., assignor to himself and HARRISON B. OATMAN, same place.—*Combined Harrow and Cultivator.*—July 20, 1869.

Claim.—1. The cultivator and harrow frame B, as constructed and arranged, in combination with the main frame A.

2. The toggles K, in combination with crank R, levers E and F, and rods J J.

3. In combination with the cultivator and harrow frame, cultivator and harrow teeth, the latches P, for the purposes specified.

4. In combination, the frame B, frame A, toggles K, crank-rods R, levers E and F, rods J J, lever H, rod J', and latches P, all as constructed and arranged.

92,715.—PETER GARDNER, Gloucestershire, England, assignor to himself, D. E. ATHERTON, and E. A. VAN CISE, Mount Pleasant, Iowa.—*Clothes Pin or Clamp.*—July 20, 1869.

Claim.—The conical tubular slotted clothes fastener or pin, constructed, applied, and operated as herein described.

92,716.—JAMES GARGETT, Alma, Mich.—*Method of Hanging Reciprocating-Saws.*—July 20, 1869.

Claim.—The adjustable radius-bars H, herein described, in combination with the rock-shaft I and slotted pitman E, when all these parts are arranged, constructed, and operating as and for the purpose above set forth.

92,717.—GEORGE D. GILLETT, Meridian, N. Y.—*Harness Saddle-Tree.*—July 20, 1869.

Claim.—The herein described saddle-tree for harness, composed of the part A, cast with lugs *a a*, *a' a'*, the crupper-loop D, and check-rein hook C, having dovetailed shanks, and the part B, all secured together by means of screws *e e*, and constructed and arranged substantially as shown and described.

92,718.—GEORGE W. GLASS, New Brighton, Pa.—*Ejector.*—July 20, 1869.

Claim.—1. The combination of the pipes *b* and *c*, so arranged as to be used for the purpose of foreing, blowing, or ejecting liquids from wells, ships, or other place, as herein described and set forth.

2. The ejector, composed of the pipes *b* and *c*, the lower end of pipe *b* entering within the coniformed mouth of the pipe *c*, substantially as herein described.

3. The construction and combination for immersing in oil or water, in wells or other place, the lower end of pipes arranged so that, by the use of steam or air forced down one pipe, liquids will be forced up the other, substantially upon the principle as herein described and set forth.

92,719.—E. A. GOODES, Philadelphia, assignor to himself, S. F. MATHEWS, and W. MATHEWS, Mechanicsburgh, Pa.—*Harrow.*—July 20, 1869.

Claim.—1. The combination of the bars A B and truck, when arranged substantially as specified.

2. The combination, with the bars A B, of the hooks H and clamping-bar G, when arranged substantially as specified.

92,720.—LEWIS GRANGER and LUKE PHILLIPS, Memphis, Mich.—*Eave-Trough Former.*—July 20, 1869.

Claim.—The adjustable plate or bar F, in combination with the dies B and D and beader C, substantially as herein shown and described, and for the purpose set forth.

92,721.—THOMAS HAGAN, Rochester, Pa.—*Lock-Nut.*—July 20, 1869.

Claim.—A screw-nut, provided with recesses or chambers for keys, said recesses or chambers and keys being so arranged with relation to the openings of the nut as to secure it on the bolt through the medium of keys, as herein described.

92,722.—CHARLES HEPTONSTALL, Providence, R. I., assignor to ORVILLE PECKHAM, trustee; and ORVILLE PECKHAM, trustee, assignor to C. HEPTONSTALL, PARDON M. STONE, and JONATHAN BOYD, same place.—*Loom for Weaving Irregular Fabrics.*—July 20, 1869.

Claim.—1. The combination, with "take-up" rollers I and J, and vibrating pawl-levers N, of the intermediate worm-gears *a*, arranged and operating substantially as described.

2. The combination, substantially as specified, of the warp-weighted "let-off" apparatus with the "take-up" apparatus, constructed and operating as described, whereby the two mechanisms are made to work in more complete harmony with each other in the organized loom.

92,723.—L. B. HOIT, Cedar Falls, Iowa, and MATTHEW LAFLIN, Chicago, Ill., said HOIT having assigned his right to said LAFLIN.—*Harvester.*—July 20, 1869.

Claim.—1. The oscillating shoe C, constructed with partitions H H and recess K, and provided with the curved rods D and braces E E, substantially in the manner and for the purpose set forth.

2. The connecting lock-joint formed by the cylindrical pin I, and hooked end of finger-bar J, constructed to operate in the manner and for the purpose set forth.

3. Giving a reciprocating motion to the sickle while in different positions, by means of the combination of the cam or eccentric wheel A, pivoted lever F, rod L, jointed to lever F, in the manner described, and connected to the sickle-bar by the head N, substantially in the manner described.

92,724.—WILLIAM J. HORTON, Newburgh, assignor to himself and JOHN S. NAPIER, Mount Hope, Ala.—*Cotton-Gin Rib.*—July 20, 1869.

Claim.—The cotton-gin rib, provided with a plate, B, which has a recess, *b*, on each side, substantially as and for the purpose herein shown and described.

92,725.—Gardner Howland, Brunswick, and Elias T. Ford, Stillwater, N. Y.—*Faucet-Plug.*—July 20, 1869.

Claim.—As a new article of manufacture, a plug for a faucet, consisting of a loop, C, of wrought metal, and part B, of cast metal, both constructed as described, when the part B is cast upon said loop, as set forth.

92,726.—Daniel Hussey, Lowell, Mass.—*Method of Hanging Shafting.*—July 20, 1869.

Claim.—1. The rail *g*, in combination with the shaft *p*, when arranged substantially as described, and for the purposes specified.

2. In combination with the rail *g*, the stands *c c*, arranged and operating as described and specified.

3. The arrangement and construction of the sliding hanger *i*, when used in connection with the rail *g*, as described and specified.

4. In combination with the sliding hanger *g*, the movable foot *k*, when operating as described and specified.

92,727.—George W. C. Jarvis and Charles Graves, Lapeer, Mich.—*Portable Picket-Fence.*—July 20, 1869.

Claim.—The arrangement of the rails A, inclining toward each other in each panel, the pickets B, nailed to said rails, the connecting-pins C, and the supporting-stakes D, constructed and operating as above described.

92,728.—John B. Johnson, Rock Island, Ill.—*Corn-Planter.*—July 20, 1869.

Claim.—1. The slide *g*, having the plates *h*, *t*, and *u* attached thereto, and arranged to operate in connection with the plate *j*, substantially as herein described.

2. The combination of the treadles *e*, rock-shaft *d*, with the arms *d'*, and pendants or levers *f* attached, and the seed-slides *g*, all arranged to operate as herein set forth.

3. The combination of the removable plate *j*, held in position by the lugs *p*, and the detachable hoppers *n*, secured by the hooks *o*, whereby all the parts may be readily detached or replaced, as set forth.

92,729.—August Wilhelm Kientoff, Oakland, Cal.—*Watch-Wheel Holder.*—July 20, 1869.

Claim.—The improved tool herein described, its constituent parts being constructed and fitted together as and for the purpose specified.

92,730.—Marcus D. Kirk and William H. Belknap, Sturgis, Mich.—*Fishing-Jack.*—July 20, 1869.

Claim.—The burner, consisting of the plates I I', cylinder V, spring P, and nut N, in combination with the pipes D B F C, stop-cock G, and reservoir A, as described.

92,731.—William Koch and George Koch, Cass, Pa.—*Shelving for Stores.*—July 20, 1869.

Claim.—Constructing the shelving in section C, provided with friction-wheels D and E, either or both, substantially as herein shown and described, and for the purpose set forth.

92,732.—Joseph B. Koon, Aurelius, assignor to Alden & Co., assignors to George J. Letchworth, Auburn, N. Y.—*Horse-Rake.*—July 20, 1869.

Claim.—The relative arrangement of the guard-board C to the teeth and axle of the rake, and the method for fastening the same, as represented and described.

92,733.—George B. Lothrop, Boston, Mass.—*Door-Knob.*—July 20, 1869.

Claim.—The improved door-handle, as made with its head B and shank A, arranged as set forth, and with the recess *c* in the head, and the passage *b* in the shank for the reception of the metal *e*, when cast into them, as and for the purpose set forth.

92,734.—David Lown, Poughkeepsie, N. Y.—*Butter-Tub.*—July 20, 1869.

Claim.—The fastening for the lid D, composed of the two parts B C, one of said parts, B, having two fixed lips, *b c*, the former of which, *b*, projects outward, and the other, *c*, inward over the lid, the part C also having a fixed outwardly projecting lip, *b'*, and a latch *f*, with a pivoted button, *h'*, underneath; the above-named parts being arranged and combined with a butter-tub and its lid, substantially as herein shown and described.

92,735.—Stephen Mapes, Buffalo, N. Y.—*Thrashing-Machine.*—July 20, 1869.

Claim.—1. The segments H H', and racks F F', or their equivalents, when arranged and connected together so as to be simultaneously actuated by a single lever, for adjusting the concave, substantially as set forth.

2. In combination with the two pairs of segments H H', and shafts I I', the arm J, lever K, and connecting-rod L, operating substantially in the manner and for the purpose set forth.

3. The manner of adjusting the connecting-rod L, so as to enable the concave to be eccentrically adjusted by a movement of the lever K, substantially as set forth.

4. Hinging the grain-rack P, and connecting it with the adjustable concave by means of the rod and roller *r*, and slotted bars *t*, as herein set forth.

5. Making the sides of the teeth of the cylinder and concave with a uniform taper, when combined and operating with an adjustable concave, in the manner and for the purpose shown and described.

6. Constructing the feed-table with the curve or bend *x*, as shown, and so arranged as to cause the grain, before it reaches the cylinder, to assume the proper inclination for passing between it and the concave, as herein set forth.

92,736.—T. M. Mitchell, Philadelphia, Pa., assignor to the Anthracite Fuel Manufacturing Company, Philadelphia.—*Process and Apparatus for Utilizing the Waste Coal of Mines.*—July 20, 1869.

Claim.—The process described, the same consisting in intimately mixing the purified waste coal and the agglutinating or resinous matter together in a hot state, condensing the same into solid lumps, and finally depriving the said lumps of their volatile and odorous matter, substantially as and for the purpose described.

92,737.—T. M. Mitchell, Philadelphia, Pa., assignor to the Anthracite Fuel Manufacturing Company, Philadelphia.—*Drying and Baking Apparatus for Preparing Fuel from Waste Coal.*—July 20, 1869.

Claim.—1. The heat-generating furnaces A A', the hot-air and gas-consuming chamber B, and the drying and baking ovens E E', the said parts being constructed, arranged, and inclosed together within suitable walls, D D, and operating together, substantially as described, for the purpose specified.

2. When used in connection with a drying and baking oven, constructed and arranged to operate substantially as and for the purpose described, a railway-car, F, having its containing body and its platforms made of perforated plate-iron or coarse woven wire, substantially as and for the purpose described.

92,738.—T. M. Mitchell, Philadelphia, Pa., assignor to the Anthracite Fuel Manufacturing Company, Philadelphia.—*Mixing-Apparatus for Preparing Waste Coal for Fuel.*—July 20, 1869.

Claim.—1. The mixing-vessel B, in combination with a surrounding steam-jacket, A, opening into the vessel B, through the series of small perforations 3 3, in the sides of the said vessels, substantially as and for the purpose described.

2. In combination with the vessel B, and the steam-jacket A, communicating therewith, as described, the series of armed shafts C C C C, arranged and operating together simultaneously, as and for the purpose described.

3. In combination with the arms *c' c'* of the rotary shafts C C, the pointed, flat, and vertical projections or fingers 2 2, arranged to operate substantially as and for the purpose described.

92,739.—Robert Moore, Oswego, N. Y.—*Artificial Leg.*—July 20, 1869.

Claim.—The lever I, with the spiral spring H, and circular spring R, and wheel J, and hinge L, when connected with the foot, as stated, and combined and connected together substantially as stated, and for the purpose described.

92,740.—George W. Morrill, Sterling, Ill.—*Spring Bed-Bottom.*—July 20, 1869.

Claim.—Improved elastic, flexible, and adjustable bed-bottom, composed of slats C C, united in pairs by central blocks D, carrying elastic loops or rings, to receive the movable ends of the short levers F, whose fulcrum ends rest upon the bedstead-frame, and by intermediate bearing-blocks E, bearing upon said levers, when these double slats are united in a series, by transverse flexible bands G, secured thereto and to the bedstead-frame, all substantially as herein set forth.

92,741.—Howell Mulford, Philadelphia, Pa.—*Propelling-Apparatus.*—July 20, 1869.

Claim.—The combination and arrangement of the connecting-rod D, the double-crank gearings B and E, with the paddle-shafts I and K, provided with paddles *s s*, the whole operated as and for the purposes substantially as described.

92,742.—T. Brod. Myers, Palatine, W. Va.—*Stock Shed and Rack.*—July 20, 1869.

Claim.—1. The combination of the pivoted roof-plates G G with the wall-plates H H, cords *i* and *l*, all arranged and operating as described, to be adjusted as specified.

2. The sheep-rack, supported on a head, A, which is, by means of inclined bars *a a*, connected with the runners B B, as described, and which carries the troughs E, as specified, all made and operating substantially as set forth.

92,743.—James H. Newton, Holyoke, Mass.—*Imitation Fabric of Paper Cloth.*—July 20, 1869.

Claim.—As a new article of manufacture, a paper-cloth material, in which the cloth surface is stamped in imitation of linen or other woven material, substantially in the manner herein described.

92,744.—Joshua G. Nickerson, Boston, Mass.—*Fertilizer from Sea-Weed.*—July 20, 1869.

Claim.—1. The process, as described, of preparing the algæ or sea-weed for being mixed with one or more other fertilizers.

2. The mixing of it, so prepared, with one or more animal, mineral, or vegetable matters, known as fertilizers, and subsequently grinding the whole together in a grinding-mill, the whole being productive of an improved article of manufacture, for use as a fertilizer.

3. The new manufacture or fertilizer, as made, in manner as set forth.

92,745.—William I. Page, Boston, Mass.—*Water-Closet.*—July 20, 1869.

Claim.—1. The arrangement and combination of the hooked or bent arm *f*, and the weight and arm or weighted arm *e*, with the valve-stem *d*, the cock of the supply-conduit of a water-closet, and with the seat hinged to the body supporter or frame, as described.

2. The arrangement and combination of the two stops *h i*, with the hooked and bent arm *f*, and the weight and arm, or weighted arm *e*, when applied to the valve of the cock of a water-closet supply-pipe, and arranged with the seat B, hinged to its frame A, as described.

92,746.—Zadock Pangborn, Algonac, assignor to George Clark, William P. Campbell, and Andrew H. Mills, Detroit, Mich.—*Alarm for Sailing-Vessels.*—July 20, 1869.

Claim.—The arrangement of the bellows A, head B, ears C, pitmen D, arms E, rock-shaft F, lever G, guides H, fixed cylinder I, frame J, flexible reservoir K, pipes L, head M, ears N, guiding-rods O, hollow-standards P, and coil-springs R, or their equivalents, with any suitable whistles or horns, the whole combined and operating substantially as shown and for the purposes described.

92,747.—Charles Parkin and Samuel Trethewey, Allegheny County, Pa.—*Tempering Steel Castings.*—July 20, 1869.

Claim.—1. In tempering rolls or other articles made of steel, inclosing the part or parts to be preserved from the action of the tempering agent by a metallic cap placed on each, so as to make a water-tight joint at its base, substantially as above set forth.

2. In the process of tempering the body of a steel roll, the use of caps *c*, having outwardly projecting flanges *e'*, and so made that their bases can be drawn tightly against the ends of the body *a* of the roll, with or without interposed packing, substantially as above set forth.

92,748.—Thomas Ramsden, Allegheny City, and Henry M. Davis, Pittsburgh, Pa.—*Valve-Cock.*—July 20, 1869.

Claim.—1. Guiding-ribs *e*, in any desirable number, on the sides of a loose disk-valve, or on the sides of that part of the valve-shell through which the valve plays, substantially as and for the purposes above set forth.

2. The arrangement of long screw-threads on the center-piece, and in the valve-shell of a disk-valve, in connection with threads on the stem and in the center-piece, so combined that, by a partial unscrewing of the center-piece out of the shell, the stem-thread may be screwed out of the center-piece, and the valve be rotated freely, substantially as and for the purposes set forth.

3. A head, *n*, on the end of the valve-stem, in combination with a correspondingly shaped recess in the bottom of the valve-cup, substantially as and for the purposes set forth.

4. A valve, *a'*, attached by a lock-nut, *o*, to a stem, *d*, having the rim *m* projecting above the upper face of the lock-nut *o*, and ground, so as to operate, in connection with the center-piece, to form a steam-tight joint, substantially in the manner and for the purposes set forth.

92,749.—Benjamin Reamer and Cornelius Van Derzee, Albany, N. Y.—*Potato-Digger.*—July 20, 1869.

Claim.—The construction of the frame of a potato-digger, consisting of the front side-pieces or levers G, with their arms G', and whose center of motion is in the center of the axle R, in combination with links E, H, and I, and levers F and K, substantially as and for the purposes herein shown and described.

92,750.—Lyman Robinson, Matteawan, N. Y., assignor to John Falconer, same place.—*Machine for Crossing Fibers in Forming Bats for Felting.*—July 20, 1869.

Claim.—1. The improved method of crossing the fiber of felts, bats, &c., by means of laying-rollers, arranged to work to and fro across the main portion of the fabric, moving perpendicularly to the movement of the said rollers, over a table, substantially as and for the purpose described.

2. The combination, with a table, B, of the laying-rollers E and E', arranged to have a to and fro motion over the same, and to change their positions at the end of each movement, substantially as and for the purpose described.

3. The combination, with the laying-rollers, pivoted to the slides F^1, of the stops K and K', substantially as and for the purpose described.

4. The combination, with the slides F, carrying the laying-rollers, of the rack F^3 and the system of change-gearing, and the means for changing it, substantially as and for the purpose described.

92,751.—John Rogers and Laurence Reid, Brooklyn, N. Y.—*Treating and Revivifying Bone-Black.*—July 20, 1869; patented in England April 1, 1869.

Claim.—1. The process herein described of neutralizing the excess of lime in bone-black resulting from its previous use in the refining of sirups and sugar, by first digesting or steeping it in a solution of superphosphate of lime or phosphoric acid, as de-

scribed, and afterward subjecting it to the process of calcination, for the purposes set forth.

2. The process herein described of removing excess of organic matters in bone-black, resulting from its previous use in the refining of sirups and sugar, by steeping it in a solution of nitrate of ammonia, as described, and afterward subjecting it to the process of calcination, for the purposes set forth.

3. The combined processes herein described, whereby previously exhausted bone-black is rendered capable of again neutralizing and absorbing both the free lime and organic matters contained in but foreign to the raw sugars and sirups being refined, or in the matters used for their defecation, as set forth.

92,752.—MITCHELL A. SALOMONS, Boston, Mass.—*Boiler-Flue Scraper.*—July 20, 1869.

Claim.—1. The construction of the jaws *a b* with their enlargement 5 6, and lips or flanges *c c*, arranged substantially as described.

2. The combination of the circular plate or washer *g* and rod *f*, with the jaws *a b* and flanges *c c*, substantially as set forth.

92,753.—CYRUS SANBORN, Chichester, N. H., assignor to himself and BENJAMIN F. LEAVITT, same place.—*Railroad Car Heater.*—July 20, 1869.

Claim.—An improved stove, divided into two compartments, A and B, by the double-walled partition C, and provided with a water-reservoir, D, and the pivoted plates or valves E G, said parts being constructed and operating in connection with each other substantially as herein shown and described, and for the purpose set forth.

92,754.—P. A. SCHANCK, Matawan, N. J. assignor to himself and R. L. MERRITT, Boston, Mass.—*Dust-Pan.*—July 20, 1869.

Claim.—The strengthening-plate A B, in combination with plate C′ and lugs C, as shown and described.

92,755.—BRONSON SCHOONMAKER, Plainwell, Mich.—*Ladder.*—July 20, 1869.

Claim.—The combination of the ladders B B, provided with brace-bars F F and bands *g g*, with the platform A, provided with standards C C, lever D, and arms *e e*, arranged and operating as above specified.

92,756.—LYMAN SHERWOOD, Springfield, Ill.—*Spading-Machine.*—July 20, 1869.

Claim.—1. A spading-machine, constructed and arranged with the revolving-cylinder A, stationary shaft B, frame C, spades D, shank and toggles *a*, fingers *b*, studs *e*, grooved wheel E, studs *d*, slots *e e*, substantially as herein described, and for the purposes set forth.

2. The stationary grooved wheels E, constructed and arranged with the studs *d* and slots *e e*, substantially as herein described, and for the purposes set forth.

3. The combination of the spades D, shank and toggles *a*, with the revolving cylinder A, arranged substantially as herein described, and for the purposes set forth.

4. The combination of the shank and toggles *a*, fingers *b*, and studs *c*, with the grooved wheel E, studs *d*, and slots *e e*, for the purpose of creating the semi-revolution of the spades D, substantially in the manner herein described.

92,757.—ROBERT SIM, Naples.—*Composition for Preventing the Fouling of Ships' Bottoms.*—July 20, 1869; patented in England August 12, 1868.

Claim.—1. The combination, in such compositions, of compounds or mixtures of iodine and mercury, by preference, the red iodide of mercury, as herein described.

2. The compound, consisting of red iodide of mercury, red lead, boiled linseed-oil, and turpentine, as herein described.

92,758.—HARLOW C. SMITH, Washington, D. C.—*Spring-Chair.*—July 20, 1869.

Claim.—In combination with the fore-feet of a chair, the springs B, hinged substantially as set forth.

92,759.—J. B. SMITH, Milwaukee, Wis.—*Shoulder-Support.*—July 20, 1869.

Claim.—1. A shoulder-support, made substantially as described.

2. A shoulder-support, with the abdominal supporter E, substantially as and for the purpose described.

92,760.—ADAM STORCK, Cincinnati, Ohio.—*Organ-Action.*—July 20, 1869.

Claim.—1. A melodeon or organ action, provided with two reeds or pipes for each key, and separate connections F G, so adjustable that either one of them may be acted on by the key to which they belong, substantially as and for the purposes set forth.

2. The cam-cylinder I *f*, constructed and operating in combination with the frames H, substantially as described, for the purpose stated.

3. The frames H, employed to hold the valve-rods F G, of two sets of reeds, in the requisite positions, and bring either one into connection with its key, B, as described, by the action of a cam-cylinder, I, or any other suitable mechanism.

4. The combination of the ring K, spring *g*, and treadle, with the ring M, springs *i*, and disk J, of the roller I, all arranged and operating substantially as herein shown and described.

5. The valve-rods F and G, of an organ or melodeon action, when supported, in pairs, by adjustable frames, substantially as herein shown and described, for the purpose specified.

92,761.—STEPHEN P. M. TASKER and ROBERT BRIGGS, Philadelphia, Pa.—*Apparatus for Drawing Tube-Skelps.*—July 20, 1869.

Claim.—1. The permanent or fixed mandrel, in combination with two permanent and fixed dies, whose upper edges are separated longitudinally, so that the tongs can be passed along and between them, to lay hold upon the skelp, substantially as described.

2. The slot or groove along the mandrel, in which the lower bit or jaw of the tongs can pass, while the end of the skelp, to which the tongs are attached, is passing the dies, substantially as described.

3. The pin or carrier for supporting the nose or end of the tongs while passing along the dies, substantially as described.

4. The flanges or sliding surfaces F F, formed upon the dies or independent of them, upon which the pin, or its equivalent mechanical device, can be made to move, substantially as described.

92,762.—JOHN F. THOMAS, Ilion, N. Y.—*Horse Hay-Fork.*—July 20, 1869.

Claim.—1. So arranging the tripping-bar in relation to the locking-lever, that the trip may be thrown over the locking-lever before the fork is closed, substantially as and for the purpose specified.

2. The combination of guard *o* with trip *i* and tripping-bar *d*, substantially as and for the purpose set forth.

3. The combination of the divided tine *a*, toggle-joint *b* and *e*, tripping-bar *d*, locking lever *b′*, and trip *i*, substantially as and for the purpose herein specified.

92,763.—JOHN H. TUTTLE, East Hampton, Mass.—*Manufacture of Rubber Balls.*—July 20, 1869.

Claim.—As a new article of manufacture, rubber balls made from pulverized rubber waste, without the necessity of admixture with pure rubber or gutta-percha, by introducing said waste under pressure into molds, which are afterward subjected to heat, as specified.

92,764.—JOHN H. TUTTLE, East Hampton, Mass.—*Process of Treating Vulcanized Rubber-Thread Waste.*—July 20, 1869.

Claim.—The application of ground vulcanized rubber-thread waste, without the necessity of being mixed with pure rubber or gutta-percha, to the manufacture of molded and other articles, by subjecting the said ground waste to pressure and heat, as specified.

92,765.—JONATHAN WALTON, Brooklyn, N. Y., assignor to VICTOR E. MAUGER, New York City.—*Lithographic Press.*—July 20, 1869.

Claim.—1. The slotted or perforated tubes D C B, arranged one within the other, and made adjustable, to regulate the flow of water through them, substanstantially as herein shown and described.

2. The tube D, when provided with slots or rows of apertures, which have V-shaped sides, substantially as herein shown and described, to adjust the flow of water to the length of stone, as set forth.

3. The handles *a b* of the tubes C D, when arranged to serve as pointers, and also to lock the tubes in the various positions, substantially as herein shown and described.

92,766.—ABEL WHITLOCK, Danbury, Conn.—*Lamp-Chimney.*—July 20,1869.

Claim.—A lamp-chimney, constructed substantially as herein described and shown, and for the purposes set forth.

92,767.—ABEL WHITLOCK, Danbury, Conn.—*Saw-Frame.*—July 20, 1869.

Claim.—The saw-frame A, provided with the hinge H and tension-arms K K, where all the parts are constructed and arranged to operate as described.

92,768.—WILLIAM WORLEY, Newark, W. Va.—*Implement.*—July 20, 1860.

Claim.—The improved implement, consisting of the large nail-claw B, recess B′, plate-lifter C, hammer D, tack-claw E, and pot-lifting hook F, all constructed and arranged as herein shown and described, for the purpose specified.

92,769.—JAMES M. YOUNGBLOOD, St. Louis, Mo., assignor for one-half to A. J. P. GARESCHE.—*Stomach-Pump.*—July 20, 1869.

Claim.—The pump A, its perforated tube B, and the covering-tube C, with its attaching-branches *g g′*, combined substantially as and for the purpose set forth.

92,770.—HENRY W. ADAMS, Philadelphia, Pa.—*Brick-Kiln.*—July 20, 1869.

Claim.—1. The arrangement in a brick-kiln, of furnaces, with jets of steam discharging into the furnaces, both above and below the fires, substantially as and for the purpose set forth.

2. In combination with the furnaces C C′, arranged in tiers in front of the several burning compartments B B^1 B^2, &c., the furnaces H, placed in the sides of the kiln, substantially as and for the purpose set forth.

3. The kiln, when constructed with the side walls E′, converging from front to rear, and also with a rear pigeon-hole wall, substantially as set forth.

4. The wall F, when constructed of a tight partition, F^3, and a series of perforated walls, F^2 F^1, substantially as and for the purpose set forth.

5. The construction and arrangement, with relation to each other, of the walls F^1 and F^2, so that the solid portions of each shall stand opposite to the perforations of the other, substantially in the manner set forth.

6. The arrangement of the compartments B, B^1, B^2, and B^3, and flues I, I′, and flues under the hearth K, as shown, and dampers N, N^1, &c., and O O′, substantially as set forth.

7. The combination of a kiln or kilns, and hearth K, under which the draught is made to pass, substantially as and for the purpose set forth.

8. The chimneys M M′, constructed as described, arranged to serve not only as uptakes for the kilns, but also to form bulkheads between the furnaces, and also buttresses, to support the inner walls A, substantially as set forth.

9. The arrangement within the flue, under the hearth, of steam jets G^5 and G^6, to discharge jets of steam in either direction, substantially as and for the purpose set forth.

10. The combination of a series of kilns with intercommunicating flues, and a series of steam jets, for carrying the surplus heat from one kiln into another for utilization, substantially in the manner set forth.

11. The combination, in a kiln, substantially as described, of a burning-chamber, as shown, and a draught-chamber formed in rear thereof, between the solid wall F^3 and pigeon-hole wall F^1, substantially in the manner and for the purpose set forth.

12. The pigeon-hole wall A^1 and partitions A^2, arranged in relation to the front wall and furnaces, substantially as set forth.

13. The arrangement, in connection with the furnaces of a kiln, of a steam-generator, so that the same fire which burns the brick shall generate the steam, when combined with the series of pipes to conduct the steam from said generator, and discharge it into the series of furnaces and flues, substantially in the manner set forth.

14. In combination with two tiers or sets of furnaces, as herein shown, the interposed partitions A^2, to form subdivisions of the draught-chamber, to prevent the interference of one furnace or set of furnaces with another, substantially as set forth.

15. The burning-chambers of a kiln, constructed with converging side-walls, and having also communicating flues, through which the heat is conducted from the rear of one chamber, passing thence into the rear of another burning-chamber, to escape at the combustion-end of said last-named chamber, substantially as set forth.

16. The rear partition wall or walls, constructed with pigeon-holes, increasing in diameter, in series, from bottom to top, substantially as and for the purpose set forth.

92,771.—THOMAS ADAMS, Hudson City, N. J., assignor to MARY A. VAN ALEN, Brooklyn, N. Y.—*Lamp-Burner.*—July 20, 1869.

Claim.—1. The dividing-plate *h*, introduced within the wick-tube, and acting to separate and guide the wick or wicks, substantially as set forth.

2. The chimney-holder *g* and tapering sleeve *g′*, in combination with the cone *k*, to allow the chimney and holder to be removed from the argand burner, substantially as set forth.

92,772.—JOHN AHEARN, Baltimore, Md.—*Plant-Protector Attachment to Plows.*—July 20, 1869.

Claim.—1. As an article of manufacture, an independent plant-guard, A, connected to a socket, B, which can be fastened upon the edge of a plow mold-board, substantially as and for the purpose described.

2. The combination of the parts A B, *s*, *b*, C, *c c*, constructed to operate in connection with each other, substantially in the manner and for the purposes specified.

3. In a device having a guard-plate, A, and a socket, B, for the purposes referred to, making the guard-plate adjustable toward and from the mold-board, substantially as and for the purposes specified.

92,773.—F. A. ARCHIBALD, Concord, N. C.—*Land Level and Measure.*—July 20, 1869; antedated July 15, 1869.

Claim.—The hinged legs A B, provided with feet G G, pivoted thereto, in combination with the pivoted cross-bars D F and slotted piece H, having the scale S on its outer surface, all arranged, constructed, and operated in the manner and for the purpose set forth.

92,774.—JOSHUA ASHTON, Red Wing, Minn.—*Fanning-Mill.*—July 20, 1869.

Claim.—1. The arrangement of the opening and the adjusting slide on the part G of the hopper, the shoe H, and distributing-board I, all substantially as specified.

2. The sieve-shoe, suspended by the elastic metallic bands K, when arranged substantially as specified.

3. The improved sheet-metal sieves, provided with orifices L, formed substantially as specified.

4. The arrangement of the shoe in two parts, M and N, when the part N is hinged and suspended by thumb-screw P, substantially as specified.

5. The adjustable slide U, arranged between the final sieve and the upper sieves, substantially as and for the purpose specified.

92,775.—JAMES L. BALDWIN, Troy, Pa.—*Plow-Beam Clevis-Attachment.*—July 20, 1869.

Claim.—The combination of a rubber block, B, or equivalent, with the mortised forward part of the plow-beam, to sustain the draught of the clevis-pin or bolt, substantially as herein shown and described, and for the purpose set forth.

92,776.—O. W. Bean, Farmington, Texas.—*Machine for Breaking and Scouring Hides.*—July 20, 1869.

Claim.—The combination of the endless belt B, rollers C and G, beater-roller E, and apron H, all substantially as specified.

92,777.—Timothy Beaudry, Levis, Canada,—*Saw-Mill.*—July 20, 1869.

Claim.—1. The method herein described of operating a series or gang of saws, without the use of gates or devices for straining them.

2. The chain-carriage *v*, in combination with the pressure-rollers *t* and *s*, when constructed and arranged to operate substantially as described, and for the purpose specified.

3. The buckle *b*, to which saws *a* are attached, in combination with the cross-head *i* and pitman *c*, when constructed to operate as described, and for the purpose specified.

4. The strengthening-rod *u*, attached to the bar D, in combination with the gauge *r*, when used as and for the purpose set forth.

92,778.—S. W. Bennett, Jr., Monroe, La.—*Brick-Machine.*—July 20, 1869.

Claim.—The brick-press, with the gearing E F, shaft G, crank H, and slides I and L, constructed and arranged as described, and to operate in combination with the roller J and scraper K, in the manner and for the purpose substantially as set forth.

92,779.—George Benns, Rockford, Ill.—*Camp-Stove.*—July 20, 1869.

Claim.—The stove described, consisting of the cylinder A, constructed as described, grate B, and funnel C, the whole being combined and arranged as and for the purpose set forth.

92,780.—H. C. Beshler, Berrysburgh, Pa.—*Corn-Planter.*—July 20, 1869.

Claim.—1. The dropping-cylinders H, when made adjustable upon the axle B, and provided near one end with a continuous row of recesses, and near the opposite end with groups of recesses, whereby said cylinders are adapted to drop the seeds from the hoppers, either in hills or in continuous rows, as herein set forth and shown.

2. An improved corn-planter, formed by the combination of the wheels A, axle B, dropping-cylinders H, hopper E, spouts I, conductor-tubes J, hollow standards K, double mold-board plows L, hinged covering-plows M *m'*, plow-beams N, adjustable braces O, and rod P, provided with the loops P' and lever Q, said parts being constructed, arranged, and operating substantially as herein shown and described, and for the purposes set forth.

92,781.—Bentley C. Bibb, Baltimore, Md.—*Fire-Place Heater.*—July 20, 1869.

Claim.—A movable evaporating-vessel and a movable screen, combined and applied to the top of a heater, substantially as described.

92,782.—Dominicus L. Bollerman and Richard Bollerman, New York, N. Y.—*Device for Closing Bottles and Pipes.*—July 20, 1869.

Claim.—The combination of the side tube D, cap E, and sliding-plunger F, with the fixed socket B and its flexible lining A, all constructed and arranged as shown and described.

92,783.—James B. Bowen, Charles A. Whelan, and Cleanthus A. Reed, Madison, Wis.—*Harvester-Rake.*—July 20, 1869.

Claim.—1. The teeth E E E E, or their equivalent, working up and down at the discharge-edge of the harvester-platform, in the manner and for the purposes stated.

2. The teeth E E E E, the lever B, the rod C, and the spring D, combined in the manner and for the purpose stated.

92,784.—William H. Boyden, Rockland, R. I.—*Machine for Dressing Warp-Threads.*—July 20, 1869.

Claim.—1. The racks H, bars I, and rod J, or any of them, when receiving a reciprocating movement from a power independent of that which works the thread, substantially as and for the purpose specified.

2. The combination of the rocking-frame G, with the racks H, bars I, rods J, cords *j k*, and springs or weights K, substantially as and for the purpose set forth.

3. The racks H and bars I, hung in the manner described, so that they can be slid apart, to allow them, or either of them, to be turned down on their side, substantially as described, and for the purposes specified.

4. The racks H, constructed with a removable top-piece, *i*, substantially as and for the purposes set forth.

92,785.—Thomas W. Bracher, New York, N. Y.—*Hat-Ventilator.*—July 20, 1869.

Claim.—The dust-valve D, in combination with the corrugated strips C and hat A, substantially as set forth.

92,786.—John A. Bradshaw, William H. Brown, and Darius Whithed, Lowell, Mass.—*Mechanism for Driving Sewing-Machines.*—July 20, 1869.

Claim.—1. The arrangement of the segment-gears *e'* and *f*, ratchets *k* and *k'*, pawls *j* and *j'*, and rods *f'* and *g*, substantially as herein described and specified.

2. The caster-plates or rods *r* and *o*, with casters *p'*, *q q'*, and *r*, when arranged in reference with each other, and operated substantially as herein described and specified.

3. The adjustable slide *o' o'* and *p p*, in combination with the caster-plates *n'* and *o*, for the purposes as specified.

92,787.—Charles Bradway, Maquoketa, Iowa.—*Bed-Bottom.*—July 20, 1869.

Claim.—1. The cross-slats G, in combination with the side-bars D, the suspending-springs C, and the intermediate springs *J*.

2. Suspending the cross-slats G, by their notched ends H, to the stirrup-ends F of the spiral-spring stem C, as herein described, and for the purpose set forth.

92,788.—William W. Brigg, Home, Tenn.—*Churn.*—July 20, 1869.

Claim.—1. The hollow shaft B, when the same is so placed that it works in suitable bearings on the opposite sides of the tub, and is provided with two or more tubes, D D D' D', and blades. *c c*, the latter being so attached as to run in angular directions, the whole being combined and arranged in such a manner that when motion is imparted to the dasher it will work on the principle of the screw, substantially as described.

2. Pinion-wheel F, having a hollow neck, F', center opening *f*, hollow tube B, step *b*, and when the same are arranged and operate as described, as and for the purpose specified.

92,789.—S. W. Broadwell, Logan, Iowa.—*Water-Motor.*—July 20, 1869.

Claim.—1. The weighted valves T, provided with adjustable nuts V, in combination with the slotted levers L, depending gate-rods K, oscillating walking-beam I F, provided with ties *h*, and buckets G, as described.

2. The buckets G, provided with valves S, attached to rods J, which are made to discharge water by striking bumpers Z', in the bottom of the race, and provided with plates N, which project down into them, to prevent water from being splashed over their edges, and with plates *d*, which project down to form suitable bearings, as set forth.

92,790.—Lester B. Brown, Petroleum Centre, Pa.—*Boiler-Flue Scraper.*—July 20, 1869.

Claim.—The combination of the yielding spring-scrapers B B with the cone-slide D, adjusting-rod *d*, and tube-handle A, when constructed and arranged to operate substantially in the manner as herein described and set forth.

92,791.—George W. Burwell, Zanesville Ohio.—*Measure-Holder.*—July 20, 1869.

Claim.—An improved measure-holder, A *a'* B C E, constructed substantially as herein shown and described, and for the purpose set forth.

92,792.—D. P. BUTLER, Boston, Mass.—*Lifting-Bar.*—July 20, 1869.

Claim.—The improvement in surfacing handles, substantially as and for the purpose specified.

92,793.—D. P. BUTLER, Boston, Mass.—*Spring Lifting-Apparatus.*—July 20, 1869.

Claim.—1. A spring lifting-apparatus, in which the muscular force is exerted against a series of springs, substantially as described.

2. In combination with the series of lifter-springs *g h*, the side and center lifter-rods, substantially as described.

3. In combination with the lifter-rods, lifter-plate, and springs *h i*, the platform *e*, supported upon springs, substantially as described.

92,794.—CYRUS CARRIER, Oswego, N. Y.—*Clothes-Drier.*—July 20, 1869.

Claim.—1. The plate F, provided with lugs C and D, in combination with the pivoted bars of a clothes-drier, as and for the purpose set forth.

2. In combination with the arms 1, 2, and 3, and plates F, constructed as described, the dogs or buttons A and B, as and for the purpose set forth.

92,795.—JULES JOSEPH CHAUDUN, Paris, France, assignor to himself, JEAN JEAN DEXANT, and ALFRED BERNARD.—*Metallic Cartridge.*—July 20, 1869; patented in France March 31, 1865.

Claim.—The anvil, substantially as shown and described, which serves to receive the blow from the hammer or firing-pin to explode the cap, and to remove the same after being fired, or before, by pressing upon the end of the stem of the anvil, as herein described.

92,796.—H. CLARKE, Baltimore, Md.—*Door-Lock.*—July 20, 1869.

Claim.—The herein-described arrangement, with reference to each other, of the flanged case H, slotted key-hole plate E, knob and stem C, bolt B, having the notched and recessed end *d*, the spring *e*, and slotted spring-tumblers *a b c*, for the purpose specified.

92,797.—EDWARD P. CLARK, Millbury, Mass.—*Clothes-Drier.*—July 20, 1869.

Claim.—As an improvement on a clothes-drier, the stand A, spindles D, ears or plate C, sockets B, and arms E, all constructed, combined, and arranged in the manner and for the purpose specified.

92,798.—GEORGE S. CURTIS and HENRY CURTIS, Chicago, Ill.—*Drawer-Guide.*—July 20, 1869.

Claim.—The drawer-guides E, arranged as described, in combination with the slot *a* in the drawer-back, as and for the purposes hereinbefore set forth.

92,799.—L. T. DELASSIZE, New Orleans, La.—*Breech-Loader.*—July 20, 1869.

Claim.—The combination of the forked bar M, having the hooks *o'*, the spring *x*, and pin *p*, with the slotted sliding-bar K, and hammer *q*, all arranged and operating as described, for the purpose specified.

92,800.—JOHN DENNISON, Hillsborough, N. H.—*Current-Wheel.*—July 20, 1869.

Claim.—The combination, with the shaft A, of the fixed arms D, adjustable buckets C, sliding-collar H, connecting-rods G, and shifting-lever I, when all constructed and arranged substantially as specified.

92,801.—W. EDSON DOOLITTLE, West Haven, Conn.—*Mode of Attaching Screws to Knobs.*—July 20, 1869.

Claim.—The knob, when secured to the screw and shell or cap B, by means of corrugations or holes, and the material forced into the cap when in a limpid or plastic state, as shown and described.

92,802.—WILLIAM H. ECKERT and JAMES A. BLACK, Dayton, Ohio.—*Station-Indicator for Railroad-Cars.*—July 20, 1869.

Claim.—The combination of the rollers B B' and belt P, when the tension of the belt is regulated by springs O, arranged between the boxes in which the journals of the rollers move, such boxes moving in grooves formed in the sides of the case, substantially as and for the purposes set forth.

92,803.—A. N. EDWARDS, Greenville, Ala.—*Plow.*—July 20, 1869.

Claim.—1. The T-shaped bolt D, when arranged to clamp the notched plow or shovel-share C to the perforated standard, having the projecting rib *a*, all made and operating substantially as herein shown and described.

2. The brace E, when arranged in combination with the notched share C, T-shaped bolt D, and standard A, having the rib *a*, all combined and operating substantially as herein shown and described.

92,804.—J. M. ELLIOTT, Winnsborough, S. C.—*Cotton-Seed Planter.*—July 20, 1869.

Claim.—1. The arrangement of the plow E relatively to the wheel A, and for adjustment by means of the slide F, substantially as specified.

2. The arrangement in the hopper, having the passage K, shaped as described, of the bent rotating fingers L, and fixed fingers, all substantially as specified.

92,805.—THOMAS ELLISON, Abingdon, Ill.—*Sliding Farm-Gate.*—July 20, 1869.

Claim.—1. In a sliding-gate, the construction, combination, and arrangement of the posts A and B, tracks C C, and guard-rails E, in the manner shown, and for the purposes described.

2. The gate D, with its top rail projecting as shown, and provided with the pulleys *c* and *c'*, for the purposes herein set forth.

3. The cap G of the post B, provided with the pulley-wheels d^1, d^2, d^3, and d^4, arranged as shown, and for the purposes described.

4. The arrangement of the operating chains *g* and *h*, as herein shown, and for the purpose described.

92,806.—PHILIP FALKER, Lanesville, Ind.—*Plow.*—July 20, 1869.

Claim.—1. The arrangement of the clevis E, bar D, and box F, which is regulated to slide freely over the clevis, and is controlled by the screw G, as specified.

2. In combination with the box F, clevis E, and bar D, the bar C, when connected to a loop, which passes from the under side of the beam over the top thereof, and passes back down through the beam and connected to the upright, as shown and described.

92,807.—DAVID J. FARMER, Wheeling, W. Va.—*Land and Water Velocipede.*—July 20, 1869.

Claim.—1. The floats J J J', arranged substantially as described, for the purpose set forth.

2. The floats J J J', adapted to be adjusted as described, for the purpose set forth.

3. The float J', constructed with the cavity or recess *l*, as represented and described, for the purpose set forth.

4. In combination with the removable floats J J J', arranged as described, the combined draught and paddle-wheels F F, constructed as represented and described, for the purpose set forth.

92,808.—DAVID J. FARMER, Wheeling, W. Va.—*Velocipede.*—July 20, 1869.

Claim.—1. The wheels G G, when constructed in the form of a hollow cylinder, having the circumferential flanges *g g* and the radial flanges *g' g'*, substantially as and for the purpose set forth.

2. A float, M, arranged in relation to the standard C and the rear-wheels G G of a velocipede, substantially as and for the purposes set forth.

3. The combination of a rubber, R, with float M, and treadles or cross-head *c*, substantially as and for the purpose set forth.

4. The arrangement of the rudder R, wheel *m*,

float M, standard C, socket *s*, and ropes *o o*, substantially as and for the purpose described.

5. The combination of the float M, wheel *m*, standard C, reach B, levers D, rods E, cranks and gear-wheels F *e'* I, axle A, and wheels G G, when constructed to operate together, substantially as and for the purposes set forth.

92,809.—JOHN FERGUSON, Fall River, Mass.—*Grain-Cleaner and Smut-Machine.*—July 20, 1869.

Claim.—1. The arrangement and combination of the series of foraminous troughs and the series of brushes of the hollow cylinder with the rotary stone, all constructed as herein described, and so disposed within a case, provided with a fan-blower, as to operate therewith, substantially as hereinbefore specified.

2. The series of deflectors within the foraminous troughs and the series of brushes of the hollow cylinder, all constructed as herein shown, and combined with a rotary stone, as described, the whole being arranged to operate together within the case R, provided with a fan-blower, substantially as set forth.

3. The arrangement and combination of the conduit S^2, (Fig. 2,) with the case R^2, the fan-blower j^2, the stone o^2, and the hollow cylinder B^2, furnished with brushes and foraminous troughs, with their deflectors, all constructed and operating as herein specified.

92,810.—RANDALL FISH, Washington, D. C.—*Fertilizer.*—July 20, 1869.

Claim.—The fertilizer herein described, compounded of the ingredients named, substantially as specified.

92,811.—EDWARD FLEISCHER, Cincinnati, Ohio.—*Hoop-Skirt.*—July 20, 1869.

Claim.—The improved skirt herein described, provided with upper and lower hooped sections C and D, suspenders B, and knee band or tape F, arranged substantially as and for the purposes set forth.

92,812.—J. W. FOARD, San Francisco, Cal.—*Curtain-Fixture.*—July 20, 1869.

Claim.—1. The curtain-fastening, consisting of the sheave *c*, supported upon a movable frame, E, the screw-clamp H, for fixing the sheave at any required height, and the connecting-cord F, that extends from the sheave to the screw-clamp, all constructed to operate together, substantially in the manner and for the purpose set forth.

2. The construction of the pulley or sheave *c*, as herein described, and for the purpose specified.

92,813.—I. N. FORRESTER, Bridgeport, Conn.—*Valve-Gear for Actuating Steam and other Engineery.*—July 20, 1869.

Claim.—The arrangement of the rod *i*, provided with the adjustable collar *l* and springs *m*, and the setting adjustable arm *j*, with relation to each other, and the beam L, valve K, piston H, valve C, and piston D, constructed substantially as herein shown and described.

92,814.—SAMUEL FOSTER, Jr., Des Moines, Iowa.—*Fanning-Mill.*—July 20, 1869.

Claim.—The arrangement of the fan B, crank C, pitman B, levers E and G, arm F, rods H and K, screens I, M, and N, frame L, springs O, box S, and arm T, all constructed as described, and combined to operate in the manner and for the purposes set forth.

92,815.—ORRIN B. GALLUP, Summit, R. I.—*Round Comb.*—July 20, 1869.

Claim.—A round comb, having a joint at or near its center, substantially as and for the purposes herein described.

92,816.—ISAAC M. GATTMAN, New York; N. Y.—*Manufacture of White Lead.*—July 20, 1869.

Claim.—1. Manufacturing white lead in a pure amorphous form, by subjecting metallic lead to a blast of air, carbonic and acetic acid under superatmospheric pressure, by means of a hydrostatic column, substantially as set forth, whereby the same gaseous elements are kept constantly in contact with the metal, with unvarying pressure, from the beginning to the end of the process.

2. Equalizing the pressure by means of the hydrostatic column, as described.

3. Condensing the surplus acetic-acid vapors in the hydrostatic column, substantially as set forth.

4. Preventing the escape of white-lead dust in the room by watery vapor, substantially as described.

5. Exposing metallic lead to the simultaneous action of the gases and vapors under a higher than atmospheric pressure.

6. Subjecting atmospheric hot air to metallic lead, in combination with currents of acetic and carbonic-acid gas.

7. The combination of acetic and carbonic-acid gas with a blast of atmospheric air.

8. The manufacture of pure amorphous white lead by the corroding process, substantially as described.

92,817.—PETER GEISER, Waynesborough, Pa.—*Gauge for Making Axles.*—July 20, 1869.

Claim.—The described templet or gauge for marking the timbers, and also at the same time centering the spindles of axles, substantially as set forth.

92,818.—ROBERT GLORE, Nashville, Tenn.—*Machine for Dressing Feathers.*—July 20, 1869.

Claim.—1. The arrangement of the valve-tubes G, valves H, springs I, bell-cranks L, and rods K, all substantially as specified.

2. The arrangement of the valve-boxes M and rods K with the central tube B, as specified.

92,819.—ALBERT J. GOODRICH, Wolcottville, Conn., assignor to TURNER, SEYMOUR & JUDDS, same place.—*Twine-Holder.*—July 20, 1869.

Claim.—1. The weight *f* and socket *e*, in combination with the shell of the twine-holder, as and for the purposes set forth.

2. The lever-arm *g*, with an eye at the end, in combination with the weight *f*, socket *e*, and twine-holder, as and for the purposes set forth.

92,820.—JOHN P. HAINES, New York, N. Y.—*Oil-Cup.*—July 20, 1869.

Claim.—As a new article of manufacture, the pocket oil-can, when the shank *a* of its nozzle B is provided with the left-hand screw-thread fitting into a corresponding female-screw thread in the mouth of the body A, and with a right-hand screw-thread, *b*, adapted to receive the cap C, in which a similar female-screw thread is formed, all operating as described, for the purpose specified.

92,821.—BENJAMIN F. HARRISON, Newark, N. J.—*Thill-Coupling.*—July 20, 1869; antedated July 15, 1869.

Claim.—The combination of the screw-cap *s t* with the collar-packing V, constructed and arranged in the manner and for the purpose shown.

92,822.—ORANGE N. HART, Winona, Minn.—*Hot-Air Furnace.*—July 20, 1869.

Claim.—1. The adjustable gas-burner M and plates J and J', arranged as described, for the purpose of adapting the furnace to the use of various sizes and kinds of fuel, as herein set forth.

2. The combination of the furnace or fire-chamber, constructed as herein described, with the air-heating devices, consisting of the drums D E, flues B and B', with the stationary diaphragm D and deflector L, all constructed and arranged substantially as described.

92,823.—DANIEL HARWOOD, Dutch Flat, Cal., assignor to himself and SETH WHITE, same place.—*Animal-Trap.*—July 20, 1869.

Claim.—The combination of the spring A, the jaws B B, the blades C C, when the trap is operated by the sliding-bar H, inclined projection J, and catch-spring K, and its projections S, held by the projection T on the bait-pan, substantially as and for the purpose set forth.

92,824.—M. C. HEPTINSTALL, Enfield, N. C.—*Rein-Holder.*—July 20, 1869.

Claim.—Rein-holders A, either provided with the

clamps B and turn-buttons C, or the annular grooves D, and applied to driving-reins, substantially as specified.

92,825.—J. E. Higgins, Charles Merriam, and Curtis O. Luce, Brandon, Vt.—*Hand-Stamp.*—July 20, 1869.

Claim.—1. The spring-catch *s*, in combination with the recessed type-wheel and cap A or plate *t*, constructed and operating substantially as and for the purposes set forth.

2. The arrangement and combination of the wheels *a*, *b*, *c*, *d*, and *e*, plate *t t*, springs *s s s*, cap P, and case A, substantially as and for the purposes set forth.

92,826.—Albert Hodgson and Edwin Hodgson, El Paso, Ill.—*Corn-Planter.*—July 20

Claim—1. The appliance G, composed of the curved plate *g*, hinge g^2, and spring g^1, substantially as described.

2. The said appliance G, in combination with the runner A'.

3. The device P, composed of the hook p' and the spring p'', when arranged and applied as herein set forth, for the purpose of holding the runners above the ground in turning.

92,827.—T. S. Howard, Savannah, Mo.—*Machine for Cutting Stone and Marble.*—July 20, 1869.

Claim.—1. The saw D, constructed as described, having a movable rim made in sections, and consisting of center-piece *a* and side-pieces *b b*, all arranged and combined substantially as shown and described.

2. The arrangement of the wheels, belts, and pulleys herein described, for the purpose of imparting the necessary degree of rotary motion to the shaft S, and pinion T, whereby the main carriage A' is moved either to or from the saw, substantially as herein set forth.

3. The arrangement of the carriage C' with its graduated plates *h h*, provided with series of holes, pins *i i*, pointers *k k*, slotted bar *n*, bolt *m*, and screw *o*, all substantially as and for the purposes herein set forth.

4. The combination of the carriage D', turning upon its center-pin *p*, and rollers *r r*, and having set-screws *s s*, with the brace E', substantially as and for the purposes herein set forth.

5. The combination of the carriages A', C', and D', all constructed and arranged to operate substantially as and for the purposes set forth.

92,828.—Nathan Hunt, Salem, Ohio.—*Head-Block.*—July 20, 1869.

Claim.—1. The combination of the bracket A, nut C, screwed rod E, and bracket H, when arranged for operation, substantially as specified.

2. The combination, with the above, of the swinging-dogs K, substantially as specified.

92,829.—George A. Huntley, Quincy, Ill.—*Coal-Stove.*—July 20, 1869.

Claim.—The arrangement, in a stove, of the horizontal partitions *h h* and vertical partitions I I, in connection with the walls A G and small passages *a a'*, as described, whereby the air is made to circulate slowly around the fire-pot in the large horizontal passages H H' H'', escaping rapidly from one passage to another through the small holes *a a*, substantially as and for the purposes specified.

92,830.—Eugene Huret and François L. Debruyn, Condette, Pas-de-Calais, France.—*Device for Stopping the Revolution of Spindles in Spinning-Machines, &c.*—July 20, 1869.

Claim.—The combination of the driving-mechanism herein described, the spindles A, and the plates K, provided with slots L L, and bent ends, all constructed and arranged for adjustment on the frame of a spinning-machine, as specified.

92,831.—Gustav L. Jaeger, New York, N. Y.—*Paper Box.*—July 20, 1869; antedated June 7, 1869.

Claim.—The arrangement of an outwardly projecting flange, *a*, on the body A of a paper box, substantially as shown and described.

92,832.—George Henry James and Josiah James, London, England.—*Card-Case.*—July 20, 1869.

Claim.—The halves A A^2, combined, as shown, with the receptacles *a a*, spring C, and cover B, substantially as and for the purposes set forth.

92,833.—Granville E. Jarvis, Grafton, W. Va.—*Railway-Rail Joint.*—July 20, 1869.

Claim.—As an article of manufacture, a railroad-track brace made from a flat plate of iron, and having the bent-up tongues *e e'*, the spurs *c c*, the long shank c^2, and the spike-holes, all arranged and constructed substantially as and for the purposes set forth.

92,834.—James G. Johnson, Carthage, Ill.—*Cultivator and Stalk-Cutter.*—July 20, 1869.

Claim.—The construction of the machine herein described, consisting of the combination outer frame A, hinged frame C, roller L, cutters M M, and prongs O O, whereby I am enabled to furnish, in one machine, a corn-stalk cutter, which, by a slight interchange of parts, as set forth, may be used as a meadow-cultivator, substantially as specified.

92,835.—C. H. Johnson, Morristown, N. J.—*Cultivator.*—July 20, 1869.

Claim.—1. The attachable and removable curved teeth *a*, constructed and applied for operating substantially as herein described.

2. The attachable and removable scrapers *a'*, with horizontal cutting-edges, substantially as and for the purpose herein set forth.

3. The combination of the rollers C C and knives *b*, as applied to a cultivator, substantially as and for the purpose herein set forth.

92,836.—John Robert Johnson, London, England.—*Manufacture of Photographic Pictures.*—July 20, 1869.

Claim.—1. The use of shellac and its analogues, used in the way described, for the purpose of receiving and mounting the pigment picture-film upon its permanent support.

2. The mode of mounting and developing the pigment picture-film upon a temporary support, by means of the intervening surface of a solid, fatty, or resinous body, infusible at the temperature of development, and retaining the picture during that process, but which allows of the removal of the picture, when cemented, to its permanent support.

92,837.—M. J. Kavanagh, Joliet, and M. Gregg, Chicago, Ill.—*Combined Corn-Planter and Cultivator.*—July 20, 1869.

Claim.—1. The combination of the grooved cams H, hollow spokes D, hollow hubs E, dropping-slide G, provided with chambers X, and lugs Z, eccentrics N, and springs J V, as and for the purpose set forth.

2. The combination of the beams P, standards Q, and slotted plates T, as and for the purpose set forth.

92,838.—Lawson P. Keach, Baltimore, Md.—*Blacking-Cabinet.*—July 20, 1869.

Claim.—1. Arranging the foot-rest upon the bottom of a box, whose sides and ends open outwardly on either side, as and for the purpose set forth.

2. In combination with a box thus constructed, the blacking receptacles and covers, constructed as described.

3. Making the foot-rest in sections, to serve as a receptacle for the brush-handle, as described.

92,839.—Orson Kelsey, Commerce, Mich.—*Railway-Car Coupling.*—July 20, 1869.

Claim.—The car-coupler, herein described and shown, having shafts C and D, rollers E, cylinders G, H, and K, plates *a*, pulleys *s*, disk P, cord *n*, and link Y, constructed and arranged substantially as specified.

92,840.—D. A. Kennedy, Darien, Wis., assignor to himself, William Wadsworth, and E. D. Murray, same place.—*Rotary Oven.*—July 20, 1869.

Claim.—1. The stationary grooved collar D, friction-balls F, revolving grooved collar E, radial arms G, rim H, and plate I, in combination with each other, and with the stationary central shaft C and shoulder a^1 of the wall A, substantially as herein shown and described and for the purpose set forth.

2. The combination of the friction wheels or rollers B, with the arms G and rim H, either or both, and shoulder a^1 of the wall A, substantially as herein shown and described, for the purpose set forth.

92,841.—S. KEPNER, Pottstown, Pa.—*Window-Sash.*—July 20, 1869.

Claim.—The casing or beading-strip F, when raised or increased in height, as shown, in combination with the self-balanced sash D and D′, substantially as and for the purpose specified.

92,842.—A. H. KNAPP, Needham, Mass.—*Rotary-Pump.*—July 20, 1869; antedated July 17, 1869.

Claim.—1. The two piston-wheels H I, of unequal size, and constructed as described, and arranged and operating in combination, substantially as and for the purpose herein specified.

2. The combination of the projecting bearing *p p*, outside of the water-chambers G T, and the close tubes *u u*, extending through the said water-chambers, substantially as and for the purposes set forth.

92,843.—ISAAC W. LAMB, Salem, Mich.—*Stove-Pipe Fastener.*—July 20, 1869.

Claim.—Securing the pieces of pipe together by means of the fasteners *m*, entering suitable openings *a a′*, made through the pipe, substantially as and for the purpose herein explained.

92,844.—ISAAC W. LAMB, Salem, Mich.—*Combination-Lock.*—July 20, 1869.

Claim.—The combination of the dial E, with the tube W″, drive-wheel W′, and spindle S, substantially as and for the purpose herein explained.

92,845.—WILLIAM M. LANHAN, Noblesville, Ind.—*Plow.*—July 20, 1869.

Claim.—1. The cross-piece H, formed of a metal plate, in combination with the plow G, and beams A, when used to change the plow into a harrow, substantially as set forth.

2. The pronged bar F, in combination with the plates D, for hinging the beams A together, substantially in the manner and for the purpose set forth.

3. The plates D, bar F, plow C and G, cross-pieces E and H, and brace I, when all are arranged and combined in the manner and for the purpose set forth.

92,846.—HENRY A. LANMAN, Columbus, Ohio, assignor to himself and JAMES OHLEN, same place.—*Saw.*—July 20, 1869.

Claim.—The clearers *d d*, separated below their beveled top sides *f f*, down to a point which will be intersected by a curved or straight line, extending from the corners or lowest ends of one pair of the teeth to the corners or lowest ends of another pair of teeth, substantially as described.

92,847.—JAMES S. LESTER, Knoxville, Tenn., assignor to himself and L. C. SHEPARD.—*Elevator.*—July 20, 1869.

Claim.—1. The adjustable elevating-apparatus, so constructed that when one receptacle moves up another moves down, substantially as herein set forth.

2. The adjustable elevating-apparatus, so constructed that when the hoisting-rope is moved in one direction, one end is raised, and when moved in the opposite direction, the other end is raised, lowering the opposite side each time, substantially as herein set forth.

3. The combination of the horizontal beam A, brace-bars B B, pivoted frame D, and counterbalancing-lever F, all substantially as and for the purposes herein set forth.

4. In combination with the pivoted frame D, on the outer end of the horizontal beam A, the pulleys *a a*, pulley-blocks *b c*, rope *d*, and receptacles E E, all constructed and arranged to operate substantially in the manner and for the purposes herein set forth.

92,848.—JOSEPH F. LOTELLIER, Grand Rapids, Mich.—*Steam-Engine Governor.*—July 20, 1869.

Claim.—1. The construction of the sleeve I, with its projecting arm or socket, O, for the reception of the shaft P, and the inclined planes upon its lower surface, substantially as set forth.

2. The construction of the cap L L′, upon the upper end of the spindle D′, substantially as shown and described.

3. The combination of the stationary inclined plane I′, or its equivalent, with the movable inclines upon the socket I, substantially as and for the purpose set forth.

4. The stop R, when constructed and arranged substantially as set forth.

5. The construction of the hangers *k*, having the swinging-arms *l′*, substantially as shown and described.

6. The arrangement of the hangers *k* and pulleys *h*, with reference to the pulley Q of the governor, substantially as set forth.

92,849.—HENRY C. LEZOTT, Osage, Iowa.—*Harrow.*—July 20, 1869.

Claim.—The yoke E, supported and connected to the harrow, as described, and levers I K, also connected to the harrow, combined therewith and with the truck, substantially as specified.

92,850.—EDWARD A. LOCKE and WILLIAM N. WEEDEN, Boston, Mass.—*Paper-Collar Box.*—July 20, 1869.

Claim.—A box adapted for containing paper collars or other articles, and having an eye-glass or aperture at one end, and an object-glass, or transparent or semi-transparent medium at the opposite end, substantially as and for the purpose set forth.

92,851.—WILLIAM E. LOCKWOOD, Philadelphia, Pa.—*Fabric whereof to make Collars, Cuffs, Bosoms, and other Articles of Wearing Apparel.*—July 20, 1869.

Claim.—1. Improved fabrics, to be used in the manufacture of seamless shirt-collars and similar articles, prepared substantially as and for the purpose above described.

2. Shirt-collars, cuffs, bosoms, and similar articles, made out of either of the above-described improved fabrics, as new articles of manufacture.

92,852.—JAMES W. LOVELESS, Clark's Hill, Ind.—*Clod-Fender.*—July 20, 1869.

Claim.—1. The clip C, substantially as shown and described.

2. The combination and arrangement of the fender A, forked bar B, and clip C, with reference to a plow, substantially as shown and described.

92,853.—WILLIAM A. LUDDEN, Brooklyn, N. Y.—*Pencil-Case.*—July 20, 1869.

Claim.—The tubes *b* and *c*, slotted in the manner described, in combination with the extension-case *d* and point *h*, with their respective pins 2 and 5, and the inclosing-case *a*, as and for the purposes set forth.

92,854.—SAMUEL WILLIAM MAQUAY, Footscray, near Melbourne, Victoria.—*Device for Raising Sunken Vessels.*—July 20, 1869.

Claim.—1. The apparatus for producing hydrogen-gas under water, and conveying it to the gas-receivers or balloons, consisting of the case A, acid-jar D, rod E, and pipe H, substantially as specified.

2. The gas-generating apparatus, herein described, in combination with the balloon H, provided with the link M and toggle N, as set forth, for the purpose specified.

92,855.—FELICIE F. N. MARIAS, New York, N. Y.—*Washing and Cleansing Fluid.*—July 20, 1869.

Claim.—The washing and cleansing fluid, substantially as herein specified.

92,856.—JOHN MARSDEN, Halifax, England, assignor to JOHN CROSSLEY and Sir FRANCIS CROSSLEY, same place.—*Loom for Weaving Carpets.*—July 20, 1869; patented in England September 9, 1867.

Claim.—1. The combination of the batten of the loom with the slotted connecting-rod, the oscillating

guide, and the crank, substantially as before set forth.

2. The combination of the series of traversing shuttle-boxes, with the rack and pinion, the change-wheel, and the reciprocating catch-levers, for moving the change-wheel, according to the indications of the pattern-mechanism, all constructed to operate substantially as before set forth.

3. The combination of the catch-levers, the slotted sliding-frame which carries them, the crank, and the spring clutch-box, substantially as before set forth.

4. The combination of the said catch-levers, the slotted-sliding frame, the crank, the spring clutch-box, and the stop-motion, substantially as before set forth.

5. The combination of the two catch-levers, the coupling-rod connecting them, the recessed curved arc, and the spring-catch that engages in the recesses of said arc, to hold the levers in the positions determined by the pattern-mechanism, substantially as before set forth.

6. The combination of the catch-levers with the pattern-mechanism, through the intervention of divided connecting-rods, the parts of which are held together by a spring, substantially as before set forth.

7. The combination of the series of shuttle-boxes with the stop for locking said series in the required position, and with the cam, to control said locking, substantially as before set forth.

8. The combination of the instruments for moving the traversing series of shuttle-boxes, with the crank-shaft, through the intervention of the spring-clutch, so as to prevent breakage, in case a shuttle fails to box properly, substantially as before set forth.

9. The combination of the instruments for moving the traversing series of shuttle-boxes, the shaft, for imparting motion to them, the spring-clutch, and the T-shaped lever connected with the stop-motion of the loom, substantially as before set forth.

10. The combination of the picker-staff, the picking-shaft, the clutch, and the pattern-mechanism, operating said clutch for the purpose of controlling the throwing of the shuttle, substantially as before set forth.

11. The combination of the picker-staff, the picking-shaft, and the spring-clutch, which yields and prevents breakage when the picker-staff strikes the end of a shuttle-box, substantially as before set forth.

12. The combination of the batten of the loom, the stop-rod, the vibratable frog, the spring, and the rod connected with the disengaging-mechanism of the loom, so as to stop the loom in case the shuttle fails to box, substantially as before set forth.

13. The combination of the warp-beam, the brake-pulley, the curved arms, the vibrating brake-lever, and the whip-roller, substantially as before set forth.

92,857.—FRANZ O. MATTHIESSEN, Jersey City, N. J.—*Globe-Valve.*—July 20, 1869.

Claim.—1. The slotted socket B, having a graduated scale, *f*, and the sliding indicator C, having a pointer, *c*, and a yoke, *b*, combined for operation in connection with the fixed case A, and the hand-wheel G, substantially as and for the purpose herein set forth.

2. The construction and arrangement of the socket B and indicator C *c*, in relation to the valve-case A, and hand-wheel G, substantially as set forth.

92,858.—E. M. MAYO, Cincinnati, Ohio.—*Hanger for Shafting.*—July 20, 1869.

Claim.—A hanger for shafting, consisting of the frame A, having grooves, *b*, formed therein, and the sliding-box C, with set-screw B, constructed and arranged substantially as described.

92,859.—THOMAS MAYOR, Providence, R. I., assignor to ORVILLE PECKHAM, trustee; and said trustee assigns to said MAYOR and GEORGE CHATTERTON, same place.—*Speeder for Spinning and Twisting Roving.*—July 20, 1869.

Claim.—1. The method, substantially as herein specified, of driving and steadying a bobbin, by combining the bobbin J with the driving-spindle C, and the stationary bolster G, so that while the bobbin is driven by the former, it shall, in all positions, be steadied by the latter, as herein set forth and described.

2. In combination with the neck L of the flier, where such neck is constructed with two lateral orifices, for the passage of the roving, as described, the employment of a slit, *g*, connecting the axial hole in the neck of the flier with the lower one of such lateral orifices, as herein described, for the purpose of breaking the yarn, whenever the roving has not been properly led to the flier.

3. The arrangement, with reference to the long bolster G and step-rail D, of an intermediate spindle-bearing, attached to the same yoke or frame which supports the bolster G, for the purpose of furnishing a rest for the bevel driving-gear K′, and also the arrangement of the fellow bevel-gear K with such driving-gear K′ and intermediate bearing, substantially as shown, whereby the height of the machine and the length of the spindle are enabled to be reduced, as herein set forth.

92,860.—WILLIAM S. MCKINNEY, Cincinnati, Ohio.—*Shaft-Coupling.*—July 20, 1869.

Claim.—The cylindrical split-bushing C, in the described combination with the sleeve E and keys B D, constructed and operating substantially in the manner and for the purpose set forth.

92,861.—WILLIAM MCLUCAS, Reinersville, Ohio.—*Corn-Planter.*—July 20, 1869.

Claim.—1. The lever D, rods E E′ *e*, and fulcrum bolt or pin e^1, when the same are so combined and arranged as to act as a clamping-brake for the wheel B, substantially as described, as and for the purpose specified.

2. The lever D, rods E E′ *e*, upright C, and caster-wheel C′, when the same are so combined and arranged that simply by raising the lever the wheel B, by a simultaneous movement, shall be elevated and clamped, substantially as described.

3. The wheel B, and guide-post b^2, when the same are so combined and arranged as to operate substantially as described, as and for the purpose specified.

4. The curved elbows K K, when the same are so arranged as to furnish bearings for the adjustable arm I and the axle to which the roller-wheels K′ K′ are attached, substantially as described, as and for the purpose specified.

92,862.—FERDINAND MEHRMANN, Fountain City, Wis.—*Water-Wheel.*—July 20, 1869.

Claim.—The core of the wheel, formed by the spool-shaped block B, and the rim C, supported from the upper flange of the block, the annular space between the block and rim being provided with the buckets D, of the form shown in Fig. 3, all operating as described, for the purpose specified.

92,863.—SERENO T. MERRILL, Beloit, Wis.—*Straw-Board.*—July 20, 1869.

Claim.—The continuous sheets of straw-boards, rolled for handling or transportation, substantially as specified, as an improved article of manufacture.

92,864.—JACQUES MEYER, Williamsburgh, N. Y.—*Horse-Collar.*—July 20, 1869.

Claim.—The horse-collar, consisting of the wooden frame *a*, lined with the cushion C, and faced with the metal plates *b b*, hinged together at their upper ends, the whole being covered with leather, and adapted to receive at the lower end the removable V-shaped block B, as herein described, for the purpose specified.

92,865.—ZEPHANIAH MILLER, Canal Fulton, Ohio.—*Machine for Thrashing and Hulling Clover-Seed.*—July 20, 1869.

Claim.—1. The carrier-belt D, formed by eccentrically pivoting the ends of the notched slats d^1 to the endless chain of hinged blocks or links d^2, in combination with the toothed or thrashing cylinder C, of a clover-seed machine, substantially as herein shown and described, and for the purpose set forth.

2. The hopper J, in combination with the thrashing-cylinder C and hulling-cylinder H, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the elevator I with the hull

ing-cylinder H of a clover-seed machine, substantially as herein shown and described, and for the purpose set forth.

4. The combination and arrangement of the thrashing-cylinder C, endless belt or carrier D, constructed as described, hulling-cylinder H, elevator I, and hopper J, with each other, substantially as herein shown and described, and for the purpose set forth.

92,866.—ISAAC N. MITCHELL, Areanum, Ohio.—*Car-Coupling.*—July 20, 1869.

Claim.—1. The clevis E, constructed as described, so as to surround the draw-bar and be pivoted to the same, and having a slot on one side to pivot the coupling-link, and another slot on the other side to receive the head of the link, substantially as herein set forth.

2. The combination of the clevis E, and coupling-link F, constructed as described, and arranged on the draw-bar of a railroad-car, substantially as and for the purposes herein set forth.

3. In combination with the clevis E and coupling-link F, the link or chain *i*, arm *h*, and shaft *f*, substantially as and for the purposes herein set forth.

4. The arrangement of the shaft F, notched wheel *k*, and slotted slide *m*, substantially as and for the purposes herein set forth.

5. In combination with the shaft *f*, notched wheel *k*, and slotted slide *m*, the draw-bar B, provided with a wire, *o*, or its equivalent, substantially as and for the purposes herein set forth.

92,867.—OTIS M. MITCHELL, Marathon, N. Y.—*Culinary Vessel.*—July 20, 1869.

Claim.—1. The improved culinary vessel herein described, provided with a perforated hinged bottom, C, and the bar or catch D, arranged and operatiug substantially as shown and specified, for the purposes set forth.

2. In combination with the culinary vessel herein described, provided with a perforated hinged bottom, C, and the bar or catch D, the steamer E, arranged and operating substantially as shown and described, for the purposes specified.

92,868.—OTIS M. MITCHELL, Marathon, N. Y.—*Washing-Machine.*—July 20, 1869.

Claim.—The improved washing-machine herein described, consisting of the cover D, provided with the cleats *d*, the radial arms or spokes C, and the standard B, combined with and operated by the crank-shaft E, substantially in the manner and for the purposes specified.

92,869.—DAVID M. MOORE, Windsor, Vt.—*Car Brake and Starter.*—July 20, 1869.

Claim.—1. The combination and arrangement of the gear-wheels C C′ and D, drum D^1, and spring E, and axle B, substantially as and for the purpose set forth.

2. The combination and arrangement of the gear-wheel D, drum D^1, and vertical shaft D^2, substantially as and for the purpose set forth.

3. Supporting the vertical shaft D^2 in a bearing formed upon the axle B, of the car, substantially as and for the purpose set forth.

4. The arrangement of the pawl *d* and spring *d′*, with reference to the drum D^1 and gear-wheel D, substantially as and for the purpose set forth.

5. The arrangement of the tube F, which incloses the spring, with reference to the drum D^1, substantially as and for the purpose specified.

92,870.—CHARLES H. MORGAN, Worcester, Mass.—*Machine for Making Wire Rope.*—July 20, 1869.

Claim.—1. The combination of the mechanism herein described, constructed and operating substantially as set forth.

2. The spool-carrier, with its adjustable brake, constructed and operating to produce uniform tension on the wire, substantially as described.

92,871.—DAVID MORRIS, Bartlett, assignor to himself and AARON P. DEWEES, Pennsville, Ohio.—*Mining-Machine.*—July 20, 1869.

Claim.—1. In a machine for the purpose indicated, having a pivoted arm, C, carrying two saws at its forward end, the endless chain E, provided with the teeth *e e*, and operating as and for the purpose described.

2. The arrangement of lever L, pawls *i i*, wheels N N, each having a cog-rim, O, and bevel cog-rim *n*, pinion *m*, shaft *a*, and spindle T, when used for the purpose of rotating an endless chain, E, in a machine constructed and operating as above described.

92,872.—CHARLES A. MORTON, Biddeford, Me.—*Oiler for Machinery.*—July 20, 1869.

Claim.—The portable hand-oiler, consisting of the vessel A, pump B, and the vertical discharge and directing tubes, the pump being arranged within the vessel, upon the perforated convex disk C, with its piston-rod extending through the screw-plug E in the top of the vessel, and with its lateral pipe communicating with the discharge-tube upon the side of the vessel, all as herein described, whereby the oiler is adapted to be held and the pump operated by one hand, while the directing-tube D is guided by the other, as herein set forth and shown, for the purpose specified.

92,873.—FRITZ MUELLER and HERMANN KOELLER, New York, N. Y.—*Tailors' Measuring-Apparatus.*—July 20, 1869.

Claim.—The sliding and adjustable blade or plummet F, in combination with the graduated strip or blade A′, and the two sliding and adjustable frames C C′, in the manner and for the purpose herein described and represented.

92,874.—W. C. COCKBURN MUIR, Westminster, England.—*Railway.*—July 20, 1869.

Claim.—1. The within-described sleeper, curved at the upper portion, having vertical sides and a horizontal flange, D, above the vertical portions, as set forth.

2. The two ledges *a a*, arranged on the upper portion of the sleeper, beneath and parallel to the edges of the lower flanges of a rail, as set forth.

3. The piece C, in combination with the jaw *d*, the rail, and the wedge *f*, when the said piece is constructed as described.

4. The clip *c*, with its projection *h*, in combination with the sleeper, recessed to allow the passage of the projection *h*, and with the bar *g* notched to receive the said projection.

5. The sleeper, with its recess for the reception of the detachable block *i*, in combination with the tie-rod *g*, notched and adapted for the reception of the block, as described.

92,875.—BYRON W. NICHOLS, Canton, Ohio, assignor to himself, C. AULTMAN, GEORGE H. BUCKIUS, P. S. SOWERS, and A. CLARK TONNER, same place.—*Composition of Matter to be Used in the Process of Restoring Steel.*—July 20, 1869.

Claim.—1. The employment of manganese and resin in the process of restoring or refining and improving steel.

2. The employment of the ingredients herein named, when compounded and used about in the proportions and substantially in the manner and for the purpose set forth.

92,876.—BYRON W. NICHOLS, Canton, Ohio, assignor to himself, CORNELIUS AULTMAN, GEORGE H. BUCKIUS, PERCY S. SOWERS, and A. CLARK TONNER, same place.—*Converting Articles of Cast Iron into Steel.*—July 20, 1869.

Claim.—1. The use of the ingredients herein named, when compounded and used in the manner and in about the proportions herein described, and for the purpose set forth.

2. The employment of iron oxides, or their chemical equivalents, as a packing in the process of converting into steel articles of iron which have previously been cast into the desired form for use.

92,877.—JOHN D. PARSONS, Yonkers, N. Y.—*Hat-Brushing Machine.*—July 20, 1869.

Claim.—The described arrangement upon the frame, and with relation to each other, of the revolving mandrel and cap *a f*, and the sliding-shaft *d*, carrying the revolving-cap *g*, all operating, as set forth,

to hold and revolve a hat in such a manner as to leave both sides of its brim exposed above the frame and operating-mechanism for brushing and cleansing, as herein described and shown.

92,878.—BYRON PARTELLO, Detroit, Mich.—*Bed-Bottom.*—July 20, 1869.

Claim.—1. The posts E E′, when combined with the wire F in such a manner as to hold the latter nearly in a horizontal line, as and for the purpose described.

2. The combination and arrangement of the frames A B, slats C, springs *c*, and wire F, in the manner and for the purpose described.

92,879.—CHARLES B. PAYNE, Clinton, Ill.—*Check-Hook.*—July 20, 1869.

Claim.—The flat plate A, with shoulder *a*, loop C, and tongue E, which projects above the surface of the leather B, and with hook D, all connected to the parts of the leather by the rivets, as herein shown and described.

92,880.—E. B. PRATT, Monroe, Wis.—*Cultivator-Teeth.*—July 20, 1869.

Claim.—A double-winged harrow-tooth, constructed with an inclined cutting-edge, extending in a direct or straight line from top to base, and having the entire upper portion of each wing bent at right angles, thus giving additional strength to the tooth, and also enabling it to be more securely attached to the under side of the frame, substantially as described.

92,881.—N. P. QUICK, Carmel, N. Y.—*Smiths' Anvil-Clamp for Holding Tires while being Upset by Hand-Forging.*—July 20, 1869.

Claim.—1. An improved tire-clamp for attachment to anvils, formed by the combination of the plate C, arm D, arms E, arms F, jaws G, arms H, bail or connecting-bar I, connecting-bar J, treadle K, and springs L, with each other, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the tire-clamp with the anvil A and block B, when arranged as herein shown and described.

92,882.—JONATHAN RADER, Daleville, Ind.—*Corn-Planter.*—July 20, 1869.

Claim.—1. The combination of the drill D with standard D′, substantially as shown and described.

2. The combination of the scrapers E, bars *e*, with connecting-rod F and lever G, arranged to operate substantially as set forth.

92,883.—HENRY F. READ, Brooklyn, N. Y.—*Water-Meter.*—July 20, 1869; antedated July 13, 1869.

Claim.—1. The sleeve or shield M, having the two radial flanges *t t*, and the flange *r*, on the opposite side, and slot *m*, constructed substantially as and for the purpose specified.

2. The endless screw H, the driving-wheel J, and the wheel-house R, in combination with the shield M, when used together, in the construction of a water-meter, and all constructed substantially as and for the purpose described.

92,884.—HENRY F. READ, Brooklyn, N. Y.—*Molding Propeller for Water-Meters.*—July 20, 1869.

Claim.—1. The hollow cylindrical metallic mold, formed by spiral segments G G, and leaving spiral openings E′ E′ between said segments, constructed substantially as and for the purpose described.

2. The collars J and J′, in combination with the spiral segments G G, and the screws *f f*, whereby said parts are securely fastened in position, constructed substantially as and for the purpose described.

3. The opening E′ E′ between the segments, in which the wings of the propeller are molded, when constructed substantially as and for the purpose described.

4. The cap H, holding the body of the mold, and securely covering the several spiral segments and openings, constructed substantially as and for the purpose described.

5. So forming the mold for casting spiral propellers that, by removing the cap at one end, the thing cast may be drawn from the mold by being turned upon the same spiral pitch, as shown in Fig. 7, substantially as described.

6. The caps A and A′, in combination with the plungers K and K′, for holding the mandrel and shaft in position, and forcing the material to be molded into every part of the mold, constructed and arranged substantially as described.

7. The steel mandrel I, with its male-screw thread, upon which is formed the female-screw *p′*, in the body of the propeller, in combination with the plungers K K′, and collars J J′, as set forth.

8. The screw-propeller, as shown in Fig. 6, when made in metallic molds, substantially as described, and for the purpose set forth, as a new article of manufacture.

92,885.—GEORGE RIGHTER, Radnor, Pa., assignor to himself, GEORGE RIGHTER, Jr., and J. G. MAXWELL.—*Barrel-Head.*—July 20, 1869.

Claim.—Forming the head of a barrel of a single disk of wood, in the manner described.

92,886.—JOHN RIORDAN, Six Mile, Ind.—*Fence.*—July 20, 1869.

Claim.—The forked brace B′, pivoted, as at *x*, to the ground-sill B, and provided with adjusting holes *e*, and pins *i i*, for supporting the end posts of two adjacent panels, A, substantially as shown and described.

92,887.—MARVIN OWEN ROYCE, Boston, Mass.—*Miter-Box.*—July 20, 1869.

Claim.—1. The traversing guiding-bar U, provided with clamping screws, substantially as described, for straightening, stiffening, holding, and guiding the saw, either with or without the groove in the bar.

2. The guiding-bar U, in combination with the guiding-stand S, when arranged to operate substantially as described.

92,888.—PETER SCHMITT, Stewartsville, Mo.—*Sulky Land-Roller.*—July 20, 1869.

Claim.—The ground-rolling apparatus herein described, having rollers A and B connected with the cross-head, substantially in the manner specified.

92,889.—AMOS SHELLABARGER, Miami County, Ohio.—*Corn Planter.*—July 20, 1869.

Claim.—1. The arrangement of the grain wheel or disk G, with its projecting lips or spaces *i i*, and pin-wheel P, with set-screw S, for regulating the sizes of discharge-holes *f f*, with slot S′, for adjusting the same, as shown and described.

2. The lever *a*, with springs *b* and *c*, arranged for operating the rotating wheel or disk P, the valve V, and punch M together, as shown and described.

3. The combination of levers Z X L, cam J, and lever *a*, with springs *b* and *e*, for operating the dropping-mechanism, as shown and described.

4. The arrangement of the punch M, brush *g*, and disks G and P, as shown and described.

92,890.—JOSEPH SIMPSON, Millbury, Mass.—*Temple for Loom.*—July 20, 1869.

Claim.—1. The wedge-shaped piece *d′* and bolt *d*, in combination with the guide *e*, piece *e′*, spring C, and shank B, arranged and operated substantially as and for the purpose set forth.

2. The combination, with a temple, constructed as described, of the hinged shank E, with its slotted portion *e*, in combination with the plate F and spring *f*, as and for the purpose described.

92,891.—SAMUEL W. SLOCUMB, Albany, Ill.—*Wagon-Axle.*—July 20, 1869.

Claim.—1. The projections *a* a^1 a^2 and *b* b^1 b^2, formed upon the outer surfaces of axle-skeins or axles themselves, eccentrically thereto, substantially as and for the purpose described.

2. The packing B, in combination with the skein A, substantially as and for the purpose set forth.

92,892.—BYRON SLOPER, St. Louis, Mo.—*Hydrogen Generator and Carbureter.*—July 20, 1869.

Claim.—1. The arrangement of the gas-holder so as to be adjusted in accordance with the accumulation of salt and sediment thereunder, substantially as set forth.

2. The arrangement of the gas-holder to be rotated with its tray, and thus wash the metal on the latter, substantially as set forth.

3. The gauge *a*, arranged on the vessel A, acting with the fluid and stationary gas-holder, to indicate the acid action in generating gas, substantially as set forth.

4. The vessel A, gauge *a*, adjustable holder C, connected tray B, carbureter E, pipe F, service-pipe G, and its safety-stuffing, when combined and arranged substantially as set forth.

92,893.—CHARLES D. SMITH, Drytown, Cal.—*Ore-Concentrator and Endless Sluice-Blanket.*—July 20, 1869.

Claim.—1. The revolving endless belt B, having the sides constructed of the blocks *c c*, so as to form a moving sluice, and having the bottom of this moving sluice covered with alternate strips of blanket, *b b*, and amalgamated metal plates *c c*, each overlapping the other, so as to form a surface for collecting both the sulphurets and gold, quicksilver, and amalgam, in the manner substantially as described.

2. The adjustable roller E, both for the purpose of regulating the tension of the belt and for supporting the belt while passing between the drums B and C, substantially as described.

3. The chamber N, having the elongated orifices *n* and *n'*, and the short hose-pipe *o*, for directing a stream or streams of water upon the belt, substantially as and for the purpose described.

4. The hammers I I, attached to the shaft F', and operated by means of the cams K K, placed on the parallel shaft F, so as to strike the moving belt B, substantially as and for the purpose described.

5. The blanket-adjuster S, arranged so as to bear upon the belt, and place the blankets in a proper position to receive the ore, substantially as above described.

92,894.—GEORGE HAND SMITH, New York, N. Y.—*Manufacture of Wrought Iron and Steel Direct from the Ore.*—July 20, 1869.

Claim.—Heating the ore to a white heat, by what I have herein described as neutral heat, and, while the ore is in that state, applying to it the required charge of carbon, in the gaseous form, from a source separate from the heating-fire, to effect the conversion of the ore, substantially as and for the purpose specified.

92,895.—T. J. SOUTHWORTH, Rochester, N. Y.—*Tag.*—July 20, 1869.

Claim.—As an improved article of manufacture, a label-tag, composed of paper having an increased thickness of material across one end, which increase is formed in the manufacture of the paper, as set forth.

92,896.—LEWIS SPERRY, East Windsor Hill, and LESTER ROBINSON, New Haven, Conn., assignors to LEWIS SPERRY and ADELIA SPERRY.—*Cradle.*—July 20, 1869.

Claim.—1. The disk K, provided with a crank-pin and clock-work, H, in combination with the plate G, when used for rocking-cradles, substantially as shown.

2. The frame A, standards C, pins D, plate G, and clock-work H, and cradle B, when all are combined, substantially as described.

92,897.—WILLIAM M. SPRINGER, Springfield, Ill.—*Legislative Voting-Apparatus.*—July 20, 1869.

Claim.—The combination of the vertically acting catches *d* and pivoted keys *a*, controlled by springs *f*, connected to the L-shaped standards *h*, all arranged upon a suitable frame, and operated by cords or their equivalents, for recording the votes of a legislative or other body by weight, substantially as specified.

92,898.—HENRY STEM, Mifflinburgh, Pa.—*Plow.*—July 20, 1869.

Claim.—1. The metal plates E and F, when used to attach the beam D to the share, in combination with the slotted plate G, substantially in the manner and for the purpose set forth.

2. So constructing the top of the frame H, with a groove formed upon its landside, that two kinds of beams can be used, in the manner and for the purpose specified.

3. The combination of the frame H, share *a*, moldboard A, handles B B, plate G, and the beams D or C, when the several parts are constructed to operate substantially as set forth.

92,899.—JACOB STEUER, Albany, N. Y.—*Carriage-Jack.*—July 20, 1869.

Claim.—The rack B, rollers *g g*, pinions *e e*, gear-wheel *d*, ratchet-wheel D, pawl K, and stock A, all constructed, combined, and arranged as and for the purpose described.

92,900.—ENOCH P. TERREL, West Liberty, Ohio.—*Mechanism for Operating the Picking-Staff in Looms.*—July 20, 1869.

Claim.—1. The combination of the disks F, their cut-out section being arranged in opposite directions, with treadles G, springs I *i*, ropes or bands *g*, and rollers *h*, arranged to operate the picker-staves, substantially as described and shown.

2. In combination with the above, the pawl *j* and ratchet-wheel J, on shaft H, substantially as and for the purpose set forth.

92,901.—MACKLOT THOMPSON, St. Louis, Mo.—*Mashing Grain for Distillation.*—July 20, 1869.

Claim.—The method, herein described, of preparing or mashing grain for distillation, by grinding or pulping the same after it has been boiled or mashed, and before it is subjected to the action of the malt or other saccharifying agent, substantially as and for the purposes set forth.

92,902.—W. C. TILTON, Spring Place, Ga.—*Railway-Car Coupling.*—July 20, 1869.

Claim.—The coupling-link, constructed as described, of the slotted wedge-shaped extension A, cast upon one end of the link B, whereby, when adjusted in the sockets of the buffers, the weighted end A will overbalance the link B, and maintain it in a horizontal position, as herein set forth, for the purpose specified.

92,903.—GILES A. TITUS, Mantorville, assignor to himself and SAMUEL B. PINNEY, St. Cloud, Minn.—*Machine for Sowing and Drilling Grain.*—July 20, 1869.

Claim.—1. The double feed-rollers B, triangular cup or bucket, in combination with the triangular hopper A and openings C, when constructed and operating as described.

2. The drill-tubes, and the method herein described for attaching the tube-receiver N to furrow-opener H, when constructed and operating as described.

3. In combination with the tubes N, the pivoted furrow-opener H and spring *i*, when secured by a bolt passing through a rubber roll.

4. The grain-conductor and the device *m*, for changing from drilling to broadcast-sowing, and *vice versa*, when constructed and operating as described.

5. The double lever used to regulate the amount of grain sown per acre, when constructed and operating as described.

6. In connection with two draught-wheels, the solid hub, cast with a journal upon the inner end or side thereof, having the bearings upon the frame of the machine, and terminating in the clutch on the end of the journals, and fitted to receive the clutch and the rod upon which the feed-rollers B are rigidly attached.

7. The construction, arrangement, and operation of the rollers L, separately and together, in raising the drag-bars of the machine, when constructed and operating as described.

92,904.—GILES A. TITUS, Mantorville, assignor to himself and SAMUEL B. PINNEY, St. Cloud, Minn.—*Distributer for Sowing and Drilling Grain.*—July 20, 1869.

Claim.—1. The cylinder, with slots, and the slides

or buckets *b*, contracting and extending to and from the center of said cylinder.

2. The cone *a*, for the purpose of extending the said slides or buckets *b*.

3. The rubber rings *c*, for the purpose of contracting, and the withdrawing of said slides or buckets *b* toward the center of said cylinder, and whenever applied to drills or broadcast seeders, using for that purpose the aforesaid cylinder, slides, or buckets, rubber ring, and cone, or any other substantially the same, which will produce the intended effect.

92,905.—LEWIS A. TOWNE, La Crosse, Wis.—*Clothes-Drier.*—July 20, 1869.

Claim.—A clothes-rack, consisting of standard A, bar *b*, pitman *e*, lever *g*, plate *n*, pinion *p*, hook *d*, and rack B, all combined, arranged, and operating substantially in the manner and for the purpose described.

92,906.—CHARLES TRUESDALE, Cincinnati, Ohio, assignor to himself and WILLIAM RESOR & CO., same place.—*Stove-Grate.*—July 20, 1869.

Claim.—1. In the described combination, with a series of pendent front bars, D, the series of interposed bottom bars E, upon the rock-shaft F, substantially as set forth.

2. In combination with the elements of the preceding clause, the upturned fingers *e* of the movable bars E, for the purpose designated.

3. The arrangement of pendent bars D, rock-shaft F, movable bars E, and rests H.

4. In this connection, the provision of the guard I, as and for the purpose explained.

92,907.—CHARLES LAFAYETTE TUCKER, Chicago, Ill.—*Manufacture of Chipped Beef.*—July 20, 1869.

Claim.—1. The mode herein described of preserving dried or smoked beef, by chipping or slicing, and compressing such slices into a compact form, and inclosing such packages in air-tight integuments, substantially as specified.

2. As a new article of manufacture, smoked or dried beef, when sliced or chipped ready for use, and inclosed in any close-fitting integument, substantially as and for the purposes specified.

92,908.—CHARLES M. TYLER, Indianapolis, Ind.—*Combined Lamp-Wick Trimmer, Chimney-Cleaner, and Lifter.*—July 20, 1869.

Claim.—A combined lamp-wick trimmer, chimney-cleaner, and lifter, having sections A and B, pincers C, knives D and E, and fingers G and H, constructed and arranged substantially as specified.

92,909.—JOHN P. TYLER, Penn Yan, N. Y.—*Saw.*—July 20, 1869.

Claim.—A saw, formed with a space between the pairs, B C, of fleam-teeth, and with pairs of tapering clearing-teeth A A, having larger spaces between the fleam-teeth and the clearing-teeth than between the clearing-teeth in each pair, as and for the purposes set forth.

92,910.—BENJAMIN VAN BRAEKLIN, Le Roy, N Y.—*Cultivator-Teeth.*—July 20, 1869.

Claim.—A tooth, having its shank, A, provided with one or more spurs *e*, for the purpose of securing it in position, substantially as described.

92,911.—THOMAS B. VAN PEIT, Westport, Mo.—*Animal-Trap.*—July 20, 1869.

Claim.—1. The construction and arrangement of the wings B B, the disk-wheels J J′, triggers *m m′*, sector-levers *g g*, with their pinions *f f*, and the pan R, operated by either a spring or weight, or by both combined, substantially as and for the purposes herein shown and described.

2. In combination with the above, the cage W, when said cage is provided with the drop X, engaging with the trigger *m′*, whereby the animal entering the cage raises the drop, to operate the trigger and set the trap, as herein shown and described.

92,912.—FRIEDRICH VETTER, New York, N. Y.—*Sewing-Machine for Sewing Turned Shoes.*—July 20, 1869.

Claim.—1. The frame D, constructed as described, in combination with the sewing-mechanism, when made longitudinally adjustable, to suit shoes of different width, by means of the toothed bar *d* and spring-pawl *c*, as set forth.

2. The combination of the curved needle J and thread-guide L with the hooks M N, sole support R S, and feed-pinion *x*, all arranged and operating substantially as herein shown and described.

92,913.—SIMON VREELAND, Cuba, N. Y.—*Bee-Hive.*—July 20, 1869.

Claim.—The manner of supporting a series of comb-racks, *a a a*, on the projecting ends of the middle bars *b b*, so as to provide for the circulation of air between the outer and inner case, for the purposes herein described.

92,914.—SIMON VREELAND, Cuba, N. Y.—*Farm-Gate.*—July 20, 1869.

Claim.—The flanged friction-roller hinge G, as constructed, in combination with the pin *i*, to lock into it, the steadying-hook *b* and stationary flanged roller *d*, all arranged to operate substantially as and for the purposes set forth.

92,915.—SIMON VREELAND, Cuba, N. Y.—*Carriage-Wheel.*—July 20, 1869.

Claim.—1. The metal hub, as constructed, with a wrought-iron cylinder, C, whose ends are beveled off to fit into V-shaped grooves, *c c*, in the flanges *b* and D′, in combination with the pipe-box B, screw-cap D, holding-caps *d d*, secured by set-screws *i i*, and collar *a*, on the axle A, substantially as and for the purposes specified.

2. In combination with the metal hub, as above described, the metal spokes E E, as constructed, they being the largest at the ends, tapering toward the center, and are provided with square heads, *e e*, elastic washers *f f*, they being inserted and secured in the cylinder C, as herein described.

92,916.—JAMES WALTON, Roseburgh, Oreg.—*Fleece-Bundling Apparatus.*—July 20, 1869.

Claim.—1. The combination, with the permanent sides of a case, of the hinged side E and pronged cover, when arranged substantially as specified.

2. The combination of the same of a movable bottom and pivoted hooks, when arranged for discharging the cork by the movement of the bottom, substantially as specified.

3. The foregoing combination of devices, forming a machine whereby fleeces of wool or other compressible substances may be compressed and tied, substantially as specified.

92,917.—JOHN L. WELLINGTON, Dansville, N. Y.—*Fence.*—July 20, 1869.

Claim.—A portable fence, consisting of the panels A, having rails *b*, front strips *c*, top pieces *d*, and bars or uprights *a*, provided with holes *e* and posts B, provided with projections *f* and holes *h*, constructed and arranged as herein described, so that the panels may be attached or detached from the posts by pins *g*, as set forth.

92,918.—FRANKLIN WESSON, Worcester, Mass.—*Combined Pistol and Dirk.*—July 20, 1869.

Claim.—The combination of a dirk-knife, provided with a spring-catch, *c*, with a two or more barrel revolver, and arranged within a central sheath, substantially as described.

92,919.—M. ALLISON WHEELER, San Francisco, Cal.—*Sleeping-Car.*—July 20, 1869.

Claim.—1. The seats B of the car, provided with backs composed of two parts, C C, connected to branched arms D, constructed and applied to the side rails of the seats, to admit of said parts C being adjusted, in the manner substantially as and for the purpose set forth.

2. The frame or boards E, suspended from the side and top of the car by means of the hooks *j*, the jointed arms F, the pendent loop G, substantially as herein shown and described.

92,920.—JOSEPH B. WILKINSON, Troy, N. Y.—*Cooking-Stove.*—July 20, 1869.

Claim.—1. The employment of a self-feed, made in two parts, so as to close up telescopically, constructed and located substantially as described and set forth.

2. A front-plate of a cooking-stove, having a portion removed at the top, to permit a self-feed to pass through and in combination therewith, in manner and for the purpose as described and set forth.

3. The employment of the chambers *i* and *l*, divided by the division-plate *h*, with the apertures *n* and dampered apertures *m*, constructed substantially in manner and for the purpose as described and set forth.

4. The employment of the chambers *q* and *r*, divided by the division-plate *s*, with the apertures *u*, and dampered apertures *v*, constructed and located in manner and for the purpose substantially as described and set forth.

92,921.—Elias Woodward, Brooklyn, N. Y.—*Neck Tie and Bow.*—July 20, 1869.

Claim.—1. The tongue *e*, and straps 5 and 6, in combination with the metal cravat-frame, as and for the purposes set forth.

2. The hook 3, on the portion 2 of the frame *a*, in combination with the tongue *e*, for connecting the bow to the metal frame *a*, as set forth.

92,922.—John M. Woolwin, Mechaniesburgh, Ohio.—*Tinners' Gutter-Trough.*—July 20, 1869.

Claim.—1. The arrangement of rod *r*, lever E, and loops, cranks, or levers *l l*, for operating the clamp, as shown and described.

2. The arrangement of the dowel-pin *t*, entering-support B, in combination with the semi-cylindrical sliding ends *e e* of trough A, for holding the same in position while clamping the gutter-plates, as shown and described.

3. The segments or forms C C, and springs S S, in the clamp-frame F, with rod *r*, semicircular lever E, boxes *b b*, and loops or levers *l l*, when the same are used in combination, as shown and described, as and for the purpose specified.

92,923.—Alfred J. Works, Fair Haven, Conn.—*Brick-Kiln.*—July 20, 1869.

Claim.—The combination and arraugement herein described of the drying-chamber A^2, burning-chamber A^1, with valves or damper D, the perforated movable platform or car C, with a heat-distributing reservoir, consisting of chamber *f* and pipe *g*, and furnaces B^1 and B^2, all constructed and operating substantially as set forth.

92,924.—William K. Wyckoff, Ripon, Wis.—*Compound Oil for Coating Leather and Metals.*—July 20, 1869.

Claim.—The improved water-proof oil-preservative for leather and metals, with the ingredients combined in about the proportions herein named, with the addition of the specific oil mentioned, and not heretofore used, the whole prepared substantially as set forth.

92,925.—P. W. Derham, Brooklyn, N. Y.—*Paper-File.*—July 20, 1869.

Claim.—The combination, in a banker's file, of the leaves E, made of stiff brown paper, cut and numbered from one to thirty-one; the intermediate guards or strips A, with the stiffened ligatures B, and the elastic band C, the whole arranged and made as described, and forming a banker's file, in which may be arranged and secured all the notes, bills, &c., maturing during the month.

92,926.—Marcia Adkins, Oswego, N. Y.—*Hair-Curling Apparatus.*—July 27, 1869.

Claim.—The combination, with the heating and winding mandrel A, of the spiral band C, spring-pad D, comb E, and guide-pin F, substantially as specified.

92,927.—Arthur Amory, New York, N. Y.—*Guide-Attachment for Boring-Instruments.*—July 27, 1869.

Claim.—The guide-attachment for boring-instruments, consisting of the adjustable clamp A, constructed as described, the spirit-levels B C, one of which is pivoted, and the scale F, all arranged with reference to each other and the clamp, and adapted for attachment to the shank of a boring-tool, in the manner described, for the purpose specified.

92,928.—Solomon Andrews, Perth Amboy, N. J.—*Velocipede.*—July 27, 1869.

Claim.—In the velocipede having a single driving-wheel in the rear, and two guide-wheels in front, the arrangement of the several parts which constitute the velocipede, as and for the purpose set forth.

92,929.—J. B. Baker, Syracuse, N. Y., assignor to himself, Hiram R. Olmstead, and Richard W. Jones, same place.—*Carpet-Sweeper.*—July 27, 1869.

Claim.—1. The adjustable collar, carrying the driving-pulley, when constructed and arranged substantially as described, for the purpose of tightening the belt.

2. The combination of the dust-box A, rotary brush B, frame C, handle D, adjustable driving-pulley *e*, and band *f*, all constructed, arranged, and operating substantially as herein described.

92,930.—George H. Bliss, Brooklyn, N. Y.—*Tobacco-Box.*—July 27, 1869.

Claim.—The sliding-rammer *e*, sustained in guides within the tobacco-box, and provided with a ring or head by which to move the same, in combination with the said box *a*, and the socket *e*, as set forth.

92,931.—A. L. Bogart, New York, N. Y.—*Gas-Heater.*—July 27, 1869.

Claim.—As a new article of manufacture, the within-described gas-stove burner A, with its mixing-chamber B, the whole device constructed and arranged to operate substantially as and for the purpose shown.

92,932.—Martial Bonnin and Charles Escudier, New Iberia, La.—*Sugar-Boiling Apparatus.*—July 27, 1869.

Claim.—1. The setting of square kettles in a graduated scale and position, as shown, with the expanding flue corresponding, for the purpose of evaporating cane-juice or other product substantially the same; also, the two methods of setting the same.

2. The pivot-damper, as here constructed and applied, in sugar or other evaporating apparatus, the whole operating and being substantially the same.

92,933.—John W. Bowers, Newton, Mass.—*Manufacture of Braid.*—July 27, 1869.

Claim.—1. The braid herein described, composed of two kinds of single yarns, prepared for the braiding-machine in spinning, substantially as described.

2. The method, herein described, of making single-yarn braids, consisting in preparing the yarns for braiding by spinning them with two different degrees of twist adapted to the operations of the braiding-machine, and which are spun and wound respectively upon two sets of braiding-bobbins, and which yarns, in the condition in which they are spun and wound, are formed into braid on a braiding-machine, all substantially as described.

92,934.—Edwin D. Brainard, Albany, N. Y.—*Method of Preserving the Aromatic Principle of Hops.*—July 27, 1869.

Claim.—The improved mode of preserving the aromatic principle of hops, as herein described.

92,935.—Potto Brown, Houghton and Bateman Brown, Huntingdon, England.—*Millers' Staff.*—July 27, 1869; patented in England June 23, 1868.

Claim.—The skeleton millers' staff, hereinbefore described, the same being composed substantially of two straight edges rigidly connected together, so as to form a skeleton frame, with a plane surface, for the reception of the coating of color, which is to be transferred to the high parts of the millstone.

92,936.—George Brownlee, Princeton, Ind.—*Pedecycle.*—July 27, 1869.

Claim.—1. A pedecycle, made and operating substantially as herein shown and described.

2. A vehicle in which the weight to be conveyed

is suspended from the top of the wheel or wheels, substantially as herein shown and described.

3. The brakes *f g*, applied automatically to the bearing-roller *a*, to prevent either backward or forward motion of the hoop, substantially as herein shown and described.

4. The pivoted tube C, containing the ball *h*, to operate the brakes *f g* automatically, substantially as herein shown and described.

92,937.—THOMAS J. BUTCHER, Wenona Station, Ill.—*Medical Compound.*—July 27, 1869.

Claim.—The medical compound composed of the ingredients above mentioned, in about the proportions named, and prepared substantially as described, for the purposes set forth.

92,938.—JAMES D. BUTLER, Lancaster, Mass.—*Braiding-Machine.*—July 27, 1869.

Claim.—1. The hooked traveler-tops, substantially as described.

2. The combination of the hooked traveler-tops with the upper table, substantially as described.

3. The combination of the spool-catch with its weight, substantially as described.

4. The means for operating the spool-catch by the thread, undisturbed by the jumping of the weight, substantially as described.

92,939.—WILLIAM F. COLLIER, Worcester, Mass.—*Corn-Popper.*—July 27, 1869.

Claim.—1. The clamp C, for holding the rim body, wires, and handle, substantially as described.

2. The making the hinge-wire in the form, and applied in the manner shown and described, and both holding the parts together, and making an eye or hinge for the cover.

92,940.—JOHN H. CROWELL, Providence, R. I.—*Bobbin for Spinning.*—July 27, 1869; antedated July 23, 1869.

Claim.—The spiral spring C, in combination with the chambered bobbin A B, as and for the purposes set forth.

92,941.—T. J. DEAN, St. Louis, Mo.—*Condenser for Stills.*—July 27, 1869.

Claim.—1. A condenser for stills, having the vapor delivered into a condensing-chamber, among a series of tubes, through which a current of cold water is passing, substantially as described.

2. The combination of the chamber A and tube B with the water-chamber D, tubes F, chamber C, and overflow E, all constructed and arranged to operate substantially as described.

3. The supplementary chamber A, for the condensation of the fusel-oil, so arranged that the vapor must pass through it, on its way from the heater to the condensing-chamber, as set forth.

92,942.—W. U. DUDLEY, New York, assignor to himself and LAWRENCE W. CLARK, Brooklyn, N. Y.—*Hand-Mirror.*—July 27, 1869.

Claim.—A hand or portable toilet-mirror, constructed substantially as described, of a base-piece, B, with its handle-extension piece or stiffener C, glass A, and outer back and handle D, made of any suitable composition or cement, substantially as specified.

92,943.—CLEAVELAND F. DUNDERDALE, New York, N. Y.—*Machine for Generating and Carbureting Gas.*—July 27, 1869.

Claim.—The combination of valves *a* and *w* with the hydrocarbon-chamber and pipes, the flanch, or skirt N, surrounding the perforated compartments of the chamber D, and the wire-cloth *x* on the inside of said chamber, the screw-cap, or man-hole W, and the condensing-receptacle M, arranged and combined and used in connection with a gas-generator, substantially as herein specified and described, and for the purpose set forth.

92,944.—P. DUNHAM, Leeds, Mass.—*Stop-Motion for Silk Stretching and Winding Machine.*—July 27, 1869.

Claim.—The arrangement of the lever I, with hook-arm *k*, upon the frame, and the spring-catch *l* upon the pulley B or its shaft, all substantially as described, and so that the breaking of the thread causes them to engage and stop the machine, as set forth.

92,945.—JOSEPHUS EASTERDAY, Frederick County, Md., and J. B. CROWELL, Greencastle, Pa.—*Grain-Drill.*—July 27, 1869.

Claim.—1. The device *n*, when constructed as and for the purpose set forth.

2. The bar G, when furnished with staple K, in combination with device *n*, pulleys *m*, *h*, and *h'*, cords *j* and *d*, and bar H, the whole constructed, arranged, and operating substantially as described.

92,946.—JOHN EIBERWEISER, Cincinnati, Ohio, assignor to himself and FREDERICK GROENE, same place.—*Fodder-Cutter.*—July 27, 1869.

Claim.—1. The described construction and arrangement of knife H, whose wrists *h* occupy eyes 1 in bolts 2, which pass horizontally through the free ends of the vibrating arms F F', in the manner set forth.

2. The described arrangement of adjustable apron and weighted pressure-roller, whose operating-handle is provided with a notch and button, as and for the purpose explained.

92,947.—HIRAM FILSON, Monongahela City, Pa.—*Bee-Hive.*—July 27, 1869.

Claim.—The construction of the removable side and half top of the upper and lower sections, (either or both,) in such manner that said slide and half top, when united, either rigidly or by a hinged connection, may be removed together, substantially as herein shown and described, and for the purpose set forth.

92,948.—A. FINLEY, Bainbridge, Ind.—*Front Gear for Wagon.*—July 27, 1869.

Caim.—1. The combination, with the hounds, the axle, and curved bar D, of the bar A, arranged as specified.

2. The tongue, constructed of two parts E, and connected to the hounds in the two recesses by the bolt G and braces I, all arranged as specified.

3. The arrangement of the bolster K, sand-board M, and fixed bolt L', all substantially as specified.

92,949.—JEREMIAH FISK, Augusta, Me.—*Spring-Bed.*—July 27, 1869.

Claim.—A compound spring, made up of a series of springs formed from wire coiled and arranged to be united by rods or ties *b*, substantially as described.

92,950.—WILLIAM S. FOSTER, Montgomery, Ala.—*Shoes.*—July 27, 1869.

Claim.—The extension of the uppers or quarters, or both, in boots or shoes, and uniting them at the bottom, so that the shank of the sole will be dispensed with, substantially as described.

92,951.—DANIEL D. FRANKLIN, Flora, Ill., assignor to himself and JOHN S. UNDERWOOD, same place.—*Corn and Seed Planter.*—July 27, 1869.

Claim.—1. In combination with the driver's or planter's seat, supported by the furrowing-teeth, the spring I, interposed between the seat and the furrowing-teeth, substantially as described, for the purpose set forth.

2. In combination with the arrangement covered by the first claim, hanging the axle of the center carrying-wheel D, so that the wheel can vibrate vertically, and adapt itself to uneven ground, substantially as described.

3. In combination with the devices for setting the furrowing-teeth nearer together or farther apart, the devices for adjusting the covering-wheels to follow the track of the furrowing-teeth.

4. The devices for setting the lower ends of the planting-tubes forward and backward, to plant the rows obliquely, substantially as described.

5. The grid, or rack L over the traversing seed-bar, or between the bar and brush.

92,952.—CHARLES H. FRANKLIN, jr., New York, N. Y.—*Steam-Generator.*—July 27, 1869.

Claim.—A steam-boiler having a third combus-

tion-chamber, E, the same being set in the boiler in the manner substantially as herein shown and described.

92,953.—Samuel H. Frederick, Matteson, Mich.—*Three-Horse Clevis.*—July 27, 1869.

Claim.—The hook marked 1, slotted at one end, to receive the hook 2 and hook 3, slotted at the rear end, to receive the upper end of hook 2, in combination with hook 2, all constructed and arranged as described and shown.

92,954.—John H. George, Newark, N. J.—*Hose-Coupling.*—July 27, 1869.

Claim.—1. The hose-coupling, constructed with the male and female sections B, substantially as and for the purpose specified.

2. The tube C, or its equivalent, in combination with the coupling B D, substantially as and for the purpose specified.

92,955.—John Gibbs, Brooklyn, E. D., N. Y., assignor to himself and Calvin H. Carter, Waterbury, Conn.—*Match-Safe.*—July 27, 1869.

Claim.—The tubular match-holder, formed of a strip of sheet-metal, rolled up and closed at the end, as set forth, in combination with the ring or band *c*, that keeps the joint of the tube from opening, and forms the base for the tubular cap *d*, as set forth.

92,956.—Thomas Gill, Waltham, Mass., assignor to himself, John Stark, and John Stark, jr., same place.—*Governor for Steam and other Enginery.*—July 27, 1869.

Claim.—1. The clock-escapement mechanism, substantially such as herein described, to regulate or govern the speed of the engine or other motor with which it is connected, substantially in the manner shown and set forth.

2. The combination with the aforesaid escapement-governing mechanism, for regulating the speed of the engine or other motor, of the friction-sleeve or device which connects the same with the driving-shaft, substantially as herein shown and set forth.

3. The arrangement, with the escapement-mechanism and friction-brake or sleeve, of the gears *r s t*, toothed wheel *q*, lever *w*, and sectoral rack *b′*, for transmitting power from the escapement to the engine.

92,957.—Roscoe J. Gould, Newark, N. J.—*Steam-Pumping Engine.*—July 27, 1869.

Claim.—The combination of the springs C with steam-pumps, as shown in Fig. 1 of the drawings, or in any other mechanically-equivalent way to produce the same effect.

92,958.—C. J. Greene, Olneyville, R. I.—*Mule for Spinning.*—July 27, 1869.

Claim.—1. The combination with the quadrant-wheel I, of the rocker-shaft, with the gear E, for operating the friction-shaft to back off the yarn from the spindles, substantially as described.

2. The combination with the shipper-lever K and the friction-clutch, of the gearing-mechanism, consisting of the bell-crank O Q and connecting-apparatus, substantially as described, for the purpose specified.

3. The combination, with the bell-crank O Q, of the lever R, actuated by a pin on the wheel E, substantially as and for the purpose specified.

4. The combination with the friction-shaft A, of the drum *i*, when arranged relatively to each other, and to the main rack, and provided with actuating mechanism, substantially as and for the purpose described.

5. The combination, with the clutch-pinion *a*, of the shifting-lever *d*, arranged to be actuated by the return movement of the rocker-shaft, substantially as and for the purpose described.

92,959.—Richard Groom, Albany, N. Y.—*Device for Cleaning Plows.*—July 27, 1869.

Claim.—1. The shear-blade A, in combination with colter B, substantially as herein shown and described.

2. The horizontal shear-blade C, and the two-edged movable shear-blade A, in combination with an upright blade or colter, B, substantially as herein shown and set forth.

92,960.—William Guest, London, assignor to James Buckingham, Walworth, England.—*Machine for Making Cord.*—July 27, 1869.

Claim.—1. A circular woven cord or rope with a solid center, made by weaving the threads or strands together across the center of the cord or rope, substantially in the manner herein set forth.

2. The combination of the spindles *b* with the plates *c*, *d*, and *e*, when said parts are all constructed, arranged, and made to operate conjointly, substantially in the manner and for the purpose herein set forth.

3. The conductors *g* and *h*, when combined with the spindles *b*, and with the levers *g*x and *h*x, and so arranged as to select automatically the desired number of spindles from the central plates *c*, and guide them into the recesses *d*x *e*x, in the peripheries of the plates *d* and *e*, while the other spindles are carried round with the said central plate, all substantially as and for the purposes set forth.

4. The spindles *b*, plates *c*, *d*, and *e*, the conductors or tappets *g* and *h*, and central hollow axis c^1, combined and operating together, substantially as and for the purposes set forth.

92,961.—John H. Holbert, Ottawa, Ill., assignor to himself, Elias P. Read, and T. W. McFarland, same place.—*Hedge-Setter.*—July 27, 1869; antedated July 5, 1869.

Claim.—1. The trench-opener, when constructed of a front-cutter, D, and two vertical wings D′ D′, at the rear thereof, forming a space between, entirely open and unobstructed at the top and rear, so that the plants may be put down through the top, and fixed in the ground, without being displaced by the onward progress of the machine, as and for the purposes set forth.

2. So attaching and connecting said trench-opener D D′ to the frame of the machine that the same may be moved upon its pivoted attachment, in the manner and for the purposes specified.

3. In combination with said trench-opener, the bar S and lever F, arranged and operating as and for the purpose shown and described.

4. In combination with said trench-opener D D′, the arrangement of the vertical curved runner R, in such a manner as to move the soil laterally toward the row of plants, and press the soil close against the said plants, in the manner herein shown and specified.

5. In combination with said trench-opener and runner R, the beveled rollers M, arranged and operating as and for the purposes set forth.

6. The belt H, when provided with a series of pincers or plant-holders, arranged and operating substantially as and for the purposes described.

7. The gripe J, in combination with a crank, K, and inclined block, L, in the manner and for the purposes specified.

8. The combination of the shaft K, and gearing connecting the same, with the pulley G and belt H, with pincers I, in the manner set forth.

92,962.—James P. Hall, New York, N. Y.—*Compound for Cutting and Polishing.*—July 27, 1869.

Claim.—A compound for cutting and polishing purposes, having the within-named ingredients thoroughly mixed, substantially as herein described and set forth.

92,963.—Israel C. Hall, Sanbornton, N. H.—*Whiffletree.*—July 27, 1869.

Claim.—The arrangement and combination of the spring C, the hook *a*, and the lever D, with the whiffletree A and its hitching-head B, as set forth.

92,964.—John C. Ham, New York, N. Y.—*Carriage.*—July 27, 1869.

Claim.—The top D and seat B, extended in line with each other, in combination with the curved front C, substantially as described, for the purpose specified.

92,965.—Alexander Harroun, Jr., Onondaga, N. Y.—*Sewing-Machine for Working Button-Holes.*—July 27, 1869

Claim.—The rotary reciprocating hook *b*, in combination with the holding-points *i* and *k*, for laying the thread, substantially as and for the purpose set orth.

92,966.—Otto Hennig, Chicago, Ill.—*Street-Reflector for Windows.*—July 27, 1869.

Claim.—The arrangement and combination of hinges E F H I, rod P C G, socket B, thumb-screws L J. K and frames *o o'*, when made and operated substantially as and for the purpose set forth.

92,967.—Benjamin B. Hill and John R. Hill, Worcester, Mass.—*Corn-Popper.*—July 27, 1869.

Claim.—Forming the guard, the eye or loop S, making the hinge for the cover and the handle or tang of one and the same continuous piece of wire, when constructed and operating in the manner and for the purposes above set forth and described.

92,968.—Laban Holloway, San Francisco, Cal.—*Gang-Plow.*—July 27, 1869.

Claim.—1. The movable arms C C, pivoted to the sides of the frame, and the treadle-lever J attached to the pole, so that by their simultaneous movements the plow-frame can be raised and lowered, substantially as described.

2. The slotted stops H at each side of the driver's seat, and the strap or bar L, beneath the frame, substantially as and for the purposes set forth.

92,969.—Henry A. House, Bridgeport, Conn.—*Screw-Wrench.*—July 27, 1869.

Claim.—1. A screw-wrench, having its sliding jaw held back by a spring connecting it with the fixed portion *b*, substantially as and for the purpose herein set forth.

2. The combination and arrangement of the spiral spring C, the hollow screw B, and the sliding jaw A, substantially as herein described.

92,970.—Leonard D. Howard, St. Johnsbury Vt.—*Shutter-Fastener.*—July 27, 1869.

Claim.—The pivoted levers *f g*, when provided with the lateral-operating prongs *k k*, arranged, with relation to each other, in the manner herein shown and described, for the purpose specified.

92,971.—William C. Howard, Belle Plaine, Iowa.—*Grain-Register.*—July 27, 1869.

Claim.—The adjustable block, carrying the pulley X, in combination with the box B 2 3 4, and spring-pawl Q R, for holding the half-bushel, and operating a registering device, as set forth.

92,972.—Thomas Huckans, New Baltimore, and J. Wesley Carhart, Troy, N. Y.—*Needle-Protector for Sewing-Machine.*—July 27, 1869.

Claim.—The needle-guard, constructed as described, consisting of the bar B, secured at *a a* to the needle-bar A, and provided with bearings *b b*, for the reception of the movable guard-rod C, adjusted by the collar I, and surrounded by the spiral spring G, as herein described, for the purpose specified.

92,973.—James Ives, Mount Carmel, Conn.—*Harness-Buckle.*—July 27, 1869.

Claim.—1. The buckle, consisting of the frame C E D, tongue *b* and pivot *a*, all arranged, combined, and operating substantially as described.

2. The reduced arched portion D of the buckle, in combination with the tongue *b b'* and pivot *a a*, substantially in the manner and for the purpose described.

92,974.—William H. Jackson, New York, N. Y.—*Ornamental Back for Fire-Place.*—July 27, 1869.

Claim.—An ornamental back and sides for open fire-places, consisting of a cast-metal frame, enameled on its face with diamond or other shaped spaces filled with tile of various colors, the said back and sides locking together in the manner and for the purpose substantially as herein set forth, shown, and described.

92,975.—Thomas C. Kelly, West Liberty, Pa.—*Horse Hay-Fork.*—July 27, 1869.

Claim.—The tines A, head B, jointed arm C, sheave D, spring-catch, and cords H and I, all combined and arranged substantially as specified.

92,976.—John Lauer, Chicago, Ill.—*Velocipede.*—July 27, 1869.

Claim.—The combination of the wheels A B, reach E, connecting-rod M, lever P, disk O, standard F F, spring-standards K, spring-seat plate J, and seat I, all combined, arranged, and operating as herein shown and described.

92,977.—James Lee, New York, N. Y.—*Chair.*—July 27, 1869.

Claim.—The seat-frame D, hinged board E, straps or webbing F, springs G, and upholstering or cloth back H, in combination with each other and with the chair-frame A, secured together by the screw-bolts B and nuts C, substantially as herein shown and described, and for the purpose set forth.

92,978.—Johan Linnemann, Copenhagen, Denmark.—*Turret for Vessels.*—July 27, 1869.

Claim.—A turret, so supported as to permit its elevation and depression, substantially in the manner and for the purpose set forth.

92,979.—David Lithgow, Philadelphia, Pa.—*Water-Gauge.*—July 27, 1869.

Claim.—The chamber G, tube H, and glass gauge-tube E, in combination, substantially as and for the purposes described.

92,980.—George S. Lovell and Mary F. Lovell, Philadelphia, Pa.—*Probang, or Instrument for Treating Diseased Orifices.*—July 27, 1869.

Claim.—The combination, with the handle A, of the elastic supporting and retaining cap C, retained thereon by means of the stem B, substantially in the manner and for the purposes set forth.

92,981.—William John Lynd. Golden City, Colorado Ter.—*Method of Extracting Iron and other Oxides from Clay, Porcelain-Earth, &c.*—July 27, 1869.

Claim.—1. The method of removing iron and other discoloring matters and impurities from potters' clay, and other argillaceous substances, substantially in the manner and by the means herein described, that is to say, by the employment of unmagnetized plates of iron or steel, immersed or placed in a solution of the clay to be purified, substantially as set forth.

2. The employment, with the unmagnetized iron or steel plates, immersed in the bath of clay to be purified, of electricity, substantially in the manner specified, whereby the action of said plates may be rendered more energetic.

3. The use in combination with unmagnetized steel plates, whether the action of the same be aided or not by electricity, of artificial or natural permanent magnets, substantially as and for the purposes set forth.

92,982.—Henry G. Mack, Oswego, N. Y.—*Clothes-Drier.*—July 27, 1869.

Claim.—The standards *a*, with side-pieces *b*, hinged at the top and the bottom, in combination with the metallic braces *c*, when constructed and used substantially in the manner and for the purpose described.

92,983.—William C. Marr, Peru, Wis.—*Combined Drill and Saw-Gummer.*—July 27, 1869.

Claim.—1. The bar or frame A a^1, drill-shaft B, screw-sleeve D d', jaws a^2, and set-screws E, in combination with each other, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the flange plates G, screws H, bar I, and nuts J, with each other and with the jaws a^2 of the frame or bar A a^1, substantially as herein shown and described, and for the purpose set forth.

3. The oiler K L, constructed as described, in combination with the bar or frame A of the machine, substantially as herein shown and described, and for the purpose set forth,

92,984.—DANIEL MCCULLOUGH, Oxford Township, Ontario, Canada, assignor to himself, WILLIAM J. SCOTT, Jr., and PATRICK HARTY.—*Corn-Planter.*—July 27, 1869.

Claim.—1. In connection with the hopper-bottom E, having the seed-passage *e*, the alternately-reciprocating slides F F′, arranged above and below the bottom E, and operated by means of the spring-arms H H′, and pins I J, or their mechanical equivalent, all said parts being constructed to operate substantially as and for the purposes set forth.

2. The parts M M, when arranged upon the rim of a wheel, as and for the purposes described, said parts consisting essentially of the fixed plates *m m n*, pivoted plates O *n*′, rod *r*, and spring *s*, constructed to operate together, substantially in the manner specified.

3. The combination of the parts M M, constructed to operate as described, with the wheel B, pins I J, arms H H′, levers or bars G G, slides F F′, and hopper-bottom E, all operating together substantially as described and for the purposes specified.

92,985.—THOMAS MCKINLEY, New York, N. Y.—*Plastering-Machine.*—July 27, 1869.

Claim.—The box A, piston C, tube O, and delivery-tube R, arranged to operate substantially as herein shown and described, and for the purpose specified.

92,986.—GEORGE V. METZEL, Baltimore, Md.—*Card-Case.*—July 27, 1869.

Claim.—The false bottom B, furnished with springs *f f*, in combination with press-plate *g* and case A, all combined to operate substantially in the manner and for the purpose described.

92,987.—ELIE MONEUSE and LOUIS DUPARQUET, New York, N. Y.—*Coffee-Pot.*—July 27, 1869.

Claim.—1. The cover *f*, with the flange sitting down inside the cylinder of the urn, in combination with the flange *e* and water-ring *c*, as and for the purposes set forth.

2. The urn for coffee or tea, formed of sheet-copper, with a lining of sheet-tin fitted and attached to the inside of the copper vessel, as and for the purpose set forth.

92,988.—DANIEL MOORE and EDWIN MOORE, Brooklyn, N. Y.—*Filtering-Tube.*—July 27, 1869.

Claim.—The tubular case *b*, formed with segmental springs, in combination with the clamping-band *e*, and filtering diaphragm *d e*, as and for the purposes set forth.

92,989.—EDWIN MOORE, Brooklyn, E. D., N.Y.—*Hay and Manure Fork.*—July 27, 1869.

Claim.—The movable tines, with shanks that are wider at their back end than toward the front part of the shanks, so as to be retained within the metal socket by the handle, in the manner set forth.

92,990.—SAMUEL MOORE, Providence, R. I.—*Throttle-Valve Gear.*—July 27, 1869.

Claim.—The combination, with the stem and operating-lever of a throttle-valve, of a segment, B, a friction-pinion and a friction-device, substantially as specified.

92,991.—THOMAS N. MORSE, Fairhaven, Mass.—*Velocipede.*—July 27, 1869.

Claim.—The frame A of a velocipede, when made of one single piece, by bending the side-bars *b* and the front extension *c*, on the plate *a*, substantially as herein shown and described.

92,992.—WILSON NOBLE, New Haven, Conn.—*Plow.*—July 27, 1869; antedated July 3, 1869.

Claim.—The wheel D, constructed with a corrugated surface, in combination with the plowshare, substantially as and for the purpose set forth.

92,993.—GEORGE OAKLEY, Quincy, Ill.—*Composition for Curing Corns.*—July 27, 1869.

Claim.—The within-described composition or tincture, substantially as and for the purpose specified.

92,994.—GEORGE OSBORN, Lakeville, Mass., assignor to himself, FREDERICK LEONARD, and JOSEPH C. OSBORN, same place.—*Nail-Machine.*—July 27, 1869.

Claim.—The arrangement and combination of the movable gauge-guards *r r*, provided with mechanism for operating them as described, with the intermediate guard E, the two series of cutters A F B G, and the vibratory nail-plate carrier I, the whole being essentially as set forth.

92,995.—GEORGE OSBORN, Brooklyn, assignor to ABRAHAM G. JENNINGS, New York, N. Y.—*Lace-Making Machine.*—July 27, 1869.

Claim.—In combination with the needles B, the sinkers C and the slotted frame D, the bar or strap E, arranged to slide upon the pins *a*, substantially as described, for the purpose specified.

92,996.—RICHARD A. PARSONS, Clinton, Iowa, assignor to himself and TEN BROCK & NOYES, same place.—*Guide for Gang-Saw Gates.*—July 27, 1869.

Claim.—The combination and arrangement of the fender-posts A A, the adjustable inclined pieces B B B B, the arms P P P P P P P P P P P P, supporting and fixing the guide-bars C C C C, when constructed and arranged substantially as and for the purpose herein set forth.

92,997.—GEORGE H. PEABODY, New York, N. Y.—*Cotton-Seed Huller.*—July 27, 1869.

Claim.—The concave receptacles *e*, in combination with the adjustable and fixed knives *c* and D D, substantially in the manner and for the purpose as herein set forth.

92,998.—JOHN H. PEAKE, Washington, D. C.—*Zincing-Iron.*—July 27, 1869.

Claim.—A composition of saturated solution of chloride of ammonium, hydrochloric acid, and metallic zinc, dissolved in hydrochloric acid, with the addition of chloride of potassium, in the proportions stated, or equivalent proportions, for the purpose specified.

92,999.—J. J. PEMBERTON, Oakland, Ill.—*Ventilator for Chimney.*—July 27, 1869.

Claim.—Metallic ventilating-arches A B, constructed and arranged for application to the chimneys, substantially as specified.

93,000.—TIMOTHY G. PHELPS, Belmont, Cal.—*Scraper.*—July 27, 1869.

Claim.—The scraper, consisting essentially of the carriage A, draught-bar G, semicircular turn-plate E, and scraper C, the whole being combined substantially in the manner and for the purpose described.

93,001.—HERMAN PIETSCH, New York, N. Y.—*Pitcher for Cooling Liquid.*—July 27, 1869.

Claim.—An improved cooling-pitcher, formed by the combination of the double walls A B, interior wall D, flanged bottom F G, bottoms C H, pipe or pipes K, tube L, tube N, spout P, and air-holes *o*′, with each other, said parts being constructed, arranged, and operating substantially as herein shown and described, and for the purpose set forth.

93,002.—JOEL PUTNAM, Danvers, Mass.—*Finishing Split Leather.*—July 27, 1869.

Claim.—1. The above-described method of preparing the surface of split leather, the same consisting in applying thereto a composition substantially as set forth, and glassing and boarding it.

2. The improved manufacture of split leather as so made or treated.

93,003.—HENRY F. READ, Brooklyn, N. Y.—*Mold for Casting the Cylinder and Dial-Box of Water-Meter.*—July 27, 1869.

Claim.—1. The mold for the cylinder and dial-box, composed of parts C and F, and the mandrel D, with its removable collar *d*, when constructed substantially as and for the purpose described.

2. The mold for the cap of the dial-box, composed of the parts L, Q, and K, constructed substantially as and for the purpose described.

3. The cylinder A and the dial-box B and cap P when cast in metallic molds, constructed substan-

tially as described, and substantially in the manner described, as a new article of manufacture.

93,004.—Nelson Read, Winchendon, Mass.—*Mechanical Movement.*—July 27, 1869.

Claim.—The transmitting of motion from a driving-shaft, C, to two counter-shafts, A B, through the medium of the bent or curved connecting-rod D, made in one piece, and cranks or crank-pulleys A′ B′ C′, arranged to operate in the manner substantially as shown and described.

93,005.—Jacob Rebhun, New York, N. Y.—*Clarionet.*—July 27, 1869.

Claim.—1. The B-key B, connected with the lever C, which has the ear *d*, to actuate the C-key D, substantially as herein shown and described.

2. The lever F of the C-sharp key E, when provided with the ear *e*, to close the key D, as set forth.

3. The lever J, pivoted between the levers C and F, to act at once on the keys D and G, substantially as herein shown and described.

4. The plate I, pivoted to the clarionet, to close the key G, and to produce the B-C-sharp trill, substantially as herein shown and described.

5. The application, to a clarionet, of a second C-sharp key G, to operate substantially as herein shown and described.

6. The application, to a clarionet, of a second E-flat key L, substantially as herein shown and described.

7. The combination of the seeondary E-flat key L with the key N and levers M, substantially as herein shown and described.

8. The keys P and Q, or either, provided, together with the G-sharp keys, to produce A and the G-sharp and A trill, substantially as herein shown and described.

93,006.—E. L. Roberts, Brooklyn, N. Y.—*Bolt.*—July 27, 1869.

Claim.—The combination, with the door C, of the bolts E, A, and D, when the bolt A is arranged to be thrown out when the said bolts E A are withdrawn, and *vice versa*, and when the bolt D is arranged to permit the bolt E to be shot and the bolt A to be withdrawn, whether the said bolt D falls into its notch or not, substantially as specified.

93,007.—E. L. Roberts, Brooklyn, N, Y.—*Ventilating-Apparatus.*—July 27, 1869.

Claim.—The arrangement of cold and hot air passages, heater, and valve-devices for opening the one passage and closing the other, and *vice versa*, simultaneously, by one and the same movement of the valve-apparatus, substantially as specified.

93,008.—Mark L. Roberts, New Brunswick, N. J.—*Knitting-Machine.*—July 27, 1869.

Claim.—1. The combination of the needle-guide Q and needle-board opener and yarn-guide P, when all are constructed and arranged substantially as and for the purpose described.

2. The combination of the same with the needles and the needle-cylinder, substantially as and for the purpose specified.

3. The adjustable cylinder F, arranged to be geared with the spiral flange G, or ungeared therefrom, substantially as described, to be operated by the shaft H, for the purpose set forth.

4. The needle-cylinder F and needles, combined in one machine with the two sets of needle-operating mechanisms herein described, as and for the purpose set forth.

5. The combination, with the needle-cylinder and its needles, of the slide B, made adjustable in the supports C C, substantially in the manner and for the purpose set forth.

93,009.—George A. Robinson, Mount Pulaski, Ill.—*Bee-Hive.*—July 27, 1869.

Claim.—The construction and arrangement of the moth-box A, the platform B, the bee-orifice I, and the slide E, substantially as and for the purposes described.

93,010.—Anna P. Rogers, Quincy, Ill.—*Guide for Sewing-Machine.*—July 27, 1869.

Claim.—The combination of the recessed portion C of the gauge-plate, and the curved adjustable spring F, with the concave pad E, all arranged and operating as described, whereby all lateral movement of the pad is prevented, and its pressure upon the cloth adjusted, as herein described, for the purpose specified.

93,011.—G. D. Rowell, Menomonee Falls, Wis.—*Adjustable Mold-Board and Colter.*—July 27, 1869.

Claim.—A colter and mold-board, consisting of colter A, mold-board B, slots C, and bolts D, substantially as described.

93,012.—Francis Schleifer, San Francisco, Cal., assignor to himself and Francis Cutting.—*Method of Manufacturing Vinegar.*—July 27, 1869; antedated July 16, 1869.

Claim.—1. Mingling oxygen with a vapor intended to be acetified before the same is condensed, by injecting atmospheric air, or the prepared gas, into the vessel or compartment in which the vapor is generated, substantially as described.

2. The generator F′, consisting of the compartment A, provided with the air-injection pipe *b′*, and the compartment B, divided by the perforated plate F, and provided with the pipe D and cap E, the whole being constructed and arranged substantially as and for the purposes set forth.

3. In combination with the generator F′, the acetifier H, one or more, for completing the process of acetification, substantially as described.

93,013.—William A. Sharpe, Syracuse. N. Y.—*Harvester.*—July 27, 1869; antedated July 16, 1869.

Claim.—1. The combination of the box B and link C, substantially as and for the purpose set forth.

2. In combination with the box and link, the rack or racks G and pinion-wheel F, substantially as and for the purposes mentioned.

3. Pivoting the link *c*, and swiveling the same, substantially as herein specified.

4. The entire combination of parts forming a caster-wheel for a reaping-machine, consisting of the wheel A and the box B, link C, adjustable pivoting-plate D, rack G, and pinion F, as and for the purposes described..

93,014.—Wesley Sherman and Giles Bishop, Middletown, Conn.—*Stop for Preventing Retrograde Motion in Sewing-Machines.*—July 27, 1869.

Claim.—The self-acting hanging pawl or stop-lever A in two parts, constructed and operating substantially as hereinbefore described, when applied to sewing machines, as and for the purpose described.

93,015.—John Sherwood, Ottumwa, Iowa.—*Potato-Digger.*—July 27, 1869.

Claim.—1. An improved potato-digger, formed by the combination of the plow or shovel A, curved bars B, rods D, cross-bar E, hinged cross-bar F, rods G, and handles H I, with each other, substantially as herein shown and described, and for the purpose set forth.

2. The apron F G, constructed as herein described, and provided with the lever K, working in the keeper *h′*, when arranged with reference to the rods D, curved bars B, and handle H, as set forth and shown.

93,016.—David R. Smith, San Francisco, Cal., assignor to himself and Norbert Landry.—*Velocipede.*—July 27, 1869.

Claim.—In the velocipede as constructed, and in combination therewith, the friction-clutch J J, spurs L L, arms K K, cross-bar M M, cam N, guide-wheel V, with hollow rim R′ and axle X, arranged and operated substantially as described.

93,017.—Walter Smith, Boonville, Ind.—*Cultivator.*—July 27, 1869.

Claim.—The frame B, the wheels C L, the gauge H, the gauge-lever I and gauge-spring J, the slides E, the regulators G, and the setter-screws O, and their application to, and co-operation with the plows, handles, and clevis.

93,018.—Hiram Staples, Nashua, N. H., assignor to himself and Elbridge M. Dudley, same place.—*Composition for Pavements, Roofing, &c.*—July 27, 1869.

Claim.—1. The employment of bitumen and coal-tar in or about in the proportions stated, with gravel, or its equivalent, and wood sawdust, in the formation of a composition for the fabrication of a pavement or roof-covering.

2. The combination of a finishing-layer of pulverized granite or comminuted stone with the composition made, as explained, of bitumen, coal-tar, gravel, and wood sawdust.

93,019.—Francis Stein and Henry Haering, New York, N. Y.—*Adjustable-Scaffold.*—July 27, 1869.

Claim.—1. The friction-wheels L L, arranged with relation to the post C and case A, as and for the purpose set forth.

2. The metallic wheel or ring F, supporting the socket B, combined with the platform A, substantially as specified.

3. The combination, with the ratchet-wheel, pinion N, and rack O, of the pawls, brake, and lever, when arranged substantially as specified.

93,020.—Richard Straubel, Williamsburgh, N. Y.—*Eye-Glass.*—July 27, 1869.

Claim.—The nose-pieces B′, suspended from the spring B, and pivoted to the glass frames A by means of the lugs *a b*, inclosing the spring *d*, as herein described, for the purpose specified.

93,021.—John Blake Tarr, Fairhaven, Mass.—*Steam-Generator Feed-Device.*—July 27, 1869; antedated July 12, 1869.

Claim.—1. The feed-water receiver D, arranged upon the feed-pipe E, leading into the boiler, the steam-pipe C leading to the steam-space in the boiler, the blow-off cock *c*, and the feed-water pipe *s*, said pipes being provided with cocks, and said parts being combined and adapted to operate substantially as described.

2. The feed-pipe E, leading from tank D into the boiler, and beneath the water-line therein, in combination with the feed-water apparatus, as herein described.

93,022.—Cebra L. Taylor, Norwich, Conn.—*Toy-Hoop.*—July 27, 1869.

Claim.—1. The arrangement and combination of the furcated handle A, the hoop or wheel B, the toy-engine L, and the mechanism applied thereto, and to the hoop or wheel, for the purpose of transmitting motion to the engine from the hoop or wheel, while being trundled or revolved, as explained.

2. The combination of the cross K, or crosses K N, with the furcated handle A, the hoop B, the toy-engine L, and the mechanism for operating the engine, by means of the hoop B, while being revolved, as specified.

93,023.—George H. Todd, Montgomery, Ala., assignor to himself and C. W. Kennedy, same place.—*Breech-Loading Fire-Arm.*—July 27, 1869.

Claim.—1. The combination of the catch *k*, trigger J, and spring *g*, when arranged within the breech, as and for the purpose described.

2. The rib D, substantially in the manner and for the purpose specified.

93,024.—William R. Walker, Concord, N. H.—*Fountain-Pen.*—July 27, 1869.

Claim.—The combination and arrangement of the air-passage through the valve *e*, and its stem B, with such valve and stem, the spring E, the flexible or elastic membrane or head *h*, and the reservoir *i*, of the pen-handle A, the whole being to operate substantially as set forth.

93,025.—Elias Werden, Pittsfield, Mass.—*Clothes-Rack.*—July 27, 1869.

Claim.—A clothes-rack, consisting of the posts A, which have the shoulders *a a*, and of the pivoted swinging bars B, which are arranged in sections, substantially as herein shown and described.

93,026.—Andrew E. Whitmore, Boston, Mass.—*Sliding Caliper.*—July 27, 1869.

Claim.—The combination and arrangement of the swiveling or socket-screw, and sectional saddle-nut *h*, with the movable jaw of a beam caliper, substantially as and for the purposes shown and set forth.

93,027.—Maximilian S. G. Wilde, Somerville, assignor to himself and James H. Noble, of Pittsfield, Mass.—*Gate.*—July 27, 1869; antedated July 15, 1869.

Claim.—1. The sliding bar C, in combination with a swing-gate or door, for the purpose as above specified.

2. The combination of the sliding bar C with a strap and weight, K, in the manner and for the purpose substantially as described.

93,028.—Irvin Willits, Deer Plain, Ill.—*Wagon-Brake.*—July 27, 1869.

Claim.—The brake-bar A, carrying the pivoted shoes F, hinged at its forward edge to the upper side of the tongue, and attached to the loose double-tree bolt by means of the adjustable link E, whereby, when the draught of the team ceases, the brake-bar falls, by its own gravity, to carry the shoes F against the periphery of the forward wheels, substantially as described, for the purpose specified.

93,029.—John W. Williams, Syracuse, N. Y.—*Detachable Foot-Valve and Seat for Pumps.*—July 27, 1869.

Claim.—The conical attachment C, containing the conical valve D, such attachment being secured to any ordinary pump, all substantially as herein shown and described.

93,030.—Simon Wortmann, New York, N. Y.—*Velocipede.*—July 27, 1869.

Claim.—1. The combination, with each other, of the frame A, wheels B C, steering-post D, shafts F I J, pinions *e d f*, lever *g*, fly-wheel K, pitmen *c*, levers H, and seats E and G, all arranged and operating substantially as herein shown and described.

2. The fly-wheel K, mounted on a separate shaft, J, the sliding pinion *f*, in combination with the lever *g*, substantially as herein shown and described, for the purpose specified.

93,031.—Lorenzo Zimmerman, Waukeshma, Mich.—*Grinding Edge-Tools.*—July 27, 1869.

Claim.—In combination with a grindstone, the bar C, socket D, lever G, and jaw I, constructed, arranged and operating substantially as herein shown and described, for the purposes set forth.

93,032.—John L. Agnew, Negaunee, Mich.—*Appendage to Blast-Pipes of Blast-Furnaces.*—July 27, 1869.

Claim.—An air-tight plug and cylinder, with substantially the arrangement and combination of holes and glass or glasses in same, as is above particularly set forth, and for the purpose herein described.

93,033.—John M. Allison, Salina, Pa.—*Broom-Head.*—July 27, 1869.

Claim.—The broom-forming apparatus herein described, having shank B, former D, and clamp E, constructed and arranged to operate substantially as specified.

93,034.—J. B. Andrews, Bridgeton Centre, Me.—*Saw-Horse.*—July 27, 1869.

Claim.—The arrangement of pedal *e*, rod *h*, V-spring *f* and toothed arm *k*, on a saw-horse, in connection with the fixed teeth *n* and rest *o*, for the purpose of easily holding the saw and wood to be sawed, the whole operating as herein set forth.

93,035.—John Baker, Fairbury, Ill.—*Grain-Binder.*—July 27, 1869.

Claim.—1. The combination of the gatherers B B B B with the troughs *a a*, A A, the treadle E, as and for the purpose specified.

2. In combination with the gatherers B B B B and troughs *a a*, A A, the trough H and elevator G, when arranged in the manner and for the purpose specified.

93,036.—JOHN BALL, Canton, Ohio.—*Plow.*—July 27, 1869.

Claim.—1. A plow-beam, constructed of two or more bars of iron or steel, when used in combination with a cast metallic standard, constructed as herein described, substantially as and for the purpose herein specified.

2. The plow-standard herein described, the same being composed of the standard A, with flanges *a a*, share-seat B, shoe-bar C, landside-bar *b*, post D, standard E, and corrugated segment F, and the said parts being so arranged as that the whole can be cast in a single casting, substantially as and for the purpose specified.

3. So constructing and arranging the landside of a plow as that the ends of said landside shall extend to the front of the plowshare and form the plow-cutter, and also, so that said landside can be turned end for end, so as to bring either of its cutter-edges into action, substantially as is herein specified.

4. The combined point and shoe herein described, composed of the bar M, with pointed ends *x x*, and flukes *r s*, when the same is used in combination with the plow-standard, landside, and movable share-piece, substantially as and for the purpose specified.

5. The spring K, when used in combination with the plow-standard A D and draught-rod or chain L, substantially as and for the purpose specified.

6. Providing the lower ends and inner-faces of the plow-handles with corrugated irons, pivoting said handles by means of a pivot-bolt to the plow-standard, and securing them at any desired angle with the beam, by clamping the corrugated irons against a corrugated segment on the plow-standard, by a clamping-bolt placed above the pivot-bolt, and passing through holes in the handles and a slot in the plow-standard, substantially as is herein specified.

93,037.—S. H. BARNES, Lanesborough, Pa.—*Water-Wheel.*—July 27, 1869.

Claim.—1. The plano-convex gates E, arranged in the mouths of the chutes, and geared with the wheel H, substantially as specified.

2. The arrangement of the hollow convex bearing I, upon the case or other support, about the wheel, and the concave bearing K, substantially as specified.

93,038.—B. F. BARNEY, Pontiac, Ill.—*Combined Harrow and Marker.*—July 27, 1869.

Claim.—The combination and arrangement of the sectional harrow C, marking-frame D, and levers *a* and *s*, constructed and operating substantially as and for the purposes specified.

93,039.—THOMAS BARRETT, Charlestown, Mass.—*Tool for Forming Lips on the Necks of Bottles.*—July 27, 1869.

Claim.—1. The combination of a neck-shaping and lip-forming tool, substantially as shown.

2. The retractile lip-former and lip-forming recess in the die, substantially as shown, and for the purpose set forth.

93,040.—RUFUS E. BEAN, Franklin, N. H.—*Device for Suspending Picture-Frames and Mirrors.*—July 27, 1869.

Claim.—The corrugated wire B, when used in connection with the frame A and cord C, substantially as described and shown, for the purpose set forth.

93,041.—UDNEY N. BEARDSLEY, Lawton, Mich.—*Dumping-Wagon.*—July 27, 1869.

Claim.—1. The arrangement of the frame A, boxes B C, board G, and stirrups H H, all constructed and operating substantially as set forth.

2. The stirrups H, when used to secure the bed to the wagon, and to dispense with the continuous reach, substantially as described.

93,042.—HIRAM BENEDICT, Detroit, Mich., assignor to himself and ALLEN CHANEY, same place.—*Cultivator and Harrow Combined.*—July 27, 1869; antedated July 16, 1869.

Claim.—1. The center bar A, the side bars D, and other bars G, when pivoted together and arranged relative to each other, as shown, for the purpose of expanding the implement.

2. The harrow-teeth M, in connection with the bars D and G, and the cultivator-teeth K and L, when arranged substantially as and for the purposes herein set forth, described, and shown.

93,043.—GEORGE W. BENSON and FRANK F. DOLAND, Sacramento, Cal.—*Sawing-Machine.*—July 27, 1869.

Claim.—In combination with the sliding block I, the spring R, when secured to the block, so as to rise and fall with it, substantially as set forth.

93,044.—BENJAMIN BEST, Dayton, Ohio.—*Compound for Destroying Insects.*—July 27, 1869.

Claim.—A composition compounded of the above-named ingredients, and applied for the protection of trees and vines, substantially as set forth.

93,045.—JAMES W. BRADY, Catonsville, assignor to M. W. BRADY, Baltimore, Md.—*Coffee-Cleaner and Polisher.*—July 27, 1869.

Claim.—1. The oblique deflecting-plates *e e*, arranged upon the inner surface of the perforated metal plates C′, in combination with the polishing-plates *m* of leather, or equivalent material, substantially as described, for the purpose specified.

2. The polishing-plates *m m*, of leather or equivalent material, arranged alternately with the perforated metal plates C′, substantially as described, for the purpose specified.

3. A cylinder constructed with solid longitudinal plates *c c*, lined with the rubbers *m*, of leather, or equivalent material, alternating with plates, *c′ c′*, of foraminated boiler-plate iron, or other equivalent plate-metal, substantially as and for the purposes set forth.

93,046.—EDWIN D. BRAINARD, Albany, N. Y.—*Refrigerator.*—July 27, 1869.

Claim.—A refrigerator, having the frame or body constructed with double side casings *a* and *b*, end casings *c* and *d*, and bottom casings *e* and *g*, inclosing dead-air chambers 1, 2, and 3, when said frame or body is sheathed both externally and internally with a continuous and hermetically sealed sheet-metal wrapper, *s*, substantially as and for the purposes herein described.

93,047.—BENJAMIN F. BREWSTER, Norwich, Conn.—*Bitting-Harness.*—July 27, 1869.

Claim.—The arrangement of the spring holding-case D, on the crupper-strap C, in combination with the girth B, bridle A, and reins *a a a*, substantially as shown and described.

93,048.—JOSHUA W. BROOKS and HENRY RUDOFF, Ashley, Ill.—*Drier.*—July 27, 1869.

Claim.—A fruit-drier, having reflecting roof A, reflecting doors B, fire-place D, and pipe E, constructed and arranged substantially as specified.

93,049.—FRANCIS M. BUCKLES, Altona, Ill., assignor to himself and JOHN A. STUCKEY, same place—*Harvester-Rake.*—July 27, 1869.

Claim.—1. The combination and arrangement of the lever D, shaft H, pitman J, shaft K, rod L, levers M, P, and R, for giving motion to the chain of levers S S S S S S S, and operating in combination with the said chain of levers, substantially as described, and for the purpose set forth.

2. The link T, combined with the chain of levers S S S S S S S, and rake-head U, and rods V V, substantially as described, and for the purpose set forth.

93,050.—JOHN M. BURKE, Dansville, N. Y.—*Potato-Digger.*—July 27, 1869.

Claim.—1. The above-described machine, for digging potatoes and freeing them from dirt at one continuous operation.

2. The pivoted grate F, in combination with the plow E, spike-wheels, axle, and pins, as described, constructed, arranged, and operating substantially as specified.

93,051.—CHARLES BURLEIGH, Fitchburgh, Mass.—*Steam and Air Engine.*—July 27, 1869.

Claim.—1. The arrangement of cranks which make entire rotations, substantially as herein speci-

fied, in the combination of a steam-engine with single-acting air-compressing pumps.

2. Devices for introduction of water into vertical air-compressing pumps, arranged to deliver the water between the tops of the pump-pistons and the pump delivery-valves, substantially as herein specified.

93,052.—JOHN BURNHAM, Batavia, Ill.—*Water-Tank for Railroads.*—July 27, 1869.

Claim.—The water-tank for railway-stations, herein described, having chambers C, man-holes and trap-doors *v*, pipes E and F, and conduit G, when constructed and arranged substantially as and for the purposes specified.

93,053.—W. H. CARR, New York, N. Y.—*Steam-Engine.*—July 27, 1869.

Claim.—1. The combination of the reciprocating cylinder B with the piston H, arranged to have a stationary position in relation to the reciprocating cylinder, and both free to oscillate on or in connection with a rock-shaft, K, to which the piston-rod is attached at its outer end, or beyond the one end of the cylinder, substantially as specified.

2. The arrangement of the valve I, by which the admission and discharge of the steam to and from the working-cylinder are controlled within the piston, for operation in connection with the ports or passages *a* and *b b*, essentially as described.

3. The arrangement, with relation to the main valve and ports, of the hollow piston-rod J, constructed with diaphragm *c*, forming inlet and exhaust passages *d e*, and terminating in a hollow oscillating bearing, substantially as shown and described.

93,054.—GEORGE W. CHANDLER, Fitchburgh, assignor to himself and JOHN G. FOLSOM, Winchendon, Mass.—*Balance-Scale.*—July 27, 1869.

Claim.—1. The combination of the knife-edged lever N with the smooth-faced lever Q, for varying the leverage of a balance-scale, substantially as set forth.

2. The combination, with rods F and G, and frame A, of the joint-pieces *a b* and pin *d*, substantially as and for the purposes set forth.

93,055.—WILLIAM H. H. CLARK, Burlington, Iowa.—*Car-Coupling.*—July 27, 1869.

Claim.—The draw-bars A, attached to the springs B, when provided with the curved edges in rear of the walls *b*, in combination with the guide-bar C, having a correspondingly curved end, the bar C, and the spring D, all arranged and operating as described, whereby the draw-bars are permitted greater lateral play at their front ends, as herein described, for the purpose specified.

93,056.—MILTON W. CLARK, Worcester, Mass.—*Cutter-Head.*—July 27, 1869.

Claim.—The cutter-head herein described, having one stationary and two laterally adjusting sections, substantially as shown in the drawings, and for the purposes set forth.

93,057.—LEWIS T. CLEMENT, Smyrna, Tenn.—*Machine for Ginning and Cleaning Cotton.*—July 27, 1869.

Claim.—1. The rotary brush D, having a continuous surface, in combination with the saws C and carding-cylinder A, substantially as and for the purpose herein described.

2. The combination, with the above, of the cam-disk *d*, operating in a fixed guide, secured to the frame, for communicating a reciprocating motion to the rotary brush D, as set forth.

3. The combination, with the saws of a cotton-ginning machine, of revolving, beating, or combing plates *f*, having slotted outer edges, whereby motes and other extraneous matter may be separated from the lint, while it is being carried upon the saws, substantially as herein described.

4. The rotary brush D, having a reciprocating motion in direction of its axis, substantially as and for the purpose set forth.

93,058.—CALVIN COLE, Ithaca, N. Y.—*Hinge.*—July 27, 1869.

Claim.—1. The arrangement and combination of the slot *d*, in the knuckle, and shoulder *e*, in the pin, substantially as shown and described, for the purpose set forth.

2. The construction of the pin C, with swells *c c c'*, fitting the bore of the knuckle, and reduced intermediate portions, substantially as and for the purposes specified.

93,059.—JAMES A. COLE, Adams, N. Y.—*Car Brake and Starter.*—July 27, 1869.

Claim.—1. The combination, substantially as described, with the axle B and spring-shaft D E, of the gears F F', sliding on said axle D, the distending-spring G, forks H H', and levers I I', all arranged to operate in the manner described, for the purpose specified.

2. The supplementary lever L, operated automatically by the spring-shaft, substantially in the manner described, in combination with said spring-shaft D E, the gear F', and axle B, substantially as and for the purpose set forth.

3. The traversing-nut M, operated by means of the screw *d* on the spring-shaft D E, and provided with the cam surface *m*, in combination with the lever L, gear F', and shaft B, substantially as and for the purpose described.

93,060.—EZRA COLEMAN, San Francisco, Cal., assignor to himself and ALMOND F. COOPER, same place.—*Sluice and Blanket for Collecting Gold and Silver.*—July 27, 1869.

Claim.—1. Forming the bottom of the sluice into transverse depressions C C, for the purpose of receiving and being filled with quicksilver, substantially as described.

2. Passing the pulp or tailings over an extended sheet of quicksilver, or over successive bodies of quicksilver, said sheet or bodies being contained in transverse depressions in the bottom of the sluice, substantially as described.

3. The blanket D, secured or arranged so as to sweep or impinge upon the surface of the moving pulp or stream, for the purpose of arresting and detaining fine particles of float-gold, substantially as above specified.

4. The descending graduated concentrating-troughs, either with or without the adjustable false bottoms F, constructed and arranged substantially as and for the purpose described.

93,061.—JOHN A. COZAD, Mercer, Pa.—*Churn.*—July 27, 1869.

Claim.—The angular self-locking slotted bars *e e*, in combination with the frame D D' and shafts *a a*, when constructed and operated substantially as shown and described.

93,062.—E. D. CRAWFORD, North Star, Pa.—*Sheep-Tagging Box.*—July 27, 1869.

Claim.—1. A sheep-tagging box, having the bars E, beveled sides A, and neck-rest in the forward end, all substantially as and for the purpose set forth.

2. In combination with the box A, the hook F, or equivalent, arranged as and for the purpose specified.

93,063.—JOB A. DAVIS, Watertown, N. Y.—*Gathering-Attachment for Sewing-Machines.*—July 27, 1869.

Claim.—1. In combination with the reciprocating gatherer, springs, to give a downward pressure and a forward movement to the gatherer, and a lever for imparting to it backward movement, and which receives its motion directly from the descending needle-bar, substantially as shown and described.

2. The combination of the inclined surfaced slide with the lever and its friction-roller, on the short arm of the lever, substantially as and for the purpose set forth.

3. The combination, with the reciprocating gatherer, of the adjustable gauge M, for varying the size or length of the gatherer, substantially as shown and described.

4. The combination, with the reciprocating gathering-edge D, of the plate R, adapted to be pressed down upon the under piece of fabric, and the spring

Q, which bears it down, and which also bears upon the upper piece of fabric interposed between the spring and plate, both these devices being located in rear of and out of reach of the gathering-edge.

5. The combination, with the gathering edge D, of the lever P and upright P′, to lift the gathering-edge from the fabric, and draw it back out of operative action, for the purpose set forth.

6. The spring-piece S, arranged to be interposed between the ordinary presser-foot of a sewing-machine and the fabric, to keep the work smooth after it is sewed, and prevent the tightening of the stitch from drawing it back.

7. The described gathering-mechanism as a whole, constructed and operating as shown and described.

93,064.—JOB A. DAVIS, Watertown, N. Y.—*Tuck-Creasing Attachment for Sewing-Machines.*—July 27, 1869.

Claim.—1. The combination, with a tuck-creasing device, which presses upon the cloth, of devices which impart to such creaser a positive motion, forward and backward, substantially for the purpose set forth.

2. The combination, with the arm which supports or carries the upper creasing-device, of a lever, to carry back the arm and then lift the creaser from the cloth, such lever being operated by the needle-bar of the sewing-machine, substantially as shown and described.

3. The combination, with the creasing-mechanism, of the spring-smoother, projecting under the presser-foot, and having an upright part thereon, hooking over the presser-foot, as and for the purpose set forth.

4. Combined with a piece or block, H, the arrangement, shown and described, of the spring-smoother and lifting-lever, so that, under all adjustments of the other parts, the lever and smoother may always preserve the same relative positions to each other and to the needle.

93,065.—JOB A. DAVIS, Watertown, N. Y.—*Sewing-Machine.*—July 27, 1869.

Claim—1. The combination of the needle-bar with the helper-bar, by means of a projection on the one and a recess on the other, a spring serving to force the two in opposite vertical directions, when the helper-bar is arranged between the presser-bar and needle-bar, and its metallic acting surface is in immediate proximity to the needle, substantially as and for the purpose described.

2. The combination of the shuttle-driving lever H, vibrating in one plane, with its motor-lever K, vibrating in another plane, and hung so as to be free to move in a plane transverse of the plane of its vibration, when such levers are connected together by a ball and socket joint, as shown and set forth.

93,066.—JOB A. DAVIS, Watertown, N. Y.—*Apparatus and Process for the Manufacture of Salt.*—July 27, 1869.

Claim.—1. The process, substantially as described, of purifying and evaporating, by supplying the evaporating-kettles with the liquid, already heated and purified, by means of the same heater which heats such kettles.

2. An evaporating-kettle, so constructed and applied as to serve also as a fire-back to the fire-chamber, substantially as described.

3. An evaporating kettle, constructed with longitudinal corrugations or hollow ribs, for receiving heat, and corresponding ones for containing the liquid to be evaporated, substantially as described.

4. A purifying-kettle, having corrugations or ribs, as last named, and communicating-channels, to give a long route or passage from the first to the last chamber thereof, and a discharging-outlet, substantially as described.

5. The combination of the fixed grating *f* with the movable grate-bars, arranged to receive a rocking motion in their bearings, substantially as described.

6. The combination of the adjustable heat-deflectors G with the corrugated troughs, substantially as described.

7. The construction, in an evaporating-apparatus, of the fire-chamber and its feed-chamber, so that the fuel may be supplied without opening any door directly admitting cold air to the ignited fuel, substantially as described.

93,067.—D. P. DAVIS, New York, N. Y., assignor to himself, WILLIAM J. COOMBS, and GEORGE H. GARDNER.—*Carriage-Wheel.*—July 27, 1869.

Claim.—The spokes *b b*, formed with forked ends, in combination with the two rims, connected with, and sustained, at the desired distance apart, by said forked spokes, as specified.

93,068.—FRANCIS E. DAY, New York, N. Y., assignor to himself and LYMAN H. DAY, same place.—*Covered Clasp for Hoop-Skirts.*—July 27, 1869.

Claim.—A covered fastening, for securing the hoops to the tabs and tapes, in the manufacture of hoop-skirts, substantially as herein specified.

93,069.—FRED. DENGLER, North Vernon, Ind.—*Dumping-Cart.*—July 27, 1869.

Claim.—1. The catch D, when constructed and arranged as described, and released by means of the roller *f*, substantially as and for the purpose shown.

2. The shaft E, provided with the arm F and roller *f*, and operated by means of the crank G, in combination with the catch D, and curved block H, substantially as shown, and for the purpose specified.

3. The within-described devices for locking, releasing, and tilting the box of a dumping-cart, consisting of the catch D, provided with the arm *d* and spring *x*, the shaft E, actuated by means of the shaft G, and provided with the arm F, and roller *f*, which operate upon the curved block H, all constructed and arranged substantially as and for the purpose specified.

93,070.—JONATHAN DILLON, New York, N. Y.—*Center-Board for Vessels.*—July 27, 1869.

Claim.—The laterally folding center-board B, composed of one or more folding leaves, having sockets *c*, the removable locking-rod *f*, the fixed socket *a*, and the guy *e*, combined for operation, substantially as herein described.

93,071.—J. S. ELKINS, Marquette, Wis.—*Sash-Holder.*—July 27, 1869.

Claim.—The combination of the tapering cap or housing H, open at its upper end, with the spool G, when constructed to operate substantially as and for the purposes specified.

93,072.—LEVI S. FALES, New York, N. Y.—*Apparatus for Evaporating Ammoniacal and other Liquids.*—July 27, 1869.

Claim.—The evaporating-apparatus, composed of the superposed intercommunicating evaporating-chambers B^1 B^2 B^3 B^4 B^5 B^6, interposed steam-passages C^1 C^2 C^3 C^4 C^5, steam-pipes *g*, overflow-pipes *e*, and vapor-conducting pipes *f*, the whole combined to operate substantially as herein described.

93,073.—JOSEPH BEVERLEY FENBY, Birmingham, England.—*Valve for Hydraulic Press.*—July 27, 1869; patented in England October 30, 1867.

Claim.—The improvements in valves for hydraulic presses, and for other purposes hereinbefore described, and illustrated in the accompanying drawings, that is to say, the said valves, constructed of a hollow cylinder and a piston or plunger working therein, the said hollow cylinder and piston or plunger being packed, and the parts connected therewith being constructed and arranged substantially as described and illustrated, whether the valve be worked by the direct motion of the piston or plunger, or by a small supplementary valve of similar construction.

93,074.—WILLIAM C. FREDERICK, Chicago, Ill.—*Coal-Sifter.*—July 27, 1869.

Claim.—The arrangement and combination of the grate B, handle H, spring-cover No. 2, incline collars D D, bottom slide E, in combination with the hod, as shown and described.

93,075.—JOSEPH FRY, New Orleans, La.—*Manufacture from Bananas and Plantains.*—July 27, 1869.

Claim.—1. The process herein described for desic-

cating bananas and plantains, substantially as specified.

2. Desiccated bananas and plantains, as a new article of food and commerce.

93,076.—William B. Gage, Saratoga Springs, and William H. Staats, Crescent, N. Y.—*Railway-Frog.*—July 27, 1869.

Claim.—The within-described construction and arrangement of the plates B B, as a consequence of which they are made capable of being reversed, and so changed in position as to present their upper and lower surfaces alternately to the wearing-action of the wheels, as and for the purpose specified.

93,077.—Charles F. Gay, Albany, Oreg.—*Gang-Plow.*—July 27, 1869.

Claim.—The cultivator herein described, having beam A, rods *d*, levers D, G, and P, ratchet H, chain *h*, curved arm *n*, and attachment Y, constructed and arranged substantially as specified.

93,078.—E. L. Gaylord, Terrysville, Conn.—*Hasp-Lock.*—July 27, 1869.

Claim.—The lock-bolt *d* and thumb-bolt *f g*, constructed substantially as described, when so arranged that the spring *e* presses directly against the former, and, through it, exerts pressure on the latter, substantially as and for the purpose set forth.

93,079.—Lewis Gibbs, Canton, Ohio.—*Sash-Holder.*—July 27, 1869.

Claim.—1. The combination of the circular sash-case B and retaining-shell F, when said retaining-shell is so constructed as that its back shall fit the inner face of the sash-case, and its movement shall be effected by its sliding within the sash-case, instead of rolling therein, or turning on an axle-pin, substantially as is herein specified.

2. The sliding-bolt A, when used in combination with the retaining-shell F, which is fitted to the sash-case B, and slides on the inner face thereof, instead of rolling thereon or turning on an axle-pin, substantially as and for the purpose herein specified.

3. The flange *d*, on the sliding-bolt A, when used in combination with the slot D in the case B, substantially as and for the purpose specified.

4. The case B, provided with the raised plate C, when used in combination with the retaining-shell F and sliding-bolt A, substantially as and for the purpose herein specified.

5. The improved sash supporter and lock herein described, consisting of the case B, with flanges *f* and raised plate C, with slot D, retaining-shell F, and sliding-bolt A, with flange *d*, the several parts being constructed, combined, and operating substantially as and for the purpose specified.

93,080.—J. H. Gill, Mount Pleasant, Ohio.—*Hand-Cultivator.*—July 27, 1869.

Claim.—A hand-cultivator, with detachable hoes, when secured to the handle by means of a collar and key, substantially as shown and described.

93,081.—Miller Graham, Coshocton, Ohio.—*Bee-Hive.*—July 27, 1869.

Claim.—1. The frame F, in combination with box G and perforated cover *g*, as and for the purpose set forth.

2. The hive above described, consisting substantially of the sections A A A′, &c., bottom piece C, frame F, feeding-box G, with lid *g*, and perforated pieces B, as and for the purpose set forth.

93,082.—T. B. Greene and C. Greene, Abington, Ind.—*Scroll-Sawing Machine.*—July 27, 1869.

Claim.—1. The arrangement of the saw-frame H, adjustable rod M, dog N, and worm R, on the adjustable shaft P, all substantially as herein set forth.

2. The arrangement of the segmental rack-bar S upon the under part of the table A, and provided with a pin which projects up through a slot in the table, for operating the carriage T upon the upper surface of the table, all substantially as specified.

3. The arrangement of the carrige T, composed of two adjustable pivoted arms and one central straight perforated arm, provided with a gauge or slide, V, and secured to the table by a pin, all constructed to operate substantially as specified.

93,083.—Nelson C. Gridley, Milwaukee, Wis.—*Manufacture of Sheet and Plate Iron.*—July 27, 1869.

Claim.—1. The process of removing the scale and slag from and at the same time hardening the surfaces of sheet and plate iron by means of one or more soft steel rollers, or their equivalents, substantially in the manner described.

2. In the process of manufacturing sheet and plate iron, the use of one or more soft steel rollers, or their equivalents, for removing the scale and slag, and at the same time making a uniform hardened surface, preparatory to its receiving the desired finish and color, substantially in the manner and for the purpose described.

93,084.—Josiah S. Haley and Samuel Worrell, New York, N. Y.—*Stench-Trap.*—July 27, 1869.

Claim.—The diagonally arranged partitions *a a′*, joined to the shell A, the part *a* descending below the level of the continuous pipe, so as to dip into the water held in the globular enlargement, and provided with a valve-seat and valve, substantially as and for the purpose herein set forth.

93,085.—William Hill, Pottsville, Pa.—*Metallic Kegs.*—July 27, 1869.

Claim.—Uniting the heads B to the body of the powder-keg by means of the joints and bearings *a*, *b′*, *c*, *d*, and *f*, as herein shown and described.

93,086.—Asa Hill, Norwalk, Conn.—*Composition Dental Plate.*—July 27, 1869.

Claim.—1. A dental plate, formed of cotton, woolen, silk, linen, paper, or any similar textile or fibrous material, combined with collodion, substantially as described.

2. The use of perforated metal plates or wire gauze, substantially in the manner herein described.

3. The method of securing teeth to the plate, by means of collodion, as herein described.

93,087.—George Hillegass, Philadelphia, Pa.—*Lamp-Burner.*—July 27, 1869; antedated July 21, 1869.

Claim.—The movable and perforated air-distributer H, with the deflector T at top, and springs V and regulating-screws S and M at the sides, constructed as herein described, and arranged, in relation to the cone F and burner A, substantially as shown, and for the purposes set forth.

93,088.—Ervin Homrighous, Shelbyville, Ill.—*Calendar Movement for Time-Pieces.*—July 27, 1869.

Claim.—1. The wheel B, having on its outer face the months of four years in succession, and pins *e*, arranged on the periphery parallel therewith, in the manner described, for the purpose of controlling the varying lengths of the months, substantially as set forth.

2. The wheel C, having on its face the days of the month, the pins *r*, and the notches S, arranged in relation to the wheel D, substantially as described.

3. The slide G, having springs *g*, for engagement with pins *r* and *e* of the wheels C and B, substantially as described.

4. The dogs *i* and I, pivoted at *k k′*, and arranged to operate in connection with slide G and detent-pawl J, substantially as and for the purposes described.

5. The combination of the actuating-pawl *a*, wheels B, C, and D, arranged in relation to each other, and with the slide, check, and springs, substantially as set forth.

93,089.—B. B. Hotchkiss, New York, N. Y.—*Projectiles for Ordnance.*—July 27, 1869; antedated July 20, 1869.

Claim.—1. So constructing the expanding-buttons B′, and so mounting them in the wedge-shaped cavities *b*, supported by the ridges a^1, as represented, that the buttons shall expand strongly, but slightly by moving forward to a definitely limited extent in

the act of firing, substantially as and for the purposes herein set forth.

2. The cavity *b*, under the packing at the rear, in combination with the wedging-grooves *a*, full cylindrical surfaces a^1, and buttons B′, adapted to move forward, and be expanded by such motion, all as and for the purposes herein set forth.

3. The provision a^2, in combination with grooves *a* and expanding-buttons B′, for receiving and locking portions of the said buttons B′, as herein specified.

4. A projectile, having a packing formed in a single piece, and having the following several qualities in combination: First, an expanding-plate or disk, B, adapted to receive the force of the discharge over the whole rear of the projectile; second, a central locking or fastening thereof; and third, the segmental wedges or buttons B′, directly supported against wringing by the projections *a*, on the exterior of the body A, all constructed, combined, and arranged as and for the purposes herein set forth.

93,090.—Thomas S. Hudson, East Cambridge, Mass.—*Hand-Stamp.*—July 27, 1869.

Claim.—1. The plate I, with an indicator, L, in combination with the printing-wheels of a hand-stamp, substantially as and for the purpose described.

2. A calendar-plate, K, in combination with the plate I, substantially as and for the purpose set forth.

93,091.—Jabez Jenkins, Philadelphia, Pa.—*Razor-Strop.*—July 27, 1869.

Claim.—A razor-strop, with a cork surface, when coated with the composition described, as a new article of manufacture.

93,092.—William E. Jenkins, Auburn, N.Y.—*Oil-Can.*—July 27, 1869.

Claim.—An oil-can, consisting of top A, tube B, spiral spring *a*, rod *b*, and cork *d*, all combined, arranged, and operating substantially in the manner and for the purpose described.

93,093.—William T. Johnston, Ottumwa, Iowa.—*Embroidering-Attachment for Sewing-Machine.*—July 27, 1869.

Claim.—The rod A, provided with the stud or cam C, arms D and E, and grooved plate B, in combination with the posts F, nuts N, and springs L, when all are constructed, arranged, and operated in the manner and for the purpose described.

93,094.—August Klein, New York, N. Y.—*Meat-Cutter.*—July 27, 1869.

Claim.—The combination of the series of curved knives N, beams M *m′*, curved uprights or guides O, connecting-rods L, cranks or crank-wheels K, shafts J, and gear-wheels I, with each other, with the revolving-block B, and with the crank gear-wheel G F, from which the block B is revolved, substantially as herein shown and described, and for the purpose set forth.

93,095.—John M. Klingenmeier, Buffalo, N. Y., assignor to John H. Miller, same place.—*Spittoon.*—July 27, 1869.

Claim.—In combination with box A and post C, the cover B and rod F, the whole to operate for the purpose substantially as described.

93,096.—Alois Kneppler, East New York, N. Y.—*Spring Bed-Bottom.*—July 27, 1869.

Claim.—The conical springs C, in combination with the interwoven spiral springs B, cross-rods *a*, hook or eye bolts B, and frame A, substantially as set forth.

93,097.—Frederick H. Laforge and George E. Somers, Waterbury, assignors to themselves and N. A. Baldwin, Milford, Conn.—*Screw-Press.*—July 27, 1869.

Claim.—The arrangement of the cross-bar F, so as to move up and down with the screw, and supporting the driving-pulleys and friction-wheels, substantially as set forth.

93,098.—Perley Laflin, Warren, assignor to himself and Z. E. Cary, West Brookfield, Mass.—*Detachable Horseshoe-Calk.*—July 27, 1869.

Claim.—1. The combination, with clamp-plate B and set-screw C, of the swiveled plate *e*, substantially as and for the purposes set forth.

2. The detachable calk B, constructed and secured to the shoe in the manner and for the purposes set forth.

93,099.—Herman Lerner, Pomeroy, Ohio, assignor of three-fourths of said invention to August Mayer, George Bauer, and Henry Rectanus, same place.—*Apparatus for Making Bromine.*—July 27, 1869.

Claim.—1. The use of tile for the material of a bromine-still.

2. Making a bromine-still of tile, all in one piece, without joints.

3. The arrangement of the stills E E, with the flues C C, D, by which the evaporating-pan and stills are heated by one fire, or the products of combustion may be conducted past the stills without heating them, substantially as and for the purpose described.

93,100.—William B. Lodge, Danbury, Conn.—*Fulling-Mill.*—July 27, 1869; antedated July 23, 1869.

Claim.—1. The combination of the steam-chest E and the showering-pipe *c c′*, with the chamber B, arranged and operating substantially as and for the purposes herein set forth.

2. The perforated draining-chamber G, arranged all across the trough, substantially as and for the purpose herein set forth.

93,101.—John C. Love, Philadelphia, Pa., assignor to himself and Silas Fuller, same place.—*Attachment for Gas-Burner.*—July 27, 1869.

Claim.—The within-described holder, consisting of the perforated casing D, outer flanged casing E, and openings *x x*, between the casings, when the whole is combined with an ordinary gas-burner, substantially in the manner described.

93,102.—R. O. Lowrey, Salem, N. Y.—*Compound for Rendering Fabrics Water-Repellent.*—July 27, 1869.

Claim.—1. A repellent fluid or composition made of the ingredients and in the manner substantially as herein described, and for the purpose set forth.

2. The treatment of fibrous and porous substances, whether in a raw, felted, or textile state, as well as of articles made therefrom, by the application of the repellent fluid herein described, substantially as and for the purpose set forth.

3. The repellent materials or articles, when so made by the application of my repellent fluid or composition, as herein described.

93,103.—John Macintosh and William Boggett, London, Great Britain.—*Boots and Shoes.*—July 27, 1869; antedated July 22, 1869.

Claim.—A shoe or gaiter, having elastic bands or fillets applied to and connecting the opposite sides of the "vamp" or "upper," so as to be concealed when the edges of the said sides are in contact, substantially as and for the purpose described.

93,104.—Hugh L. McAvoy, Baltimore, Md.—*Hot-Water Apparatus.*—July 27, 1869.

Claim.—The combination, with a hot-water or other heating apparatus, of the isolated chamber B, provided with the tubes C D, the diaphragm-piston F, or its equivalent, and the lever G, arranged to operate substantially in the manner described, for the purpose specified.

93,105.—Edmond P. McCarthy, San Francisco, Cal.—*Hydrocarbon-Burner.*—July 27, 1869.

Claim.—1. The arrangement of the adjustable steam-pipe E, in combination with the bell-mouthed pipe A, whereby said pipe E forms a plug to regulate the quantity of air admitted to mingle with the steam, substantially as described.

2. The combination and arrangement of the double bell-mouthed pipes A and I, for contracting and al-

lowing to expand again the mingled currents of air and steam, whereby the air, steam, and oil are more thoroughly mixed before entering the furnace, substantially as herein set forth.

93,106.—Thomas Meikle, Louisville, Ky.—*Apparatus for Bending Clevis-Blanks.*—July 27, 1869.

Claim.—1. The combination of the double rack B, and its socket and bolt b^1, with the die C, substantially as and for the purpose set forth.

2. The combination of the double rack B and die C, with spur-wheels D D′, and recessed rollers E E′, substantially as and for the purpose set forth.

3. The combination and arrangement of the double rack B, die C, spur-wheels D D′, recessed rollers E E′, bed A, rock-shaft F, and connecting-rod G, substantially as and for the purpose set forth.

93,107.—W. D. Mendenhall, Farmington, Ill.—*Press for Operating, Bending, and Shaping Dies.*—July 27, 1869.

Claim.—1. The combination, in a press for shaping the mold-boards or plates of plows, and for bending similar metal plates, &c., the lever *a*, with its handle H, rod or rods *b b*, with their bolts or connections, the vertical bar or shaft E, with its shoe or head at its lower end, the fulcrum or support *f*, of the lever *a*, and the guides or platforms B and D, all substantially as described, and for the purposes set forth.

2. In combination with the above, and working with them, the adjustable platform C, with its bolts *g g g g*, or equivalent means for adjustment of this platform to the upper one, to suit mold-boards of any thickness to the full power of the lever, substantially as described and for the purposes set forth.

93,108.—George W. Miller, Woonsocket, R. I.—*Drill-Chuck.*—July 27, 1869.

Claim.—A chuck for holding drills, having cylinder A, ring D, chucks *s*, springs *v*, and shaft B, constructed and arranged substantially as specified.

93,109.—Edward Morgan, Washington, D. C.—*Galley-Rest.*—July 27, 1869.

Claim.—The slotted arms C and staples *c*, or their equivalents, when used in connection with the shelf B, as described, substantially as and for the purposes specified.

93,110.—William R. Morris, Cincinnati, Ohio—*Roller-Skate.*—July 27, 1869.

Claim.—The roller-frame G, provided with tenon H, and inclined planes M, in the described combination, with the projections F F′ and jaws D D′, the whole being constructed and operating substantially in the manner and for the purposes set forth.

93,111.—F. B. Morse, New Haven, Conn.—*Trace-Fastener.*—July 27, 1869.

Caim.—In combination with the stud or whiffletree-end B, the loop C, arranged so as to operate substantially in the manner specified.

93,112.—Jacob Mosher, Mendota, Ill.—*Door-Latch.*—July 27, 1869; antedated July 24, 1869.

Claim.—1. The cam-plate D, knob E, with lugs E′, and plate G, constructed as set forth, and arranged to regulate the movement of the plate D, substantially as shown and described.

2. The "Janus-faced" latch-bolt B, in combination with the catch F, spring C, and cam-plate D, substantially as described.

93,113.—George M. Mowbray, Titusville, Pa.—*Method of Exploding Nitro-Glycerine.*—July 27, 1869.

Claim.—An electrical fuse for discharging nitro-glycerine, composed of the priming composition specified, or its equivalent, for inclosing the circuit-wires at their point of interruption, in combination with an intermediate priming-charge of fulminate of mercury, or its equivalent, all inclosed in cylinder O, and arranged substantially as and for the purpose specified.

93,114.—James W. Nathan, Chicago, Ill.—*Skate.*—July 27, 1869.

Claim.—The movable heel-plate E, having lugs F F and pins B D, in combination with the slots C C in the runner A, as and for the purpose set forth.

93,115.—Andrew A. Nuquist, Oneida, Ill.—*Harrow.*—July 27, 1869.

Claim.—A double zigzag harrow, formed of a series of separate bars, A B C D, flat braces G A, and teeth E, secured by nuts F through the zigzag and cross-bars, all constructed and arranged substantially as set forth.

93,116.—John I. Patton, Tiffin, Ohio.—*Corn-Planter.*—July 27, 1868.

Claim.—1. The combination of the slide E, lever F, and spring H, all constructed and arranged to operate substantially in the manner and for the purposes herein set forth.

2. The combination and arrangement of the seed-boxes D D, slide E, plows B B, scrapers C, levers F and I, vibrating-bar G, and the cams upon the driving-wheel, all constructed and operating substantially in the manner and for the purposes set forth.

93,117.—John M. Perkins, Cleveland, Ohio.—*Lamp-Burner.*—July 27, 1869.

Claim.—1. In a burner, provided with the extensible filling-tube C and wick-tube B, the tubes *h* and *i*, all constructed and arranged to operate as herein described and shown.

2. The combination and arrangement of the extensible filling-tube C and wick-tube B with the burner A, as and for the purpose set forth.

93,118.—James Potter, Portland, Me.—*Spring Bed-Bottom.*—July 27, 1869.

Claim.—The combination and arrangement of the springs *f*, constructed as shown, with flexible connections A, the reversible fastenings D, B, and rods *e*, secured by the metal clamps *h*, for the purposes described.

93,119.—A. J. Prescott, Catawissa, Pa.—*Reamer.*—July 27, 1869.

Claim.—A ball or taper-reamer, having a cutting-edge, *c*, and blank or smooth edge, *d*, and the concave sides *e*, substantially in the manner and for the purpose set forth.

93,120.—Louis Pritchard, Brooklyn, N. Y.—*Slate.*—July 27, 1869.

Claim.—The pivoted cross-piece D, when provided with a rod-like projection upon its end, so as to catch in the flat spring E, substantially as set forth.

93,121.—Benjamin B. Redfield, Pontiac Mich.—*Filtering and Ventilating Apparatus for Wells and Cisterns.*—July 27, 1869.

Claim.—The arrangement of the filter B, perforated pipe C, and ventilating-pipe D, all constructed as described, and for the purposes set forth.

93,122.—Nathan Richardson, Gloucester Mass., assignor to himself and Eli F. Stacey, same place.—*Steering-Apparatus.*—July 27, 1869.

Claim.—1. The rubber blocks or equivalent elastic material, interposed between the ends of the shafts *g g* and frame, as and for the purpose set forth.

2. The combination, with the boxes *i i* on one side of the frame, of the connecting-arms *o o* and hub *t′*, the parts operating as and for the purpose set forth.

3. The combination of the wedges *u u* and their nuts, with the boxes *i i*, as and for the purpose described.

93,123.—John Rogers, Cincinnati, Ohio.—*Railway-Car Wheel.*—July 27, 1869.

Claim.—1. The plates A A′, each having a fillet, *a″*, on its periphery, and a section of a recess at or near the point where they come in contact, for the reception of the lugs *b*, upon the tread B, substantially as and for the purpose set forth.

2. The ribbed or tongued tread B, in combination with the plates A A′, substantially as and for the purpose set forth.

93,124.—Thomas Rose, Oxton, and Robert E. Gibson, New Brighton, England.—*Machinery for Breaking Cotton-Seed.*—July 27, 1869.

Claim.—The shallow notched rolls and hopper, as specified, combined, and arranged, relatively to each other and to the clearing-brushes F F′, as herein set forth.

93,125.—C. E. Rymes, Somerville, Mass.—*Steam-Engine Valve-Gear.*—July 27, 1869.

Claim.—An engine valve-gear, in which the valves are arranged to turn constantly in one direction, substantially as described.

93,126.—J. B. Sawyer, East Templeton, Mass.—*Rattan-Cutter.*—July 27, 1869.

Claim.—The combination, with a many-sided rattan-cutter, of separating-fins or cutting-spurs *a*, substantially as and for the purpose set forth.

93,127.—Francis Schleifer, San Francisco, Cal., assignor to himself and Francis Cutting, same place.—*Process of Purifying and Refining Alcoholic Liquids.*—July 27, 1869.

Claim.—The introduction of atmospheric air into the still, below the surface of the liquor, in sufficient quantities to produce, by the presence of the oxygen in the said air, a chemical decomposition of the fusel-oils of alcoholic liquids, in the manner substantially as described, for the purposes set forth.

93,128.—S. R. Scoggins, Baltimore, Md.—*Refrigerator.*—July 27, 1869.

Claim.—A refrigerator, constructed substantially as above described, that is to say, having the wooden inclosing-box A A^1 A^2, the inclosed metallic box B, perforated at *e e e*, the vertical pipe C, the door D, the lid F, and the door opening through the wall A into box B, all constructed and combined substantially as and for the purposes herein set forth.

93,129.—F. C. Semelroth, Logansport, Ind.—*Paint.*—July 27, 1869.

Claim.—The mixture of the above-named materials in proportions mentioned, substantially as and for the purposes set forth.

93,130.—James Sherlock, New York, N. Y.—*Knapsack-Attachment.*—July 27, 1869.

Claim.—1. The combination of the cartridge-box, divided cartridge-box strap, and connecting rings, with the knapsack, knapsack-straps, and supporting-hooks, under the arrangement shown and specified.

2. The two haversacks, when constructed, arranged, and connected with each other, and with the straps from which they are suspended, substantially in the manner shown and set forth.

3. The arrangement, upon the person of the wearer, and with relation to each other, of the knapsack, cartridge-box, canteen or canteens, and haversacks, and straps or attachments, whereby the same are held in place, substantially as herein shown and specified.

93,131.—John E. Siebel, Chicago, Ill.—*Preparation of Iron for Medical Purposes.*—July 27, 1869.

Claim.—1. The process of producing "dialized iron," substantially as herein described, and for the purpose set forth.

2. The substance termed "dialized iron," when produced substantially as herein described, for medicinal purposes, either alone or in combination with other substances.

93,132.—Henry B. Snyder, Cherry Grove, Ohio.—*Sash-Fastener.*—July 27, 1869.

Claim.—The spring-key K, arranged to operate directly upon spring-pawl I, in combination with ratchet-wheel H and rubber-tired roller E, arranged to operate substantially as and for the purpose set forth.

93,133.—Antoine Steber, Utica, N. Y.—*Balance Slide-Valve.*—July 27, 1869.

Claim.—The hollow slide-valve R, with ports *l m i k*, seat D, and steam-chest B, constructed and arranged with reference to each other, substantially as described.

93,134.—David Strollum, Union City, Ind., assignor to himself, William A. Skellen, and E. Milton Glick, Shelby County, Ohio.—*Sack-Holder.*—July 27, 1869.

Claim.—The combination of the box A, notched bar B, prop C, loop D, and clasp E, all constructed and operating substantially as specified.

93,135.—C. W. Strout and Amos Wilder, Hallowell, Me.—*Machine for Varnishing Floor Oil-Cloth.*—July 27, 1869.

Claim.—The mode of applying varnish to oil-cloth or other fabrics, by means of horizontal, rotary, and cylindrical brushes, separately or in combination, substantially as described and set forth.

93,136.—Benjamin J. Talbott, Iowa Falls, Iowa.—*Water-Wheel.*—July 27, 1869.

Claim.—1. The hollow cylinder B, and the gate C, in combination with the shaft and wheel, substantially as set forth.

2. A turbine-wheel, consisting of the wheel A, the registering interior and exterior cylinders B and C, with the register-operating mechanism c^1 c^2 c^3, the projecting covers F E, and the shaft A^1, stepped upon the spider I, all combined, arranged, and operating substantially as set forth.

93,137.—Thomas Taylor, Washington, D. C.—*Alloy for Sabot of Projectile.*—July 27, 1869; antedated July 15, 1869.

Claim.—An alloy or composition of metals for metallic sabots for projectiles, composed of copper, tin, and lead, in all proportions.

93,138.—Alexander Thompson and Zera Waters, Bloomington, Ill.—*Gig Sawing-Machine.*—July 27, 1869.

Claim.—The arrangement of the arms P, head O, block N, spring M, bar K, disk I, pulley F, and lever H, when all are combined in the manner and for the purpose specified.

93,139.—John Trageser, New York, N. Y.—*Construction of Hot-Water Boilers.*—July 27, 1869.

Claim.—The double-folded seam, uniting the head and cylinder of the boiler, combined with the grooves and solder, employed in the manner and for the purposes set forth.

93,140.—W. F. Tunnard, East Baton Rouge Parish, La.—*Corn-Planter.*—July 27, 1869.

Claim.—1. The pitman F, provided with a pin, 1, which works in a slot in a fixed plate-standard, G, in combination with a seed-dropping drum or cylinder C and regulating sliding-covers D D′, when those several parts are constructed, arranged, and operate substantially as herein described, for the purpose set forth.

2. The above combination, in combination with a trench-opening shoe, E, and a covering-fluke, J, substantially as herein described, for the purpose set forth.

93,141.—Amos H. Tyler, Toledo, Ohio.—*Chewing-Gum Compound.*—July 27, 1869.

Claim.—The combination and use of the ingredients, as herein described, when prepared and used substantially as and for the purposes specified.

93,142.—A. Van Camp, Washington, D. C., assignor to himself and M. M. Hodgeman, St. Louis, Mo.—*Concrete Pavement.*—July 27, 1869.

Claim.—1. Crushed or pulverized rock, gravel, &c., when the same is used as an ingredient in the formation of concrete pavements, substantially as described.

2. A concrete pavement, when the same is composed of the materials stated, substantially as described, as and for the purpose specified.

3. Forming the blocks in the metallic molds A, when the same are of the form stated, and are laid with or without the molds in sand, substantially as described, as and for the purpose specified.

4. Laying the concrete pavement, when the same is composed of crushed rock or gravel and asphaltum, by means of hot rollers, substantially as described.

93,143.—William H. Wallack, Corunna, Ind.—*Liniment.*—July 27, 1869.

Claim.—A medical compound or liniment, composed of the ingredients substantially as herein described, as a remedy for rheumatism, sprains, burns, &c., as set forth.

93,144.—Zera Waters, Bloomington, Ill.—*Combined Abdominal and Uterine Supporter.*—July 27, 1869.

Claim.—1. The hinged clamp F, controlled by a set-screw, whereby the pads C C are adjusted laterally, and at different angles of inclination, in fixed positions, upon the longitudinal bar B, substantially as and for the purpose specified.

2. The combination of the cup I with a dependent hollow screw, within the tube M, cap *l*, arm D, and ball *a*, substantially in the manner set forth.

3. The springs A A, pads G G, pivots F F, hinged clamps E E, bars B B, and pads C C, all arranged substantially in the manner set forth.

93,145.—W. C. Wedge, Chicopee, Mass.—*Oven.*—July 27, 1869.

Claim.—1. The construction of the oven herein shown, in which the baking-space G is contained between the inner and outer walls A and B, in which the revolving baking-pan H is also arranged in the manner substantially as set forth.

2. The combination of the walls A and B, chimneys C and D, flues E, and pipe N, the chimneys being arranged with dampers, and the parts being all constructed and arranged substantially as described.

3. In combination with the oven herein shown, the circular rotating baking-pan H, working upon friction-wheels, and operated by rack and pinion, substantially as shown.

4. In combination with the baking-pan H, the bonnet M, arranged as and for the purpose set forth.

93,146.—Ashbel Welch, Lambertville, N. J.—*Railway-Car Truck.*—July 27, 1869.

Claim.—1. The extension of the swinging-frame beyond the outside of the truck-frame, when used for the purpose specified.

2. The extended bolster, used for the purpose specified.

3. The combination of the swinging frame so extended, the elliptic springs placed longitudinally outside of the truck-frame, as well as inside, and the extended bolster, arranged and combined substantially in the manner and for the purposes specified.

4. The combination of the swinging-frame and springs, before described, with the shorter bolster and cross-bars, arranged and combined substantially in the manner and for the purposes specified.

93,147.—Washington Wendell, Milwaukee, Wis.—*Binding-Attachment for Sewing-Machines.*—July 27, 1869.

Claim.—The presser-foot *a*, grooved presser-pad *f*, tongue *d*, needle-hole *e*, finger *e*, and fluke *b*, all constructed, combined, and arranged as described, and in one and the same piece.

93,148.—G. F. White, Aurora, Oregon.—*Shingle-Machine.*—July 27, 1869.

Claim.—1. The river, consisting of the rim D, knives *b b*, plates *b'*, and springs *c*, together with the adjustable gauge-saws *e e'* and the self-retracting rest *g*, all arranged substantially as described, and operating as and for the purpose set forth.

2. The feeder, composed of the plates I K, rollers L, springs M, or their equivalent, and bar N, arranged and operating substantially as described.

3. The rotating-planer G G', with its adjustable knives *l* and rollers *m*, in combination with the feeder I K L M N, as hereinbefore specified, for the purpose set forth.

4. The combination of the width-gauging devices *e e' g*, with the feeder above mentioned, substantially as set forth, and for the purpose described.

93,149.—Eli Whitney, C. Gerner, and F. Tiesing, New Haven, Conn., said Gerner and Tiesing assignors to Eli Whitney.—*Breech-Loading Fire-Arm.*—July 27, 1869.

Claim.—1. The retractor-rod *c*, in combination with the spring *n*, provided with the hook *i*, or its equivalent, arranged to operate as described, whereby the retractor is operated by tipping the barrels, and returned to its place automatically, substantially as herein described.

2. The arrangement of the barrels B, with the retractor applied and operated as described, and the lock-bolt E, all as herein set forth.

93,150.—William E. Wilcox, Peoria, Ill., assignor to himself and Thomas H. Wills, same place.—*Railway-Car Axle-Box.*—July 27, 1869.

Claim.—The combination and arrangement of the cylinders E, with their sectional rollers H, operating on the upper side of the journal of the axle B, and secured by the shoulder C and flange D, as herein described, and for the purposes set forth.

93,151.—William E. Wilcox, Peoria, and T. H. Wills, Beardstown, Ill.—*Railway-Car Axle-Bearing.*—July 27, 1869.

Claim.—The combination of the car-axle B with the revolving hollow cylinders C above, having anti-friction rollers E on the inside, revolving on sectional rings F around the stationary axles D, with beveled washers H at the ends, when arranged and operating as herein described, and for the purposes set forth.

93,152.—Garret Williams, West Middleburgh, Ohio.—*Rain-Water Spouting.*—July 27, 1869.

Claim.—1. The brackets C C' *c'*, employed in combination with the trough A, and attaching plates or lugs *a a*, substantially as and for the purposes set forth.

2. The combined arrangement of the chamber B'' and strainers B''' *b''*, with the spout B'''', for the purpose specified.

93,153.—P. B. Willoughby and H. G. Phelps, Judd, Wis.—*Coffee-Pot.*—July 27, 1869.

Claim.—The combination of the perforated tube C, the lower end of which forms a strainer, the covers B and D, and pot A, when arranged substantially as set forth and described.

93,154.—H. B. Smith, Tremont, Ill.—*Combined Plow, Cultivator, and Potato-Digger.*—July 27, 1869.

Claim.—1. The combination of the tongue L, roller K, bar N, clevis or clevises O, frame E, lever A', and catch-bar B', with each other, substantially as herein shown and described, and for the purpose set forth.

2. The hinged bar V, and pendent swinging-bar T, when arranged with relation to the frame E and the plow-beams, as herein described, for the purpose specified.

3. The combination of the roller X, catch-lever W, and stirrup-rod Z, with the frame E, substantially as herein shown and described, and for the purpose set forth.

4. The combination of the lever D, to which the spindle of the furrow-wheel C is attached, lever G, keeper F, and lever-pawl H, with each other and with the frame E, substantially as herein shown and described, and for the purpose set forth.

93,155.—James J. Johnston, Allegheny City, Pa.—*Manufacture of Iron and Steel.*—July 27, 1869.

Claim.—1. As a new article of manufacture, plates or bars of wrought iron, produced by bringing cast iron into its most fluid condition, and then purifying and refining it, by mixing with it a metallic oxide, and then pouring it, while fluid, into molds, as hereinbefore described.

2. The production of wrought iron from cast iron, by mixing with the latter, while in a fluid condition, a sufficient amount of oxides to purify and refine it, and then pouring the purified and refined metal into molds, as hereinbefore described.

3. The employment of detersive agents, by mixing them with pulverized iron ore, to be used in the process hereinbefore described, for the production of wrought iron.

4. The employment, in the process hereinbefore described, of metallic molds, coated with a pasty material, consisting of pulverized iron ore and water.

93,156.—S. A. B. Abbott, Boston, Mass., and E. F. Fields, Lewiston, Me.—*Flier for Spinning.*—August 3, 1869.

Claim.—The combination, with the flier, of the presser-carrying rod B, and the weight C, when the rod and weight are secured together, in the manner and for the purpose set forth.

93,157.—Isaac Adams, Jr., Boston, Mass.—*Electro-Deposition of Nickel.*—August 3, 1869.

Claim.—1. The electro-deposition of nickel by means of a solution of the double sulphate of nickel and ammonia, or a solution of the double chloride of nickel and ammonia, prepared and used in such a manner as to be free from the presence of potash, soda, alumina, lime, or nitric acid, or from any acid or alkaline reaction.

2. The use, for the anode of a depositing-cell, of nickel combined with iron, to prevent the copper and arsenic which may be present from being deposited with the nickel, or from injuring the solution.

3. The methods, herein described, for preparing the solution of the double sulphate of nickel and ammonia, and the double chloride of nickel and ammonia.

4. The electro-plating of metals with a coating of compact, coherent, tenacious, flexible nickel, of sufficient thickness to protect the metal upon which the deposit is made from the action of corrosive agents with which the article may be brought in contact.

5. The deposition of electrotype plates of nickel, to be removed from the surface on which the deposit is made, and used separately therefrom.

93,158.—Ira R. Amsden, Buffalo, N. Y.—*Hydrostatic Scale for Tonnage of Vessels.*—August 3, 1869.

Claim.—1. The cylinder or case A, connected with the outside water through the boat or vessel, and divided into two separate chambers, A and J, when the same or other equivalent device is combined with the float B, graduated strap C, and counter-weight E, in such a manner as to separate said float and weight, and allow each a free and independent action, substantially in the manner and for the purpose herein specified.

2. The cylinder A, divided into two chambers, one of which, A, opens into the water through the bottom of the boat, and the other chamber, J, is entirely free from contact with water, either inside or outside of the boat, and said cylinder receives a float, B, and counter-weight, E, which are separated from each other, but connected by the graduated strap C, and all adapted to operate as set forth.

3. In combination with two or more scales, set on opposite sides of the dead-center, the employment of a single scale at the dead-center, in the manner and for the purpose specified.

4. In combination with the float B and counter-weight E, the friction-rollers *b b*, arranged and operating as and for the purpose described.

93,159.—John Abel Aspinwall and Charles Montague Perry, New Utrecht, N. Y.—*Velocipede.*—August 3, 1869.

Claim.—The combination of the frame of a velocipede with a supplementary wheel, and an arm sustaining said wheel at one side of said frame, so as to run upon one rail of a railway-track, while the running-wheels of the velocipede run upon the other rail, substantially as before set forth.

2. The combination of the supplementary wheel and arm, constituting a velocipede attachment, suitable to be applied to and to operate in connection with a velocipede, as before set forth.

93,160.—Pardon Austin, Medina, Wis.—*Fanning-Mill Attachment.*—August 3, 1869.

Claim.—The arrangement, with relation to the fanning-mill, the elevator E, and shaft K, of the cord B and adjustable bar H, as herein described, for the purpose specified.

93,161.—William F. Auxier, Mason City, Ill.—*Flood-Fence.*—August 3, 1869.

Claim.—The combination of the base A, transverse planks B, posts C, anchors D, transverse beams E, posts F, and braces I, when all arranged substantially as specified.

93,162.—Henry Barnes, Franklin Township, Iowa.—*Plate for Making Blanks for Mold-Boards and Shares for Plows.*—August 3, 1869.

Claim.—The herein-described improved plates for the manufacture of blanks for mold-boards and shares for plows, substantially as specified.

93,163.—J. C. Bates, Warrensburgh, Mo.—*Head-Block for Carriages.*—August 3, 1869.

Claim.—1. The combination with each other of the malleable iron head-block A, bearing B, lower bar E, and side bars F F, all arranged and operating substantially as herein shown and described.

2. The metallic head-block A, when provided with lips *a*, for retaining the spring, with mortises for the side braces F, and with a backward-extending bar, E, substantially as herein shown and described.

3. The hinge-ears *b b*, formed on the rear ends of the side bars F, substantially as and for the purpose herein shown and described.

93,164.—Barzillai B. Beckwith, Rockville, Conn.—*Washing-Machine.*—August 3, 1869.

Claim.—The movable side pieces *s s*, having the bearings *c c*, c^1 c^1, c^2 c^2, the washer *b*, in combination with said side pieces, the roller-frame *m*, containing the rollers *x x x x x x*, and the movable bottom *o*, all constructed substantially as described, and operating for the purpose described.

93,165.—Jacob Behel, Rockford, Ill.—*Grain-Binder.*—August 3, 1869.

Claim.—1. The combination of the ring-carrier and stationary band-securing instrument with the same driving-shaft, by means of connecting and disconnecting mechanism, substantially as set forth.

2. The arrangement of the transmitting mechanism between the driving-shaft, the ring-carrier, and the band-securing mechanism, in such manner that the said shaft may be revolved in the same direction, whether operating the ring-carrier or the band-securing mechanism, substantially as set forth.

3. The ring-carrier, composed of an internal flange and an external toothed ring, combined by means of radial studs, substantially as set forth.

4. The combination of the detachable strap-holder with a detent, arranged to move to and fro in a circular direction upon the ring-carrier, substantially as set forth.

5. The combination of the ring-carrier and curved belt-guard for the compression belt, substantially as set forth.

6. The combination of the ring-carrier with a curved belt-guard composed of two members, separated by a gate-way, for the insertion of the belt-head, substantially as set forth

7. The arrangement of the curved belt-guard, detachable strap-holder, and ring-carrier, so that the belt-head may be held by the said guard within the range or track of the strap-holder, substantially as set forth.

8. The cord-holder, composed of two jaws, provided with serrated ribs, one of which jaws is constructed to move to and fro relatively to the other, substantially as set forth.

9. The combination of the serrated jaws of the cord-holder with a finger for pushing the binding material into the gripe of said jaws, substantially as set forth.

10. The combination of the cord-holder, composed of jaws, one of which moves to and fro, as above set forth, with a knife for severing the binding material after it is in the gripe of said jaws, substantially as set forth.

11. The combination of the cord-holder, composed of jaws, one of which moves to and fro, with a belay-hook, substantially as set forth.

12. The combination of the cord-holder, composed of jaws, one of which moves to and fro, with a finger and a belay-hook, substantially as set forth.

13. The combination of both the movable jaw of the cord-holder and the detent-stops of the strap-holder with one slide, substantially as set forth.

14. The combination of the ring-carrier, movable

jaw of the cord-holder, and movable shear-blade with rotating cams, substantially as set forth.

15. The combination of the stationary band-securing instrument, ring-carrier, slide, and cams, substantially as set forth.

16. The combination of the band-securing instrument, revolving-shaft, crank, slotted connecting-rod, segment, and pinion, substantially as set forth.

17. The combination of the swinging-stock of the band-securing instrument, stud, and stop, substantially as set forth.

18. The combination of the swinging-stock of the band-securing instrument and separate swinging band-finger, substantially as set forth.

19. The combination of the swinging-frame of the spool with the disk-head that is separate from the spool, substantially as set forth.

20. The combination of the swinging spool-frame, removable shaft, and shaft-holder, substantially as set forth.

21. The combination of the stop for the ring-carrier and the band-securing instrument, substantially as set forth.

22. The combination of the swinging spool-frame, removable spool-shaft, shaft-holder, and spring, substantially as set forth.

93,166.—Norborne Berkeley, Aldie, Va.—*Railway-Car Brake*—August 3, 1869.

Claim.—1. The self-acting brake-operating device, consisting of the buffer L, pivoted frame B, pulleys E H, belt G, and chain-drum D, constructed, arranged, and operating substantially as represented and described.

2. The combination with the pulley E and chain-drum D, employed and operating substantially as described, of the clutch *d e*, as and for the purpose set forth.

93,167.—Henry C. Bowen, New York, N. Y.—*Screw-Press.*—August 3, 1869.

Claim.—1. The differential screw E E^1 E^2, in combination with the movable nut H, adapted to be turned at will, with suitable operating means for turning the screw and the nut so as to operate the press, substantially in the manner and for the purposes set forth.

2. The within-described press, in its entire combination and arrangement, having the tie-rods *a*, serving as guides for the platen C, the hand-wheel I, as a means of operating the turning-nut H, the latter being mounted in a boss in the platen, as represented, and the differential screw E E^1 E^2 being operated by an independent lever and pawl in both directions, obtaining the two degrees of advantage, all substantially as and for the purposes herein represented and described.

93,168.—Lucien F. Bruce, Bridgeport, Conn.—*Alarm-Bell.*—August 3, 1869.

Claim.—1. An alarm, pivoted with two hammers, that strike in different time against a single bell, substantially as herein shown and described.

2. The lever J, sliding-plate H, spring *j*, and pins *k l*, all arranged as described, to operate an alarm-bell, in the manner specified.

3. The secondary lever L, when arranged in combination with the setting-lever J, substantially as herein shown and described, for the purpose set forth.

4. The lever J, when provided with the elbow-slot *o*, to receive the pin *n*, so that it will not be relocked by the closing of a door as specified.

93,169.—Henry Buck, Chardon, Ohio.—*Whiffletree.*—August 3, 1869.

Claim.—1. Hook A, band B, and staple *f*, substantially as and for the purposes specified.

2. Spring-latch J, or its equivalent, in combination with hook C, band D, and staple *h*, for the purposes substantially as described.

93,170.—James Abercrombie Burden, Troy, N. Y.—*Apparatus for Making Pig-Blooms in the Manufacture of Iron.*—August 3, 1869.

Claim.—1. The combination of the spout for delivering the molten iron, with a series of removable box-molds and a turn-table, substantially as before set forth.

2. The combination of the box-mold with a bridge piece, substantially as before set forth.

93,171.—John M. Burghartt, Great Barrington, Mass.—*Milk-Can Stopper.*—August 3, 1869.

Claim.—The combination of the piston D, provided with the packing E H, the spring F, and tube G, with the case or neck A of a milk-can, all arranged substantially as herein shown and described, for the purpose specified.

93,172.—John Campbell, London, Ohio.—*Combined Corn Planter and Cultivator.*—August 3, 1869.

Claim.—1. The shovel-standards D D′, rigid braces *d′ d′*, and sliding-brace E, when combined substantially as and for the purpose described.

2. The brace E, with its connections, when combined with the rod *f* and catch *g*, substantially as and for the purpose described.

3. The catch *g*, when combined with the brace E, and spring H, as and for the purpose set forth.

4. The spring H, provided with the regulating-screw *h*, as and for the purpose described.

5. The standards D D′, constructed as described, when combined with the levers I, as and for the purpose set forth.

6. The standards D D′, constructed as described, when combined with the levers I, chains *k*, and lever K, as and for the purpose set forth.

7. The seed-planting device, consisting of the frame L, hopper M, tube N, cylinder *m*, cords *o p*, spring *p′*, and foot-lever O, the whole being combined as described.

8. The arrangement of the beam a^2 and bars a^5, in connection with the cords *j* and foot-levers J J, as and for the purpose described.

9. The arrangement of the parts A A, and cross-bars C C, as and for the purpose described.

10. The machine described, consisting of the frame A A, planting-devices, L M N *m o* O, and shovel-devices D D′, *d′ d′*, E *f g* H, when combined as described, for the purpose set forth.

93,173.—Heman Carter, Greene, N.Y.—*Washing-Machine.*—August 3, 1869.

Claim.—The construction of roller and bottom of the machine, by which the edges of the rubber are brought in contact with the article to be washed, as shown and described in washing-machines.

93,174.—William C. Chamberlain, Dubuque, Iowa.—*Churn.*—August 3, 1869.

Claim.—1. The combination of the churn-dasher, D, which has eccentrically-hinged blades *d′ d′*, and the balance-driving wheel N, all in such manner as described, that the said eccentrically-hinged wings are caused to positively maintain their proper open and closed positions while churning the milk or cream, and working the butter, as set forth.

2. The churning arrangement, consisting of the dasher D *d′*, gears J K, and balance-wheel N, as and for the purpose described.

93,175.—John Chase, Paterson, N. J.—*Turbine Water-Wheel.*—August 3, 1869.

Claim.—1. A turbine water-wheel, with varying diameter, diminishing from bottom to top, of form and construction substantially as above described, and for the purposes set forth.

2. The combination of the upper drum with diminishing diameter from bottom to top, marked *r f i t* in the drawings, with the lower or annular drum, marked *v v* in the drawings, and with the continuous vanes winding spirally from the lower around the upper drum, substantially as above described, and for the purposes set forth.

93,176.—Robert A. Chesebrough, New York, N. Y.—*Steam-Generator.*—August 3, 1869.

Claim.—The coiled pipes or worm H H, steam-receiver E, and the heating compartments *a b c d*, constructed and arranged, relatively to each other, substantially as described.

93,177.—Anthony Conarro and Zak. Gemmill, Warren, Pa.—*Safety-Switch for Railways.*—August 3, 1899.

Claim.—1. The spring-rails D D, operating by their own elasticity. and controlled in their range of motion by the stops *q q*, when said rails are used in combination with switch-mechanism, constructed, arranged, and operating as described and shown.

2. The combination and arangement of the lipped metallic chair, or bed-plate *h*, wooden plate *k*, and top metallic plate *m*, in the manner and for the purpose specified.

93,178.—Charles L. Coombs, Washington, D. C., and John A. Bassett, Salem, Mass., assignors to Joseph J. Coombs, Washington, D. C.—*Method of Producing Calcium-Light.*—August 3, 1869.

Claim.—The method of producing a strong and brilliant light, by blowing a mixture of atmospheric air and hydrocarbon spirits (or the vapor thereof) upon a piece of lime, or its equivalent, and burning said mixture in contact with the lime, or its equivalent, substantially as set forth and described.

93,179.—R. Crain, Shaffer Farm, Dennison Post-Office, Pa.—*Pipe-Tongs.*—August 3, 1869.

Claim.—The combination of the stationary circular toothed jaw C, the sliding circular toothed jaw D, stationary handle A, movable pivoted handle B, band or socket E, and bar or lever F, with each other, substantially as herein shown and described, and for the purpose set forth.

93,180.—John C. Curran, Philadelphia, Pa.—*Device for Tilting Barrels.*—August 3, 1869.

Claim.—The arrangement and construction of the parts B, J, E, and C, with its screw F, head-supporter H, and points *h*, and hand-wheel G, in combination with the cask A, as shown and described.

93,181.—Daniel Cushing, Lowell, Mass., assignor to himself, George W. Smith, and Franklin Smith.—*Machine for Curving and Shaping Sheet-Metal.*—August 3, 1869.

Claim.—1. The combination of rings or washers *a* with the sectional dies of forming-rolls, constructed and operating together, substantially as and for the purpose specified.

2. The combination of the forming-rolls, constructed and operating as herein described, with the supplementary rolls, all adjusted, arranged, and operated substantially in the manner described.

3. The combination of elongated ways C^6, slides D, stands D^1, clamps *e*, bed F, and rods g^1, or their equivalents, with the forming-rolls, all constructed and operating as shown and set forth.

4. The combination of the slotted arms D^2, swiveled on beam D^3, and clamping-device, with the forming-rolls, all arranged and operating together as described.

93,182.—R. D'Heureuse, New York, N. Y.—*Mode of Preserving Liquid and other Substances.*—August 3. 1869.

Claim.—1. The mode of preserving and improving fluid or semi-fluid organic substances, by impelling air from below through the same, and thus indueing an oxidation of the nitrogenous parts.

2. The mode of arresting or preventing putrefaction or decay in fluid or solid organic substance, by artificial currents of air in connection with sulphurous vapors or other gases through said substances from below, substantially as hereinbefore described and set forth.

93,183.—Julius Edmund Dotch, Washington, D. C.—*Preserving Meats, Poultry, Fish, &c.*—August 3, 1869; antedated February 3, 1869.

Claim.—The preserving of meats, oysters, fish, &c., by the use of the mixtures of glycerine with the above-named antiseptic salts, in connection with aldehyde, formic ether or acid, the solution of them in carbonic acid, water, and glycerine, the covering with wrapping or parchment paper, saturated with these solutions; the sprinkling with wood-ashes; the introduction of carbonate-of ammonia vapors, turpentine vapors, oxysulphide of carbon gas, or ozone, and the use of paraffine and stearine, mixed with tannin, to kill the animal with electricity, and to keep up in the barrels or vessels a continuous electric or galvanic current, (constant battery.)

93,184.—John S. Drake, New York, N. Y., assignor to himself and William H. Burton, same place.—*Carriage and Sleigh Combined.*—August 3, 1869.

Claim.—1. The combination, with the axles and wheels of a vehicle, of the bob-runners A, when journaled on the said axles, curved at the rear ends and arranged relatively to the wheels, substantially as specified.

2. The combination, with the said "bob"-runners, of the lever G, reach K, and a locking-device for the said lever, substantially as specified.

93,185.—Melvin W. Drake, Owasso, Mich.—*Animal-Trap.*—August 3, 1869.

Claim.—The said grapple-hooks H, and upright fulcrum-post E, or their equivalents, in combination with the spring A A′, the catch-bar M, and upright bait-standard N, substantially as hereinbefore described.

93,186.—William H. Elliot, New York, N. Y. *Bedstead-Fastening.*—August 3, 1869.

Claim.—1. The combination of the post *a*, side-rail *b*, and double tenon *c* and *c′*, with its shoulders *i* and *i′*, when the surfaces of the tenon and side rail are fastened together, substantially as described.

2. Curving the diagonal shoulders *e* and *e′* of a self-tightening wooden bedstead fastening, substantially as shown, and for the purpose specified.

3. So constructing a mortise, cut in the solid material of a bed-post, and a tenon attached to the end of side-rail, that the tenon shall enter by a horizontal movement, and then complete its passage into the mortise by a direct downward and upward movement, substantially as set forth.

93,187.—William A. Estes, China, assignor to R. M. Mansur, Augusta, Me.—*Harrow and Cultivator.*—August 3, 1869.

Claim.—1. The triangular-pointed teeth, when provided with a shank or perforated plate, for independent attachment to the harrow-frame, as specified.

2. The harrow herein described, composed of the frame B B′ C, detachable teeth, Fig. 2 or 4, and the draught-bar D, all as set forth.

93,188.—Peter Falardo, Danbury, Conn.—*Clothes-Wringer.*—August 3, 1869.

Claim.—In combination with the rolls A and B of a wringing-machine, the endless apron H, constructed with edges *d*, and arranged upon the adjustable cylinder F, substantially in the manner and for the purpose set forth.

93,189.—Isaac R. Fisher, Reading, Pa.—*Gas-Burner.*—August 3, 1869.

Claim.—In combination with a gas-burner, the cap F, arranged and operating substantially as and for the purposes herein shown and described.

93,190.—William F. Foley, Albany, N. Y.—*Sled-Brake.*—August 3, 1869.

Claim.—In combination with a hand-sled, the brake D and spring *e*, constructed, arranged, and operated substantially as described, for the purpose set forth.

93,191.—Charles J. Fortin and David H. Drake, Cincinnati, Ohio, assignors to Eagle White Lead Company.—*White Lead and Packing-Cans.*—August 3, 1869.

Claim.—The combined arrangement, in a white-lead can and packing-can, of the flange B, flare C, and the flange A, as and for the purposes described.

93,192.—David C. Frazeur, and Peter Ginter, Siddonsburgh, Pa.—*Stump-Extractor.*—August 3, 1869.

Claim.—The combination and arrangement of the posts A A, platform B, sliding-beam C, lever D, blocks E F, links *e f*, lever G, and chains *g m*, all

constructed and adapted to operate together, substantially in the manner and for the purposes herein set forth.

93,193.—JOHN W. GILLAM, Newton, N. J.—*Braid-Guide for Sewing-Machine.*—August 3, 1869.

Claim.—The sewing-machine gauge, constructed as described, of the slotted plates C D, provided respectively with the bars *o* and *p*, and *n*, and adapted for adjustment longitudinally and transversely, as herein set forth, for the purpose specified.

93,194.—ISAAC GRIM, Polo, Ill., assignor to himself and WILLIAM GREGORY, same place.—*Tinners' Bending-Machine.*—August 3, 1869.

Claim.—The lever G, link M, flange I, slots K, studs L, jaws D and E, gauge N, handle O, former A, having teeth C at each end, and the end supports B, all constructed, arranged, and operating as herein shown and described, for the purpose specified.

93,195.—DAVID E. HALL, Detroit, Mich.—*Life Preserving Mattress.*—August 3, 1869.

Claim.—The slats A B, springs C, and floats E, when combined and arranged, in relation to each other, substantially as and for the purpose set forth.

93,196.—HEMAN B. HAMMON, Bristolville, Ohio.—*Blacking-Box Holder.*—August 3, 1869.

Claim.—The arrangement of the key-hole S and key B, in combination with the holder G and slotted forked slide Q, as and for the purpose described.

93,197.—JOHN T. HANCOCK, Jamaica Plain, Mass.—*Steam-Blower.*—August 3, 1869; antedated July 22, 1869.

Claim.—The apparatus described, in combination with mixing-chamber S, as described and specified.

93,198.—THOMAS HARRISON, La Fayette, Wis.—*Fence.*—August 3, 1869.

Claim.—1. The fence-panel, constructed as described, of vertical battens and woven horizontal rails.

2. The alternate arrangement of the extension of the rails of one panel, in combination with the adjacent post of the next panel, as shown.

3. In combination with a fence-panel, constructed as set forth in the first claim, the braces C *c*, constructed substantially as described.

93,199.—ANDREW HARTUPEE, Pittsburgh, Pa.—*Steam-Engine.*—August 3, 1869.

Claim.—In a double-cylinder steam-engine, the cross-ports *h h'*, in combination with the valves *e e'*, and steam-chest *d*, constructed substantially as hereinbefore set forth.

93,200.—HENRY HAYWARD, New York, N.Y.—*Stiffening-Cord for Skirts.*—August 3, 1869.

Claim.—The new manufacture of covered or wrapped horse-hair yarns, herein described, having half the hairs reversed in position relatively to the others, substantially in the manner and for the purposes herein set forth.

93,201.—JUSTIN H. HILL and HOMER C. HILL, Clinton, Ill.—*Trace Support and Buckle.*—August 3, 1869.

Claim.—1. The trace-support A, provided with a long eye, *a*, to receive the trace-loops *b b*, to embrace the hip-strap, and a bent pivoted tongue, C, to secure it in position thereon, substantially as described.

2. A buckle, constructed as described, with a shank or blade, E, as and for the purpose set forth.

93,202.—WALTER H. HOTCHKISS, Bridgeport, Conn., assignor to HOWE MACHINE COMPANY.—*Binding-Guide for Sewing-Machines.*—August 3, 1869.

Claim.—The combination of the plate A with the upper and lower guides *b* and *d*, with their respective nuts or screws, *f* and B, and adjusting-nut *n*, arranged and operating together as and for the purpose specified.

93,203.—SAMUEL HUBER, Danville, Pa.—*Combined Plow and Cultivator.*—August 3, 1869.

Claim.—1. The plate B, provided with several sets of holes, for the adjustable attachment of the plow-standards, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the adjustable plow-standards F with the plate B, substantially as herein shown and described, and for the purpose set forth.

3. The plows E, constructed as described, in combination with the adjustable standards F and plate B, substantially as and for the purpose set forth.

4. The combination of the double mold-board plow I with the adjustable standards F and plate B, substantially as herein shown and described, and for the purpose set forth.

5. The combination of the fingers J with the mold-boards of the double mold-board plow I, adjustable standards F, and plate B, substantially as herein shown and described, and for the purpose set forth.

93,204.—W. H. HULL, Warren, Ohio.—*Steam-Valve Device.*—August 3, 1869.

Claim.—The steam-chest A, with the cap B, the valve C, and channel *m*, constructed and arranged substantially as shown and described.

93,205.—REUBEN HURD, Morrison, Ill.—*Wagon.*—August 3, 1869.

Claim.—The combination, with the sway-bar of a wagon, of the notched plate A, catch-lever B, handle C, notched plate E, and link D, all arranged substantially as specified.

93,206.—A. M. JOHNSTON and H. H. AVRIT, Clarksville, Tenn.—*Hog-Cholera Remedy.*—August 3, 1869.

Claim.—The combination of the above ingredients and the proportions used.

93,207.—WILLIAM KEGG, Lassellsville, N. Y.—*Churn-Dasher.*—August 3, 1869.

Claim.—1. The dasher A, constructed as described, with the inclined wings *d* and V-shaped recesses *e*, said dasher being attached to the tubular shaft B, having the valve C at its upper end, as herein set forth and shown, for the purpose specified.

2. Introducing air into the cream through the tubular dasher-shaft B, by means of the pipe attached to the upper end of said dasher, and communicating with a water-tank, through which the air passes, as herein described, for the purpose specified.

93,208.—EUGEN LANGEN, Cologne, Prussia.—*Apparatus for Emptying the Cooling-Tubes of Bone-Black Furnaces.*—August 3, 1869.

Claim.—The apparatus for removing animal charcoal from the cooling-tubes, the said apparatus being composed of the plate C, with apertures D and compartments E, and operating in combination with the reciprocating plate F, which is provided with apertures J, substantially in the manner herein set forth, all arranged as specified.

93,209.—JOSEPH LLADÓ, New Orleans, La.—*Medical Compound or Bitters.*—August 3, 1869.

Claim.—The medical compound, made of the several ingredients, mixed together in or about the proportions substantially as described.

93,210.—SAMUEL LONG, Ogle County, Ill.—*Implement for Taming and Marking Hogs.*—August 3, 1869.

Claim.—1. The jaws A' B', having grooves *d* d^1 d^2 d^3, and the slot in the jaw A', arranged substantially in the manner shown and described.

2. The shear-blades D D', having projections *e* e^1, in combination with the jaws A' B', as shown and described.

3. The conical convex double-bladed punch F, as constructed and shown.

4. The arrangement of the sliding-plate G, having apertures, as shown and described.

5. The sliding-plates L and H, in combination with the jaws A' B', substantially as and for the purpose described.

6. The punch or die K, capable of the various modifications, as described, in combination with the

jaw A′ and plates G or H, attached thereto, in the manner shown and described.

93,211.—Luther Longley, Leominster, Mass.—*Yoke for Standards for Stove-Shelf.*—August 3, 1869.

Claim.—A yoke, for securing stove-shelf stands or rods to stoves, constructed in the manner herein shown and described.

93,212.—Albert J. Lutz and H. Reiss, New York, N. Y.—*Milling Tool.*—August 3, 1869.

Claim.—The improved milling-tool herein described, as an article of manufacture.

93,213.—Wesley Malick, Erie, Pa.—*Machine for Making Chain.*—August 3, 1869.

Claim.—1. The combination of the former or finger *o*, clamps Z Z, ram Y, and friction-rollers *e l*, all arranged and operating together as set forth.

2. The combination of the concave dies E and F, shaped as described, and for the purposes set forth.

3. The construction and arrangement of the reciprocating yoke G, sectors C D, circular frame K, and adjusting-screw J, as shown and described.

4. The reciprocating finger-bar *e*, hollowed out on its under side for the passage of the blank bar, and provided with the former *o* upon its end, all substantially as shown and described.

5. The arrangement of the shears *h i*, respectively, on the reciprocating stirrup G, and vibrating sector G, as and for the purposes specified.

93,214.—George W. Manson, Jersey City, N. J., assignor to himself, John A. Knoeller, and Michael Bowe, same place.—*Mechanism for Driving Sewing-Machines.*—August 3, 1869.

Claim.—The construction and arrangement, with relation to the stand and the machine to be driven, of the train of toothed gear and pulleys, actuated by spring-power, as described, and the brake, its rock-shaft, and handle, for regulating the speed or arresting the motion of said gear, in the manner herein shown and specified.

93,215.—John McWilliams, Providence, R. I.—*Die-Holder for Screw-Presses.*—August 3, 1869.

Claim.—The combination of the slotted frame B, sliding-piece A, and central screw C, the latter being connected to the jaw A, in the manner substantially as described.

93,216.—John M. Murphy, Olympia, Wash. Ter.—*Printers' Galley-Rest.*—August 3, 1869.

Claim.—In combination with the stand and case A B, the adjustable galley-rest C, arranged and operating substantially as herein shown and described, for the purposes set forth.

93,217.—David Nevin, Boulder City, Colo. Ter.—*Flooring-Clamp.*—August 3, 1869.

Claim.—The flooring-clamp, constructed as described, of the right-angular stock A B C, having the set-screw D and pivoted tongue or guard E, the right-angular pivoted lever F, the adjustable lever I, the rack H, and pawl K, all arranged and operating as described, for the purpose specified.

93,218.—Edwin Norton, Toledo, Ohio, assignor to himself, O. W. Norton, and Alton H. Fancher.—*Transportation-Case.*—August 3, 1869.

Claim.—The improved packing-case for transportation, its nozzle and cover being constructed and located, as shown and described.

93,219.—Thomas S. Nutter, Harrisburgh, Ohio.—*Churn.*—August 3, 1869.

Claim.—1. The dasher M N Q, herein described, composed of the shaft M, upper and lower slats N Q, with arms of triangular cross-section, and two or more central slats, O P, with arms of diamond cross-section, when said slats are so arranged as to bring the upper and lower edges of the arms of any two contiguous slats into the same horizontal plane, the several parts being constructed and combined substantially as and for the purpose herein specified.

2. The combination of the churn-box A, with extended sides B B, provided with slots F F, the slides G G, gearing-frame *h* H *h*, driving-shaft I, with crank R, bevel-gears J K, dasher-shaft L M, with pinned connection *a*, and bearing-spindle E, and dasher N O P Q, the several parts being constructed and arranged with respect to each other substantially as is herein specified.

93,220.—Robert T. Osgood, Orland, Me.—*Fishing-Line Sinker.*—August 3, 1869.

Claim.—1. The chambered line-sinker A, having the shape of an egg, with a concavity, B, in the larger end, in combination with the link L, as and for the purpose described.

2. The combination of the rod G, sliding-thimble N, and spring H, with the swinging-pawl E, as and for the purpose described.

3. The pin P, spring R, and lever E, in combination with the strap S, as and for the purpose set forth.

4. The arrangement, within the sinker A, of the spring H, sliding-thimble N, and sliding-rod G, as and for the purpose specified.

93,221.—Joseph Edlyn Outridge, Newport, England.—*Steam-Valve Devices.*—August 3, 1869; patented in England August 1, 1868.

Claim.—1. The valve-seat *c*, ports *g h i*, valve *d*, the valve-rod and weight-levers *x*, constructed and arranged relatively to the ports *e f m* of the cylinder *a*, substantially as described.

2. In combination therewith, the bands *n*, as herein set forth.

93,222.—S. W. Palmer and J. F. Palmer, Auburn, N. Y., assignors to the Metropolitan Washing-Machine Company, Middlefield, Conn.—*Faucet.*—August 3, 1869.

Claim.—1. The combination of the valve, and the valve stem and stud, and thumb-piece, mounted on the same, as described, with the tubular bearing for supporting said stem, having its outer end so constructed as to form an incline, upon which said stud, when rotated, will move so as to cause the opening or closing of the valve, substantially as shown and set forth.

2. The combination, with the valve and devices for operating the same, hereinbefore recited, of the tubular bearing for the valve-stem, and the discharge-pipe, with which said bearing is connected, said parts being constructed and operating substantially as set forth.

3. The combination, with the valve and valve-operating devices, as hereinbefore described, of a spring, arranged, substantially as set forth, so as to hold the valve open against the pressure of water passing through the faucet.

4. A faucet for washing-machines and other purposes, all parts of which are constructed and arranged for operation, as herein shown and set forth.

93,223.—Edward L. Perry and Charles Manheim, New York, N. Y.—*Wringing-Machine.*—August 3, 1869.

Claim.—1. The combination of the bearings A and H with the bolts G and springs K, arranged upon both sides of the rollers, the bolts extending through the lower bearing A, substantially as and for the purpose specified.

2. The brackets B, when extended at F to support the bearings for the lower roller, and to receive the outer bolt G, which connects the two bearings together, substantially as and for the purpose described.

3. The combination of the brackets B, with their extensions F, the bearings A and H, bolts G, springs K, and rollers O and P, all arranged substantially as and for the purpose described.

93,224.—John Phelps, Owego, N. Y., assignor to himself and C. W. Merchant, same place.—*Lamp.*—August 3, 1869.

Claim.—1. The combination, with the neck of a lamp having a filling-orifice, C, of a spring-closing band, A, substantially as specified.

2. The combination, with the above, of the projection G, arranged substantially as specified.

93,225.—John Phillips, Jr., Chicago, Ill.—*Dovetailing-Machine.*—August 3, 1869.

Claim.—The arrangement of the cutting-head E, with its knives F and G, sliding-keeper K, sliding-way N, gauge O, stop P, stop M, and set-screw L, and sliding-way S, and stop R, when constructed to operate substantially as described.

93,226.—William Porter, Sr., and William Porter, Jr., New York, N. Y.—*Lantern.*—August 3, 1869.

Claim.—1. The eye *a*, formed on the upper end of the upright guard-wire A, above the upper guard-ring D, to be fitted through the cap, and locked to the same, substantially as herein shown and described.

2. The upper guard-ring D, when made of sheet-metal, in form of a trough, substantially as herein shown and described.

93,227.—Joseph Potts, Harrisburgh, Pa.—*Buildings.*—August 3, 1869.

Claim.—In the construction of buildings, laying up the bricks B upon the side of the wooden frame A, with the laths C or D imbedded in the mortar between each course, and nailed to the frame, as herein shown and described, for the purpose specified.

93,228.—F. C. Richer, Gilmer, Tex.—*Lamp.*—August 3, 1869.

Claim.—The oil-reservoir A, provided with the long tubular neck B, when the latter is adapted to receive, in the manner described, either the conical candle-holder F or the burner C, conical case D, and long wick-tube E, as herein set forth, for the purpose specified.

93,229.—Almon Roff, Southport, Conn.—*Lock-Nut.*—August 3, 1869.

Claim.—The set-screw C, fitted eccentrically in the end of the bolt A, its head *a* resting partly on the surface of the nut B and partly on the end of the bolt, the latter and said screw having threads cut in opposite directions, as and for the purpose herein set forth.

93,230.—Henry Rosamyer, Rochester, Pa.—*Lock-Nut.*—August 3, 1869.

Claim.—A screw-nut for bolts, when said nut is recessed as herein described, and provided with springs for catching in recesses in the bolt, and thereby preventing any back movement of the nut.

93,231.—Joshua A. Rosbeck, Herman, N. Y.—*Grain-Measure.*—August 3, 1869.

Claim.—The removable bottom or partition A and sliding-piece B, in combination with a grain-measure having the slots C C and guide-ways D D, for the purpose of making a variable measure, substantially as described.

93,232.—Silas C. Salisbury, New York, N. Y.—*Steam-Generator.*—August 3, 1869.

Claim.—1. The arrangement, in combination with the main water-chamber of a boiler, of an inner water-chamber, forming the shell of the fire-chamber, such inner and outer water-chambers being connected together, substantially as described.

2. The arrangement, in combination with such an inner water-chamber, forming the fire-chamber, of the fire-tubes *e e*, passing through such water-chamber, substantially as described.

3. The combination of the portion of the water-chamber of a boiler within the furnace-chamber, or between that part of the furnace where the coal is burned and that part where the gases and products of combustion are consumed, substantially as described.

4. The combination, with a boiler, consisting of two water-chambers, an inner and an outer, connected together, of a furnace, having two, or a preparing and combustion chamber, when the inner water-chamber is between the preparing and combustion chambers of the furnace, and combustion-chamber of the furnace is between the inner and outer water-chambers, substantially as herein set forth.

93,233.—F. M. Schaeffer, Blooming Grove, Kans.—*Extension-Hame.*—August 3, 1869.

Claim.—1. The parts A, B, and C, constructed, combined, arranged, and operating substantially as and for the purposes herein shown and described.

2. The adjustable staple E and sleeve C, carrying the ring *h*, or either of them, in combination with an extension-hame, substantially as described, for the purpose specified.

93,234.—Benoni C. Scott, Paxton, Ill.—*Feeding-Door for Animal-Pens.*—August 3, 1869.

Claim.—The feed-doors for animal-pens, above described, consisting of the door C, suspended from its top, and working in the frame B, and the spring E, with its stop *e*, to regulate and control the movements of said door, when used in connection with the troughs D and the pens A, as and for the purpose above set forth.

93,235.—L. Sears, Perrysville, Ohio.—*Straw-Cutter.*—August 3, 1869.

Claim.—1. The cross-bar W, provided with the slots *v v* and crank-pin X, when used in combination with the pinion I, for the purpose of adjusting the length of cut for the straw, substantially as is herein specified.

2. The combination of the ratchet-boxes P and Q, links *r* and *s*, and connecting-rod *q*, cross-bar W, with crank-pin X, and slots *v v*, and pinion T, the several parts being arranged substantially as and for the purpose herein specified.

3. The standard *o*, with pivoted arm *u*, when used in combination with the side-piece A, and connecting-rod *q*, substantially as and for the purpose herein specified.

4. The sliding feed-roller box *b*, provided with an arm, *d*, when used in combination with the rod O, provided with jam-nuts at its lower end, and the spring N on the side-piece A, substantially as and for the purpose specified.

5. The cutter-bar R, when constructed with the double T cross-section herein shown, substantially as and for the purpose specified.

6. The presser-block *f*, provided with the tightening-nut *h*, when used in combination with the arm *g* and end of cutter-bar R, substantially as and for the purpose specified.

7. The combination of the cutter-bar R, provided with the slots *e e* and clamping bolts *y y*, side-plates D D, provided with the arms *g g*, side-pieces A A, and pressure-block *f f*, with the tightening-nuts *h h*, the several parts being constructed and arranged substantially as and for the purpose herein specified.

8. The combination of the shaft I, having the cutting-knife K and gear-wheel S secured thereon, pinion T, provided with adjustable cross-bar W, connecting-rod *q*, with links *r s*, ratchet-boxes P Q, feed-rollers J U, and cutter-bar R, with pressure-blocks *f f*, the several parts being constructed and arranged, with respect to each other, substantially as and for the purpose herein specified.

93,236.—Samuel B. Secrist and Isaac Seyster, Ogle County, Ill.—*Hay-Elevator.*—August 3, 1869.

Claim.—1. The double catch G, substantially as and for the purpose described.

2. The combination of the cone I, tackle H, levers E, springs *e*, latches F, and double catch G, substantially as and for the purpose set forth.

93,237.—Peter Shellenberger, Millerstown, Pa.—*Corn-Planter.*—August 3, 1869.

Claim.—The combination of the plows C D, constructed as described, and drag N O, with the frame A, spout E, dropping-device F G H I J K L, and wheel M, substantially as herein shown and described, and for the purpose set forth.

93,238.—Brede E. Sivertsen, Pittsburgh, Pa.—*Rotary Spade.*—August 3, 1869.

Claim.—An improved rotary spader, consisting of the several parts specified, all combined, constructed, and arranged as described.

93,239.—D. B. Skelly, Lockport, N. Y.—*Railway-Chair.*—August 3, 1869.

Claim.—The combination, with the chairs having the recesses A and mortises B, of the elastic beds F, and the blocks G, having the projections H and elevated ridges I, when arranged and keyed together and against the rails, all substantially as specified.

93,240.—HIRAM B. SMITH and J. V. STEVENS, Pomeroy, Ohio.—*Steam-Generator.*—August 3, 1869.

Claim.—1. The tubes A, and chamber or head B, formed in one piece, as herein shown and described,

2. The hollow bridge C, mud-chamber D, and tubes A, combined and arranged substantially as specified.

3. The combination of the tubes A and drums I, when arranged and united substantially as specified.

93,241.—PELEG STAPLES, Stockton, Me.—*Clamp for Planking Ships.*—August 3, 1869.

Claim.—1. The apparatus, consisting essentially of the T-piece *h*, provided with prongs and with the swiveling-eye *h'*, the hooked and bent bar *h''*, the screw-bolt *h'''*, and the braces *k*, combined and operating as and for the purpose described.

2. The clamp or holder, made up of the bar *e*, provided with prongs, the bar *e'*, projecting from the former at right angles, and the T-piece *e''*, all arranged to operate as explained.

3. Attaching the windlass *b* to the ribs of the ship by means of the brackets *z z* and suitable wedges, as and for the purpose specified.

93,242.—J. M. STARR, Jr., Fond du Lac, Wis., assignor to himself and GEORGE D. TROMBLY, same place.—*Washing-Machine.*—August 3, 1869.

Claim.—The rollers H, in combination with the double-ended beaters C, the curved longitudinal ribs B, in the tub or box, and the false bottom I, all arranged and operating as described, for the purpose specified.

93,243.—FRANK J. STEINHAUSER, Lancaster, Pa.—*Balancing the Keys of Pianos, &c.*—August 3, 1869.

Claim.—The application of the weighted screw or adjusting-balance B *b*, when employed on the keys of musical instruments, in the manner and for the purpose specified.

93,244.—EDWIN R. STILWELL, Dayton, Ohio.—*Water-Heating Device.*—August 3, 1869.

Claim.—1. Corrugated or plain-faced shelves C, constructed and arranged substantially as described.

2. The door A', applied to shell A, by means of the adjustable bars *e e*, and bolts and nuts, substantially as described.

3. The filtering-chamber D, constructed and arranged substantially as described.

4. The mud-well G', arranged below a filtering-chamber, D, in combination with the shelves and steam-inlets, substantially as described.

93,245.—LUCIUS S. STIMSON, Lowell, Mass., assignor to himself and NELSON F. LIBBY, same place.—*Composition for Roofing.*—August 3, 1869.

Claim.—The composition of soapstone, resin, and petroleum, substantially in the proportions and in the manner herein specified.

93,246.—WILLIAM O. SUMNER, Brooklyn, E. D., N. Y.—*Safety Watch-Pocket.*—August 3, 1869.

Claim.—The pocket watch-safe, constructed as described, of the parts A B, hinged together at C, and provided with the pivoted notched latch E, spring G, pins H K N, and notched spring-plate L, all constructed and arranged as described, for the purpose specified.

93,247.—JOHN F. THOMAS, Ilion, N. Y.—*Grapple.*—August 3, 1869.

Claim.—Pivoting the connecting-bar *b'* to the hooks *a* and *a'*, between the points *o* and *o'*, and the joints *e* and *e'*, substantially as set forth.

93,248.—WILLIAM B. TREADWELL, Albany, N. Y.—*Base-Burner.*—August 3, 1869.

Claim.—1. The construction and arrangement of the front of my combustion-chamber and revertible flues, in such a manner, relatively, as to increase the radiation and illuminating surface of the front of the stove, in the manner set forth and described.

2. Portable mouth to my magazine, in combination with the enlarged mica door or opening in front, for the purpose of permitting the portable mouth to be removed or adjusted through said door.

3. Improved feed-cylinder, constructed with the dissipating-flue J, substantially in the manner and for the purpose above described.

4. The universal ball and socket joint, constructed in the manner and for the purpose above described.

5. The relative shape and position of the fire-chamber, feed-cylinder, portable mouth, and revertible flues, substantially as described.

6. The air-chamber H, in combination with my combustion-chamber and revertible flues, substantially as described.

93,249.—HENRY TREBE, Indianapolis, Ind., assignor to himself and FREDERICK KLARE.—*Toy-Ball.*—August 3, 1869.

Claim.—The combination of a return-ball, B, with spherical concavo-convex cup A, when the two are strung upon the end of an elastic string, S, as shown and described, and for the purposes set forth.

93,250.—J. J. TUCKER, Albia, Iowa.—*Hedge-Planter.*—August 3, 1869.

Claim.—The within-described devices for sowing hedge-seed, consisting of the hopper I, funnel K, cylinder L, provided with the pins *l l*, shaft M, pulleys N and *m*, and slide O, in combination with the body A, wheels B B, standard D, plow E, rollers F F, and covering-shovels G G, all constructed and arranged to operate substantially as and for the purpose specified.

93,251.—P. W. VAIL, Newark, N. J.—*Hat.*—August 3, 1869.

Claim.—A hat or cap, the crown of which is formed with a shelf or shoulder, *a*, perforated, to admit air, as herein above specified and shown.

93,252.—J. B. VANNAN and N. P. CRAMER, Carbondale, Pa.—*Sheave-Pulley.*—August 3, 1869.

Claim.—As a new article of manufacture, a sheave-pulley, having the bottom only of the groove chilled, substantially as set forth.

93,253.—C. H. VAN ORSTRAND, New York, N. Y.—*Machine for Cutting and Slicing Vegetables.*—August 3, 1869.

Claim.—The combination of the cutter-plate D, and the series of cutters C C' C'', with the driving-gears F and G, the hopper H, and the cutting-plate I, all arranged and located as and for the purposes set forth.

93,254.—ASEL M. WADE, Lawrence, Mass.—*Machine for Spooling Thread.*—August 3, 1869.

Claim.—1. The improved spooling-machine, as constructed, with the celled bar E arranged as described, with the series of guides and the spooling bobbins and spindles, or the equivalent thereof, to operate as and for the purpose described.

2. The bar as made, with each cell open at its front end, closed at its rear end, and provided with a slot through its top, as explained.

93,255.—CHARLES F. WALKER, Benford's Store Post-Office, Pa.—*Washing-Machine.*—August 3, 1869.

Claim.—In a washing-machine of the described construction, the handle F, rope E, and bar K, in combination with the lever C and its attachments, as and for the purpose set forth.

93,256.—JAMES C. WARR, Wareham, Mass.—*Straightening-Machine.*—August 3, 1869.

Claim.—The combination and arrangement of the adjustable rollers *f*, with the bed A, and with the platen G, substantially in manner as represented, and so as to operate therewith, as and for the purpose described.

93,257.—ZADOCK WASHBURN, Hopedale, Mass. —*Casting Hollow Metal Rollers with Shafts.*—August 3, 1869.

Claim.—1. The employment of the shaft in the two parts B C, socketed and tenoned, and arranged in the core and mold, as described, the whole being as and for the purpose specified.

2. The shaft, as made in two or more parts, socketed and tenoned together as described, and provided with cavities, for the metal of the heads to flow into, when cast upon the shaft, as described.

3. The new or improved manufacture of metallic roller, as made with its shaft constructed in two or more parts, socketed and tenoned, and arranged as described, and with the metal of the heads cast into cavities of the shaft, or upon projections from such shaft, the whole being as explained.

93,258.—EDWARD WHITELEY, Cambridge, Mass. —*Grease-Trap.*—August 3, 1869.

Claim.—The within-described grease-trap, consisting of the tank A, in combination with the sink-pipe *b*, and the siphon B, connected with the pipe leading to the drain or sewer, all arranged to operate substantially as described.

93,259.—JAMES M. WHITING, Providence, R. I. —*Carriage-Hub.*—August 3, 1869.

Claim.—The packing-nut on the end of the box, in combination with the metallic center-piece, the wooden sleeve, and the elastic collars.

93,260.—JULIUS WILCKE, Chicago, Ill.—*Harvester-Rake.*—August 3, 1869; antedated July 23, 1869.

Claim.—1. The post I, bracketed standard A A′, with its geared segment J, and inclined plane T, the shaft S, and driving-pulley H, crank D, fitted with lug *d*, and recesses *e e* on its hub, and guide-holes *x x* on its wrist-end, in connection with the bars *v v′*, stop-pin *y*, lift-pin *z*, and springs *s s*, the pinion B, pinion-shaft P, crank C, and crank-sleeve *u*, substantially as described, and for the purposes set forth.

2. The guide-sleeve M, provided with spiral groove *m*, the rake K, and rake-rod R, provided with spring *w*, pin *r*, and bell-crank levers *a* and *b*, and link *e*, in connection with the flange of the sleeve M, or its equivalent, operating in the manner described, and for the purposes specified.

3. The double clutch N, provided with flange *f*, ribs *e e*, and recess *n′*, in connection with the pin *n*, the sectional clutch E F, provided with semicircular coupling-studs *g*, and recesses *d′*, clutch-spring O, and clutch-lever G, or their equivalents, substantially as described, and operating for the purposes specified.

93,261.—DARIUS WILCOX, Birmingham, assignor to himself and WARREN WILCOX, Ansonia, Conn. —*Fifth Wheel for Carriages.*—August 3, 1869.

Claim.—1. The tubular spring *a*, arranged within the head E of the yoke D, with the hardened steel plate *b*, bearing upon the fifth wheel C, as set forth.

2. In combination with the above, the adjusting-screw F, with its plate C, substantially as described.

93,262.—EZRA WILDER, South Hingham, Mass. —*Horse Collar and Hames.*—August 3, 1869.

Claim.—1. A horse-collar, made in two parts, fastened to the two bars of the hames, said hames-bars being jointed at top, and being connected at bottom by an adjustable connector, substantially as shown and described.

2. In combination with hames-bars constructed as described, collar-pieces, made of wood.

3. In combination with a collar or hames, the neck-piece *n*, arranged to vibrate with a universal movement, substantially as described.

4. In combination with the collar or hames, the adjustable neck-piece *n*, substantially as described.

5 In combination with the tug-pieces *i*, the removable or screw-spindle caps *l*, substantially as described.

93,263.—ROBERT WILSON, Burdett, N. Y.—*Washing-Machine.*—August 3, 1869.

Claim.—The within-described washing-machine, consisting of the box B B, C, D, and E, standards F F, cross-bar G, rubber H, and handle I, in combination with the roller L and shaft M, all constructed and arranged substantially as and for the purpose specified.

93,264.—ROBERT WILSON, Rees Corners, Md. —*Churn.*—August 3, 1869.

Claim.—The churn, composed of the outer wooden body or case A, the metallic strainer B, provided with the handle *b′*, dasher rod and dasher G H J I, small gear-wheel F, bevel gear-wheel E, supporting metallic frame D, and cover C, all constructed, arranged, and operating in the manner herein shown and described.

93,265.—GEORGE T. WRIGHT, New Preston, Conn., assignor to himself and WALTER BURNHAM, same place. — *Cord-Making Machine.* — August 3, 1868.

Claim.—The arrangement of the spindle A, pulley C, hollow platform D, sleeve E, pulley G, gear-wheels F I, disks J, horizontal bobbins K, eyes *m*, and bent wires *n*, all constructed as herein described, for the purpose specified.

93,266.—H. C. YOUNG, Bridgeport, Conn., assignor to the HOWE MACHINE COMPANY.—*Embroidering-Attachment for Sewing-Machine.*—August 3, 1869.

Claim.—The thread-carrying arms C D, (one or more, or both,) arranged so as to vibrate across the path of the needle, and combined with the spring-rod E, loop H, and needle-bar B, all constructed so as to operate substantially in the manner herein set forth.

93,267.—J. F. BARKER, Springfield, Mass., and C. N. GILBERT, New York, N. Y.—*Apparatus for Carbureting Air.*—August 3, 1869.

Claim.—1. The carbureter, having the reservoir D placed therein, and used in connection with the pipes for the circulating heating-fluid, all constructed and operating substantially as herein described and set forth.

2. The arrangement of the tube L, with a carbureter, wherein the apertures opening from the lower part of each chamber of the carbureter into said tube are opened and closed by valves, said tube with its valves, operating to draw the contents of any upper chamber into any lower one, or to draw said contents of any one, or of all of said chambers, entirely away from the carbureter, substantially as herein described and specified.

3. A gauge, composed of two or more compartments, and having one or more partitions, *o*, therein, the same being made in one piece, with a corresponding front plate, *s*, also made in one piece, the whole constituting a series of gauges, and all constructed and operating substantially as and for the purposes herein described and set forth.

93,268.—J. F. BARKER, Springfield, Mass., and C. N. GILBERT, New York, N. Y.—*Apparatus for Carbureting Air.*—August 3, 1869.

Claim.—1. The arrangement of the carbureter with a meter-wheel, said wheel being driven by a descending weight, or other equivalent mechanical power, applied to force the air through the carbureter to the burners, said carbureter being placed within a vault by itself, separate from the building to be lighted, the whole arranged and connected with pipes, substantially as herein described and set forth.

2. The heating-coil P and pipes R R′, connected with a carbureter, said carbureter being placed within a vault by itself, while the coil is placed within the cellar or building to be lighted, the whole arranged substantially as herein described, and for the purpose specified.

93,269.—STEPHEN V. BARNS, Triangle, N. Y.—*Hop-Pole Sharpener.*—August 3, 1869.

Claim.—The arrangement, upon a suitable frame, of the hollow cone-shaped cylinder *g*, and its interior projecting blade *b*, saw *d*, sliding grooved frame and lever *a*, all the parts being constructed as described.

93,270.—ALFRED BAUMGARTEN, New York, N. Y., assignor to himself and CHARLES W. WALTER,

same place.—*Receivers or Carboys for the Manufacture of Muriatic and other Acids.*—August 3, 1869; antedated August 2, 1869.

Claim.—1. The carboys of condensation for acids, made substantially in the manner and for the purposes set forth.

2. The tubes and stoppers, applied to and combined with the said carboys of condensation, in the manner and for the purposes set forth.

93,271.—J. H. Bigelow, Worcester, Mass.—*Corn-Popper.*—August 3, 1869.

Claim.—1. The combination, with the corn-popper, of the doubled wire D, having a portion of its length bent or twisted, substantially as described, so as to form a socket for the reception of the handle.

2. The combination, with the corn-popper and its handle, of the doubled wire D, its socket *b*, and the staple-retaining wire *e m h*, substantially as and for the purpose set forth.

3. The combination, with the popping-box B, cover G, and handle A, of the wire socket *b* and wires D E, as shown and described.

93,272.—W. E. Bond, Cleveland, Ohio.—*Mode of Constructing Billiard and other Game Tables.*—August 3, 1869.

Claim.—1. Forming the beds of billiard and other gaming tables of cement, substantially as herein described.

2. A billiard or other gaming table, the bed of which is composed of cement, inclosed in a suitable frame-work, substantially as herein set forth.

93,273.—William R. Brown, Bath, N. Y.—*Piston-Spring.*—August 3, 1869.

Claim.—The construction of a piston-spring, consisting of two parts, A and B, made of flat bar or ribbon steel, substantially in the manner and for the purpose as herein shown and described.

93,274.—Daniel Bull, Amboy, Ill.—*Sash-Fastener.*—August 3, 1869.

Claim.—1. The bar or stop O, when so constructed and arranged in a sash-fastener, that it vibrates upon its center to project either end thereof, substantially as described, to lock the sash up or down, as may be desired.

2. The combination of the vibrating bar or stop O, and thumb-piece H, when so constructed and arranged that one end of the thumb-piece rests upon the bar in such a way that the bar or stop is vibrated by it when it is moved, substantially as and for the purposes shown and specified.

3. The combination of the bar or stop O, thumb-piece H, and spring J, when constructed and arranged substantially as and for the purposes herein set forth.

93,275.—George P. Clarke, Marmont B. Edson, and Jarvis B. Edson, New York, N. Y., assignors to the Recording Steam-Gauge Company same place.—*Self-Recording Pressure-Gauge.*—August 3, 1869.

Claim.—1. The combination and arrangement of the spring pressure-gauge, carrying a spring recording-pencil and parallel guide, S, with the spring ratchet-barrel H, for giving an intermittent rotary movement to the drum B, so that the pencil will trace vertical lines during the increase of pressure and oblique lines during the decrease of pressure, for the purposes and in the manner substantially as described.

2. The slot N^2 in drum B, in combination with the spring D^2 and the inclined hook c^2, for the purposes described.

3. The arrangement of the barrel H, containing the coiled spring E^2 in one side and the pawls H^2 in the other side, in combination with the toothed or ratchet wheel I, secured to the revolving spindle K, which passes through the bracket L, and is secured to the drum paper-holder B, operating in the manner and for the purposes described.

93,276.—L. H. Colborne, Albion, N. Y.—*Steam-Generator.*—August 3, 1869.

Claim.—1. The receiver C, combined as herein set forth, whereby the saturated and superheated steam is commingled, as above set forth.

2. The pipe D, superheater B, and intermediate devices, in combination with the receiver C, substantially as shown and described.

3. The arrangement of the devices whereby to exhaust steam into the receiver C, as set forth.

93,277.—G. W. Cole, Farmington, Ill.—*Garden-Plow.*—August 3, 1869.

Claim.—The garden-plow described, consisting of the handles A A, wheel B, U-shaped rod C, and slotted standard D, rod E, cone-shaped blocks F F, and braces G, when constructed substantially as described, for the purpose set forth.

93,278.—John B. Cox, James O'Connor, and Michael Cahalan, Columbus, Ga.—*Railway-Switch.*—August 3, 1869.

Claim.—1. The main track A, sliding-track A′, when arranged, with relation to the switch-track A″, in the manner and for the purpose substantially as described.

2. The combination of the switch-track A″ A″, connecting-bars B″, stop-chairs B′, in curved lines, with the connecting-rod C and lever *a*, in the manner and for the purpose substantially as set forth.

3. The removable connecting-bar B″, when constructed in the manner and for the purpose substantially as described.

93,279.—Gustav Cramer and Julius Gross, St. Louis, Mo.—*Photographic Head-Rest.*—August 3, 1869.

Claim.—The rest-prongs B, arranged with the slots B′, and combined with the fulcrum-arm A, substantially as herein set forth, to form a head-rest, the prongs whereof have a longitudinal as well as lateral movement, independent of each other.

93,280.—Henry L. Cranford, Brooklyn, N. Y.—*Composition-Pavement.*—August 3, 1869.

Claim.—The combined stone and composition pavement, prepared and laid substantially as set forth.

2. The wedge-shaped filling of composition, introduced between the stones, as and for the purposes set forth.

93,281.—Joel H. Dalbey, Springfield, Ohio.—*Earth-Scraper.*—August 3, 1869.

Claim.—The arrangement of the scraper A, with blocks F F, and grabs *p p*, handles B B, spring-bolts *m m*, bars *n n*, loops *o*, and lever I, the several parts being constructed and operating substantially as specified.

93,282.—Andrew B. Davis, Catahoula Parish, La.—*Street-Car Starter.*—August 3, 1869

Claim.—The guiding-bar A, when the same is provided with a reciprocating-bar, C, a cross-head, B, and a spring, D, in combination with a lever, J, and a chain, H, the whole being attached to a city railroad-car, and operating substantially as herein described, for the purpose set forth.

93,283.—Andrew B. Davis, Catahoula Parish, La.—*Car-Starter.*—August 3, 1869.

Claim.—The lever B, spring C, and clutch J, in combination with bars G and H, the springs L and M, and the ratchet E, when these several parts are constructed, arranged, and operate substantially as described, for the purposes set forth.

93,284.—Andrew B. Davis, Catahoula Parish, La.—*Plow.*—August 3, 1869.

Claim.—Covering plows on their front faces and on their landsides with a series of thin steel, or hardened iron plates A and C, substantially as herein described, for the purpose set forth.

93,285.—A. B. Dean, Louisville, Ky.—*Churn.*—August 3, 1869.

Claim.—The arrangement of the churn herein described, with the chamber E, blocks G and P, button *c*, slat H, and spring *a*, substantially as specified.

93,286.—Louis Amable De Lime, St. Louis, Mo.—*Apparatus for Purifying Whisky and other Alcoholic Spirits.*—August 3, 1869.

Claim.—An apparatus for refining whisky and other alcoholic productions, composed of tubs A, B, C, D, E, and F, provided with false bottoms covered with blankets, and a filtering substance, as shown and described, and connected the one with the other, by pipes and tubes, in the manner shown and stated, so that the liquid may pass from one to the other, in its passage, forcing the confined air through the liquid, and all arranged for joint operation, and constructed and operating substantially as and for the purpose shown and specified.

93,287.—Thomas H. Denison, Baltimore, Md.—*Portable Clamp for School-Books.*—August 3, 1869.

Claim.—As a new article of manufacture, the extensible clasp for school-books, herein described, consisting of the divided sides A A, constructed with ears G and longitudinal slots *c*, the rivets D D, clamping-screws C H C H, straps B B, and buckles F F F′, combined and arranged to operate substantially in the manner and for the purposes set forth.

93,288.—George B. Dyer, New York, N. Y.—*Gas-Carbureter.*—August 3, 1869.

Claim.—The carbureter herein described, having reservoir B, compartments C D E F, arranged as passages for gas, perpendicular plates *f f*, tubes *h k m*, pipes with stop-cocks *e′ d′ e′*, pipes *b′* N G, opening and screw cap *a*, openings and screw-stoppers *v w x y z*, and gauge *s*, constructed and arranged substantially as specified.

93,289.—D. Elliot and E. Seely, N. Y., assignors to themselves and John A. Holmes.—*Carriage-Jack.*—August 3, 1869.

Claim.—1. The ratchet-sector *h*, lever *k*, and pawl-plate *f*, in combination with the lever *c* of the carriage-jack, substantially as and for the purposes set forth.

2. In combination with the foregoing, the link *g*, legs *a* and *b*, and bolt *d*, as and for the purposes set forth.

3. The India-rubber bearing-surface *n*, combined with the lever of a carriage-jack, as and for the purposes set forth.

93,290.—H. C. Eves, Orangeville, Pa.—*Seed Planter, Fertilizer, and Plow Combined.*—August 3, 1869.

Claim.—The double seeding-slide, screw-fertilizer, and adjustable plow, when constructed, combined, and operating as herein described, and for the purposes set forth.

93,291.—Charles A. Fenn, Edward P. Fenn, and Isaac Cook, St. Louis, Mo., assignors to Charles A. Fenn.—*Machine for Mortising Blind-Stiles.*—August 3, 1869.

Claim.—1. The parts G¹ G² *g*¹ and the slides E′, combined with the bar G, frame *h* H, the ways I, rod I 1, and direction-bar I 2, and operated by the bar K and link *h*¹, substantially as set forth.

2. The frame E E′, slide-bars G, frame *h* H, link *h*¹, and bar K, when arranged in combination with and adjusted by the extension-piece *k*, its slot *k*¹, and set-screw *k*², substantially as set forth.

3. The operating-shaft L, and the cam-plate P, pivoted at *p*, and adjusted at *p′*, combined and arranged with the lever Q and bar K, substantially as set forth.

93,292.—Frederic G. Ford, New York, N. Y.—*Caster.*—August 3, 1869.

Claim.—A caster, the top of which is provided with a transverse cylindrical head, D, and a neck, *d*, for fitting in a horizontal hole and slot made in the side of the foot of the article to which it is designed to be attached, substantially as herein described.

93,293.—Jacob Foster, Philadelphia, Pa.—*Decoy-Duck.*—August 3, 1869.

Claim.—A decoy-duck for sporting purposes, composed of India rubber, and provided with lugs L and L′, and air-valve A, substantially as herein set forth.

93,294.—C. H. Frisbie, Chicago, Ill.—*Exhaust-Nozzle for Steam-Engine.*—August 3, 1869.

Claim.—The construction and arrangement of the exhaust-valve, consisting of the cap A, hinged cover D, projection E, extension H, and spring G, substantially as described.

93,295.—John Gardner, New York, N. Y.—*Capstan.*—August 3, 1869.

Claim.—1. The plate *c*, carrying the gears *d d′*, and fitted with the pawl *e*, in combination with the capstan-barrel *g*, internal gear *i*, gear *f*, and shaft *b*, substantially as and for the purposes specified.

2. In combination with the foregoing, the handspike head *h*, and pawls, or equivalent device for connecting the same with the barrel, for the purposes specified.

93,296.—William H. Gibbs, Cincinnati, Ohio.—*Bottle-Stopper.*—August 3, 1869.

Claim.—The arrangement of the button A, shank D *d*, rubber gasket E, cork F, and pin G, or their equivalents, for the purpose stated.

93,297.—W. W. Goff, Avoca, N. Y.—*Flour-Cooler.*—August 3, 1869.

Claim.—1. The blower H, in combination with curved plates *e e*, when constructed, arranged, and operated as described.

2. Cylinders A and C, when combined with blower H, curved plates *e e*, and conduits *h* and *n*, the whole arranged and operating substantially as described.

93,298.—Charles Greenman, Scott Township, Pa.—*Railway-Switch.*—August 3, 1869.

Claim.—The pieces G, secured to the sides of the movable rails C, in combination with the said rails, springs E, guides H, and plates D, when arranged and operating substantially as shown.

93,299.—Frederick Hale and William Manley, Philadelphia, Pa.—*Drawer-Knob Label.*—August 3, 1869.

Claim.—The combination of the hollow knob A with the glass plate *c* and the detachable annular flange *d*, all arranged as and for the purpose described.

93,300.—Willis C. Hall and Colatres Moore, California, Mo.—*Eye-Sirup.*—August 3, 1869.

Claim.—1. The use of analine compounds, substantially as and for the purpose set forth.

2. The use of the several ingredients, substantially as and for the purposes set forth.

93,301.—S. R. Hathorn, Worcester, Mass.—*Slate and Metal Roofing.*—August 3, 1869.

Claim.—1. The combination, with the slates B, of the metallic strips D, provided with hooks *e*, substantially in the manner described and for the purposes stated.

2. The metal joint strips D, formed with side flanges *f* and top hooks *e*, substantially as and for the purposes set forth.

93,302.—Joseph Hindemyer and Charles C. Savery, Philadelphia, Pa.—*Water-Cooler and Refrigerator.*—August 3, 1869.

Claim.—The ice-chamber A, annular space C, and surrounding air-space K, in combination with a refrigerating-chamber, I, the whole relatively arranged, and operating as and for the purposes described.

93,303.—Benjamin H. Hussey, Portsmouth, N. H.—*Anti-Friction Mast-Hoop.*—August 3, 1869.

Claim.—The combination of rollers placed on the mast-hoop, between shoulders, as aforesaid, and the mast-hoop, made with shoulders, to keep the rollers in place, and a movable staple, made as herein described, or substantially the same, which will produce substantially the same effect.

93,304.—Carleton B. Hutchins, Ann Arbor, Mich.—*Composition for Roofing and Paint.*—August 3, 1869.

Claim.—The compounding of ingredients, as

herein described, to make a composition for roofing and paint.

93,305.—Hanford Ingraham, Naples, N. Y.—*Bedstead.*—August 3, 1869.

Claim.—1. The combination of the plates A A, and pivot screws or bolts *a* and *b*, with the posts B B, and rails C C, substantially as described.

2. The flat steel springs D, as arranged and connected with the slats *d* and cross-bars *e*, when said cross-bars are suspended from springs E, arranged and attached to bracket-plates *e*, substantially as described.

93,306.—John Jay and Joel Coppock, Jonesborough, Ind.—*Harrow.*—August 3, 1869.

Claim.—1. The levers F F, and M, and the wheels I, I, and N, in combination with a harrow, so connected and arranged that the harrow may be raised from the ground, either in whole or in part, substantially as shown and described.

2. The combination of the lever *m*, rock-bar L, pivot-bolt *p*, arm O, and wheel N, with the harrow, substantially as herein shown and described, and for the purpose specified.

93,307.—Moses Johnson, Three Rivers, Mich.—*Potato-Digger and Cultivator Combined.*—August 3, 1869.

Claim.—1. The disks E, when constructed, applied, and operating as described, for the purposes specified.

2. In combination with the disks E, the scrapers *d*, apron G, plows H, and roller C, constructed and arranged substantially as and for the purposes described.

3. In combination with the foregoing devices, the attachable-beam K, cross-bar N, disks R, scrapers *h*, and springs *v*, constructed and arranged substantially as specified.

93,308.—Josee Johnson, New York, N. Y., assignor to himself and William H. Johnson, same place.—*Washing-Machine.*—August 3, 1869.

Claim.—1. Hanging the tub of a washing-machine loosely on the same shaft with which the beatersare connected, and from which they receive their motion, substantially as and for the purposes herein set forth.

2. The combination of the tub B, shaft *a*, curved arms E E, and beaters I I, all constructed as described, and arranged to operate substantially in the manner and for the purposes set forth.

93,309.—Josee Johnson, New York, N. Y., assignor to himself and William H. Johnson, same place.—*Washing-Machine.*—August 3, 1869.

Claim.—1. The reciprocating-box E, provided with rows of pins *a a*, in combination with the pitman H H, and fly-wheels I I, all substantially as and for the purposes hereiu set forth.

2. The arrangement of the table A, box C, and reciprocating-box E, all constructed substantially as described, and for the purposes set forth.

3. The combination and arrangement of the table A, box C, track D, box E, wheels F F, fly-wheels I I, pitmen H H, and guard K, all constructed and operating substantially in the manner and for the purposes herein set forth.

93,310.—Wesley L. Jukes, New York, N. Y., assignor to himself, Frederick McLewee, Prentice H. Putnam, and Johnson Murray, same place.—*Gas-Burner.*—August 3, 1869.

Claim.—1. The revolving gas-burner, with the tube *a*, arms *b b*, and pivot-bearing *c*, all made in one piece of glass, as and for the purposes specified.

2. The tube *d*, with pivot *e* at its end, and the opening *i*, in combination with the cup *f* and revolving burner, when the cup *f* and tube *d* are of glass, and united by cement, as set forth.

3. The rubber tube *m*, in combination with the glass tube *d*, cup *f*, and revolving gas-burner, for connecting the parts with facility, and without risk of injuring the glass, as set forth.

93,311.—William H. Karicofe, Harrisonburgh, Va.—*Corn Harvester and Shocker.*—August 3, 1869.

Claim.—1. The "stacker" C′, constructed substantially as shown and described, and for the purposes set forth.

2. The rotating-beam B′, provided with two rows of arms, *f f*, and a handle or arm, *g*, substantially as and for the purposes herein set forth.

3. The crooked levers *h h*, spring *i*, and hook *k*, or their equivalents, constructed substantially as described, and for the purposes set forth.

4. The rotating-beam B′, provided with two rows of arms, *f f*, handle or arm *g*, and crooked levers *h h*, all constructed and arranged to operate substantially as and for the purposes herein set forth.

5. The combination of the crooked arms *d d*, guide-board A′, rotating-beam B′, arms *f f*, and levers *h h*, all constructed as described, and arranged to operate substantially as and for the purposes herein set forth.

6. The arrangement of the platform M, reel T V, arms *d d*, guide-board A′, rotating-beam B′, arms *f f*, and levers *h h*, all constructed and operating substantially as and for the purposes herein set forth.

93,312.—Michael Keefer, Washington Connty, Md.—*Slaw-Cutter.*—August 3, 1869.

Claim.—A machine for cutting cabbages, having crank and pinion-gearing as described, shaft B, wheel E, knives *s*, removable bar *c*, bent wires *g*, and chute G, constructed and arranged to operate substantially as specified.

93,313.—William G. Kenyon, Wakefield, R. I.—*Hay-Spreader.*—August 3, 1869.

Claim.—The combination of the circular plates G G, having the flanges *w w q*, projections *z z* on them, with the cross-pieces *g g g*, and teeth-bars *n n n*, substantially as herein described, and for the purpose set forth.

93,314.—Martin Landenberger, Jr., Philadelphia, Pa., assiguor to Martin Landenberger & Co.—*Knitted Fabric.*—August 3, 1869.

Claim.—A knitted fabric, in which flattened wire, silvered, gilt, or otherwise polished, is interlooped with fibrous threads, as set forth, for the purpose specified.

93,315.—Jay Lathrop, Lapeer, N. Y.—*Wagon-Brake.*—August 3, 1869.

Claim.—1. The combination of the T-shaped bar G, slotted lever H, and connecting-rods I I, all constructed and operating substantially as and for the purposes herein set forth.

2. The combination of the sliding-tongue C, hounds D D, T-shaped arm G, slotted lever H, connecting-rods I I, brake-bar J, and brake-locks K K, all substantially as aud for the purposes herein set forth.

93,316.—Daniel F. Leach, Forsyth, Ill.—*Farm-Locomotive.*—August 3, 1869.

Claim.—1. The fifth-wheel apparatus as shown in Figs. 4 and 5, consisting essentially of the parts M M′, *m m′*, *n w w*, N, P, I I, all constructed and arranged substantially as specified.

2. The wheel rim or tread, constructed as shown in Fig. 3, consisting essentially of the parts *a*, *u*, *r*, substantially as set forth.

93,317.—John E. Lewis, Kittery, Me.—*Coffee Pot.*—August 3, 1869.

Claim.—The duplex coffee-pot, as made with the two compartments, the communicating passage, and the gate thereof, the two noses or discharging-spouts, and one or more handles, the whole beiug substantially as set forth.

93,318.—John J. Lindly, Lebanon, Ill.—*Gang-Plow.*—August 3, 1869.

Claim.—1. The arrangement of the bars G G′, with the plow-bars H, aud relative to the frame A C, and the draught-attachment N, substantially as and for the purposes set forth.

2. The crank-bar L, its lever *l′*, and straps M, arranged to raise the plow-bars H, substantially as set forth.

93,319.—Harvey A. Link, Columbus, Ohio.—*Harvester-Cutter.*—August 3, 1869.

Claim.—The plates C, having the projection *o* therein, and fitted in the recess *e* of the finger, substantially as shown and described.

93,320.—Seth Lowen, Temperanceville, Pa., assignor to himself and O. D. Lewis.—*Flanging-Machine.*—August 3, 1869.

Claim.—The combination and arrangement of the adjustable centering-piece, consisting of the parts *g*, *f*, and *e*, slide B, disks *h* and J, and adjustable friction-rollers *k*, the whole being constructed and operating substantially as herein described, and for the purpose set forth.

93,321.—James H. Lyon, Wilson Ager, Daniel Breed, and William H. Seaman, Washington, D. C.—*Portable Summer-Furnace.*—August 3, 1869.

Claim.—As an improvement in summer-furnaces, the construction, arrangement, and combination of the furnace A B, vertically adjustable rings C, and smoke-hood F, substantially as set forth.

93,322.—John F. Madison and Henry McLaughlin, St. Louis, Mo.—*Street-Car.*—August 3, 1869.

Claim.—1. The gate A, its loops *a*, the rail B, the prongs a^1 a^2, and the rod D, with its kerf *d*, when arranged with the platform F and dash-board E, substantially as set forth.

2. The gate A, its loops *a*, and the rail B, the prong a^1, and catch *g*, and guard H, all combined and arranged substantially as set forth.

93,323.—Henry B. Malbone, Geneva, N. Y., assignor to himself, D. E. Moore, and William J. Morse.—*Convertible Ladder.*—August 3, 1869.

Claim.—A sectional ladder, the sections of which are connected by the rounds of the ladder passing through slotted holes, the ends being provided with open slots, and the upper section with a notch or stop, in such a manner that the sections may form a continuous or step ladder, substantially as and for the purpose set forth.

93,324.—Emmons Manley, Marion, N. Y.—*Door-Latch.*—August 3, 1869.

Claim.—The arrangement and combination of the handles A and levers C, (pivoted respectively to the rosettes B,) with the horns D of the latch-bolt, substantially as described.

93,325.—J. L. McIntosh, Brooklyn, N. Y.—*Sun-Shade for Horses.*—August 3, 1869.

Claim.—1. The wire frame A, covered with canvas or other suitable material, and adapted to fit upon a horse's head, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the sponge D with the bonnet A B, substantially as herein shown and described, and for the purpose set forth.

93,326.—A. H. Mendell, Adams, N. Y., assignor to himself and William H. H Taylor, same place.—*Wire Fence.*—August 3, 1869.

Claim.—1. Providing a wire fence with a top rail, when the same is constructed in sections, said sections being united by lap-joints, supported and connected substantially as described.

2. The posts A A′, wires E E, bar *e*, plate F, and screws *f f*, when the same are so combined and arranged as to render the wires capable of adjustment, substantially as described.

93,327.—Solomon Mickley, Dover Township, and Samuel Leathery, Warrington Township, Pa.—*Seed-Drill.*—August 3, 1869.

Claim.—1. The shaft T, provided with the spiral gear X, and chains V, and lever W, when used to raise the plows, and throw the wheel C out of gear by the same motion, substantially as set forth and described.

2. The slotted lever G, operated by the spiral gear X, in combination with the movable collar D, wheels C and H, drums K, brushes N, and seed-boxes L, when used substantially as specified.

3. The axle A, wheels C and H, movable collar D, lever G, drums K, brushes N, seed-boxes L, shaft T, provided with spiral gear X, hand-lever W, chains N, and plows O, when used and combined substantially as described.

93,328.—William Miller, Bloomington, Ind.—*Corn-Sheller.*—August 3, 1869.

Claim.—The corn-sheller described, consisting of the frame A, spring-board B, board C, cylinder D, fan E, and cover K, the whole being combined and arranged as described, for the purpose set forth.

93,329.—A. C. Mills, Oaktown, Ind.—*Fly-Trap.*—August 3, 1869.

Claim.—A fly-trap, consisting of case A, provided with flange and glass *b*, sliding-door *c′*, drawer *d*, opening *e*, perforated plate *e′*, chamber D, and plate *g*, all combined, arranged, and operating substantially in the manner and for the purpose described.

93,330.—William Morgenstern, New York, N. Y., assignor to himself and Herman Funke.—*Breech-Loading Fire-Arm.*—August 3, 1869.

Claim.—1. The angle or point *c*, on the forward edge of the extractor, substantially as and for the purpose described.

2. The sight *e*, constructed with beveled teeth about its hub, *h*, in combination with a spring-detent or equivalent holding-device, substantially as shown and described.

3. The device for locking the sere or sere-plate to the breech-block, consisting of a slot or recess in the bottom of said block, seen at R, Fig 1, a notch, seen in Fig. 4, in the edge of the gas-plug, and the lug P, on the sere-plate, substantially as shown and described.

4. The nut or collar N, on the combined firing-pin and hammer, substantially as and for the purposes set forth.

5. The shoulder H, in the interior of the hollow breech-block, to act in conjunction with the nut or collar N, as a stop to the backward movement of the hammer during the operation of raising the breech-block up out of the receiver, substantially as shown and described.

93,331.—Charles N. Morris, Cincinnati, Ohio.—*Printers' Rule.*—August 3, 1869; antedated July 29, 1869.

Claim.—1. The printers' rule A, formed with catches or flanges *a′*, single or double, upon its ends, whether said catches be angular or curved, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the rule or brace B with the rule A, having flanges or catches *a′* formed upon its ends, substantially as herein shown and described and for the purpose set forth.

93,332.—Isaac J. Morrow, Everton, Ind.—*Fence.*—August 3, 1869.

Claim.—In combination with the posts A and panels B, the pieces C, with the pins D therein, whereby the panels are supported, substantially as shown and described.

93,333.—F. Neidhardt, East Saginaw, Mich.—*Roofing-Composition.*—August 3, 1869.

Claim.—A roofing made up of a composition, consisting of the ingredients herein named, in or about the proportions specified, and applied as a coating to felt, as a base or covering to the roof, substantially as described.

93,334.—Addison Norman, Rochester, N. Y.—*Lunch-Box.*—August 3, 1869.

Claim.—1. The hinged sides *b* and *d*, and lugs *x*, in combination with the cover C and hooks *i*, and the flask, for the purposes set forth.

2. In combination with the above, the liquid-flask A, substantially as shown and described, and for the purposes set forth.

93,335.—C. M. O'Hara, New York, N. Y.—*Apparatus for Opening Boxes.*—August 3, 1869; antedated July 30, 1869.

Claim.—The implement for opening boxes, consisting of the lever K, the link G, carrying the hooks

H H, the fulcrum-beam L, bands C C, and adjustable arms D D, provided with the feet E E, all the parts being constructed, arranged, and operating as herein described.

93,336.—H. A. PALMER, Rochester, N. Y.—*Coal-Scoop.*—August 3, 1869.

Claim.—As a new article of manufacture, the scoop herein described, the same consisting of a body, A, having a curved back, *b*, gradually sloping sides, *c*, of dishing form, and a flaring mouth, *a*, when perforated throughout and constructed of cast steel, as set forth.

93,337.—JOSEPH PARADIS, Brooklyn, N. Y.—*Propelling-Apparatus.*—August 3, 1869.

Claim.—1. The air-vessel *m*, safety-valve *n*, and inlet-valve *o*, applied to the inner end of the propeller-cylinder *b*, and combined with the piston *c*, in the manner and for the purposes set forth.

2. In combination with the said air-vessel, valves, piston, and propeller-cylinder *b*, the steam-cylinder *f*, and steam-valve, arranged in the manner specified, so as only to admit steam to act in the same direction as the air of the air-cushion, for projecting the water from the cylinder *b*, as set forth.

3. The return nozzle *s*, fitted as specified, so as to be swung to coincide with the end of the cylinder *b*, as and for the purposes set forth.

93,338.—GEORGE J. PARHAM, Harrodsburgh, Ind.—*Fruit-Picker.*—August 3, 1869.

Claim.—1. The hand or stem A, provided with metal bands, and thumb-screw *b*, substantially in the manner and for the purpose described.

2. A fruit-picker, consisting of stem A, thumb-screw *b*, basket B, pulley *d*, cord *c*, and hook *g*, all combined, arranged, and operating substantially in the manner and for the purpose set forth.

93,339.—J. D. PARROT, Morristown, N. J., assignor to himself and HENRY MCCAULEY, same place.—*Filter.*—August 3, 1869; antedated July 30, 1869.

Claim.—The water-filter, composed of the case A, having the central partition B and the perforated diaphragm E, arranged as described and shown, to produce the chamber F, having perforated walls, the filtering-chambers C D, and the clear-water chamber G, having the discharge-tube H, as and for the purpose specified.

93,340.—RICHMOND PEARSON, Appleton, Wis.—*Bee-Hive.*—August 3, 1869.

Claim.—1. A bee-hive, formed mainly of the wire skeleton-frame, covered with paper, arranged to inclose air-spaces between the interior and exterior air-tight walls, substantially as specified.

2. The part B of the hive, formed of paper straps, secured at the top and bottom only, to form air-tight interior and exterior walls, as specified,

3. The combination, with the part B, of the honey-board, having the bars F, and arranged substantially as specified.

93,341.—A. C. PENNY and MINOR SPICER, Unadilla Forks, N. Y.—*Switch-Holder.*—August 3, 1869.

Claim.—In combination with the stool A, with hinged legs *d d d*, the switch-holder, consisting of the post D, toothed cam C, block E, and rod *m*, all arranged to operate as herein shown and described.

93,342.—GEORGE M. PHELPS, Brooklyn, N. Y., and ROBERT STEWART, Bordentown, N. J.—*Electrical Railroad-Signal.*—August 3, 1869.

Claim.—1. A motor, operated by electricity, and fitted substantially as specified, to remove and retain the danger-signal while the circuit is closed, and to allow said signal to be shown when the circuit is broken, substantially as set forth.

2. The circuit-breaker, formed of the springs *n o*, lever *s*, block *r*, and spring *t*, in combination with the switch-level *l*, substantially as and for the purposes specified.

93,343.—CHARLES J. PHILLEO, Kenyonville, N. Y.—*Carriage-Jack.*—August 3, 1869.

Claim.—The arrangement and combination of the ratchets C and D, the pin G, pawl H, and lever I, with the lever E and standard A, substantially as shown and described.

93,344.—MORRIS POLLAK, New York, N. Y.—*Safety-Attachment for Watch-Chain.*—August 3, 1869.

Claim.—The watch-protector, formed of the slide *c*, points *e*, and case *a*, in combination with the chain or guard, as and for the purposes set forth.

93,345.—JOHN A. A. POST, New York, N. Y.—*Hand Stamp.*—August 3, 1869.

Claim.—A letter canceling-stamp, in which the stamp *a*, cross-piece *b*, tang *c*, and cork-carrier, are all formed of one piece of metal, in the manner shown, so as to insure strength and lightness, and to allow the hole *i* to be inserted, in the manner specified.

93,346.—JOHN RINGEN, St. Louis, Mo.—*Washing-Machine.*—August 3, 1869.

Claim.—The device E and C, for sustaining the stopper A, when elevated, in combination with a washing-machine, as shown and described.

93,347.—HENRY R. ROBBINS, Baltimore, Md., assignor to himself and J. J. MORAN, same place.—*Tobacco and Grain Curer.*—August 3, 1869.

Claim.—1. The combination of the double walls, having the space *a* between them, with the flues F F, chimney C, furnace D, having a water-space or boiler *e*, and pipes G *g g'*, when constructed and arranged to operate substantially as and for the purposes specified.

2. In connection with the furnace D, and arranged within a tobacco-curing house, A A^1, the employment of the tanks I H, and pipes *h* J K, arranged substantially as described, so as to be adapted to the purposes herein specified.

93,348.—OBY ROBIRDS, St. Louis, Mo.—*Railway-Car Axle Journal and Box.*—August 3, 1869.

Claim.—The journal, increased in size as the inner collar D is approached, by reinforcements, which are separated by V-shaped collars E and F, or such thereof as may be deemed necessary, substantially as and for the purposes set forth.

93,349.—WILLIAM ROBJOHN, New York, N. Y.—*Organ.*—August 3, 1869.

Claim.—1. The rock-shafts G, G^1, &c., connected with the pneumatic levers, and provided with projecting stops *c e*, so that they may be worked by the slides F F^1, &c., substantially as herein shown and described.

2. The slides F^1, F^2, &c., for operating the pneumatic levers, when connected with the reverse slides I I, substantially as and for the purpose herein shown and described.

3. The slides F, F^1, &c., when slotted and provided with two sets of pins, *d' g'*, to operate directly the pneumatic levers, substantially as herein shown and described.

4. The valve J, of the pneumatic lever, when held against its seat by a spring, *j*, and when adjustable on the seat by the screw *l*, substantially as and for the purpose herein shown and described.

5. The reversible coupler, consisting of the lever *m*, wedge *n*, slide L, lever M, and bar N, all combined and operating substantially as and for the purpose herein shown and described.

6. The tremolo pneumatic lever D^1, provided with the anchor *t*, rod X, spring *y*, and arm *u*, on the valve, all arranged and operating substantially as herein shown and described.

93,350.—THOMAS ROSSITER, New Haven, Conn., assignor of one-half interest to RUFUS H. SANDFORD and FRANK PRESCOTT, same place.—*Adding-Machine.*—August 3, 1869.

Claim.—The arrangement of the index-wheel C, hollow-shaft *b*, registering disks D and E, actuated by the pin *c*, contained within the case A, constructed as shown and described.

93,351.—SILAS C. SALISBURY, New York, N. Y.—*Hot-Air Furnace.*—August 3, 1869.

Claim.—1. The application and use, in combina-

tion with suitable air chambers and pipes for heating air for dwellings, &c., of a heating-furnace, consisting of an inner fire or preparation chamber, and an outer or combustion chamber constructed and arranged substantially as described, whereby atmospheric air can be applied to both such chambers, and be heated in passing thereto, such inner chamber being also covered by or separated from the outer one by a perforated arch or top, and such chambers being arranged with respect to each other, substantially as and for the purposes set forth.

2. Forming the pipes, or chamber that receives the air, and in which it is heated, of fire-clay, and, in combination with such pipes or chamber, the use of asbestos cloth or fiber within the same, for the purposes mentioned.

3. An apparatus for heating air for warming dwellings, &c., constructed, arranged, and operating substantially as described.

93,352.—William S. Sampson, New York, N. Y.—*Grain-Bin.*—August 3, 1869.

Claim.—1. The grain-bin, constructed of wire-cloth, substantially as herein described.

2. The longitudinal battens or ribs G, applied to the bin-cylinders, as and for the purpose set forth.

3. The congregation of equal cylindrical wire-cloth bins and intervening triangular spaces, to constitute a grain-storehouse, when arranged as shown and described.

93,353.—Joseph F. Sargent, Melrose, assignor to Elmer Townsend, Boston, Mass.—*Eyeleting-Machine.*—August 3, 1869.

Claim.—1. In combination with a reciprocating eyelet-set, or clinching-tool, and with a reciprocating eyelet-chute, an eyelet box or hopper, which not only moves with the chute, but which also has an intermittent rotative movement, substantially as and for the purpose described.

2. In combination with a rotating-hopper, actuated by a ratchet and pawl, such an arrangement of the ratchet and pawl mechanism as to cause the hopper to have a positive rotative movement in one direction, and a friction or slipping movement in the other direction, substantially as described.

93,354.—Moritz Saulson, Troy, N. Y.—*Kettle-Spout Attachment.*—August 3, 1869.

Claim.—The attachment A, provided with the raised flange *a*, as herein shown and described, and for the purpose set forth.

93,355.—Joseph M. Shank, Dayton, Ohio.—*Wire Ear for Metal Buckets.*—August 3, 1869.

Claim.—A wire ear, the portions *b* of which are bent and crossed, in the manner and for the purposes set forth.

93,356.—D. P. Shaw, Elkhart, Ind.—*Apparatus for Chalking Billiard-Cues.*—August 3, 1869.

Claim.—Chalking a cue by means of a train of driven gears, when said gears are set in motion by pressing the cue against the chalk or its holder, and stopped by removing the pressure, substantially as described.

93,357.—Samuel S. Sherman and Silas D. Piper, West Eau Claire, Wis.—*Carriage-Wheel.*—August 3, 1869.

Claim.—1. The oil-chamber C, consisting of an elongated tube, one end of which is closed by packing, and which has a number of openings made through its inside surface, substantially as set forth.

2. Securing two or more spokes by a single burr inside of the hub, substantially as described.

3. The hub A, provided with the two sections B, in combination with the oil-chamber C, burrs *i*, and spokes D, when arranged substantially as set forth.

93,358.—Benjamin Slusser, Sidney, Ohio.—*Sulky-Plow.*—August 3, 1869.

Claim.—1. In connection with such crank-axle, the lug L, constructed and arranged as and for the purposes set forth.

2. In connection with such axle, the movable plate or rest C, capable of shifting position so as to remain horizontal, whether the crank be raised or lowered, substantially as and for the purposes set forth.

3. The combination and arrangement of the plow-beam *p*, axle A, part C, having the straps *c c*, and brace B, all constructed to operate substantially as and for the purposes specified.

4. The weighted treadle N, in combination with the lever M, rack R, catch *o*, and crank *a* a^1 a^4, all constructed to operate substantially as and for the purposes described.

5. The jointed tongue T, in combination with the slotted plate *u*, cross-bar V, and arm *e*, all operating substantially as and for the purposes indicated.

93,359.—Patrick Smith, Newport, Ky.—*Door-Spring.*—August 3, 1869.

Claim.—In combination with the spring C and gasket D, the four-sided adjustable bracket E, constructed with notches J J′, and two screw-holes, H H′, substantially as and for the purposes set forth.

93,360.—Willard H. Smith, New York, N. Y.—*Vapor-Burner.*—August 3, 1869.

Claim.—1. In vapor-burners, the employment of heater-wings, constructed and arranged in such a manner that a flame will protrude above and below them, heating both sides at the same time, without obstructing the light, substantially in effect and for the purpose herein stated.

2. The employment of the plug K, when constructed and arranged and operating in combination with the air-tube A, substantially as and for the purpose herein described.

93,361.—William M. Smith, Augusta, Ga.—*Street-Railway.*—August 3, 1869.

Claim—1. An endless elevated railway, consisting of two separate rails or wire cables, properly supported by elevated frame-work, and carrying the carriages G, which are adapted to be connected to the car running on the track below, the carriages being connected by a cable, and propelled by stationary engine or engines, all arranged and operating substantially as and for the purposes set forth.

2. The peculiar construction of the carriages G, with upper and lower wheels, with a suitable projection above for the attachment of the cable and the arm which connects with the car, all constructed and arranged to operate as and for the purposes set forth.

3. In this described railway, the endless driving-chain, arranged to operate as described, and adapted to the peculiar construction of the cable-carriages, as and for the purposes set forth.

4. The hanger Y, clamp C, and key K, constructed and applied substantially as and for the purposes set forth.

5. The clamp Z, formed and attached to the cables, substantially as and for the purposes set forth.

6. One or more spring-extension draw-bars, arranged to act in connection with the carriages G, as and for the purposes set forth.

7. In combination with the extension draw-bars, when arranged on the platform of the car, the extension-spring Q, as and for the purposes set forth.

8. The extension-spring ring O, operating in connection with the carriages G and car, substantially as and for the purposes set forth.

9. The wheel K, ratchet-wheel L, and pawl *m*, substantially as and for the purposes set forth.

10. In the described railway, the guide-drum S, adapted to the carriages and cable, substantially as and for the purposes herein set forth.

93,362.—Hugh B. Spedden, Baltimore, Md., assignor to himself, William H. Baltzel, and G. A. Moore, same place.—*Plow-Gauge.*—August 3, 1869.

Claim.—The slotted plate G, connected with the plow-beam by the rods C C, and adjusted horizontally and vertically by the nuts *n n*, in the manner and for the purpose described.

93,363.—B. E. Sperry, Aurora, Ill.—*Soda Fountain.*—August 3, 1869.

Claim.—A beverage-drawing apparatus, having pumps A and C, doors P, S, and R, false bottom H, and stirup-compartments, as described, all incased or

forming parts of one box, and arranged and operating substantially as specified.

93,364.—Louis Sterne, London, England.—*Driving Belt and Band of Rubber and Metal*—August 3, 1869; patented in England June 2, 1868.

Claim.—A driving belt, band, or strap, made of India rubber and metal strips, united or joined together during the process of vulcanization, substantially as specified.

93,365.—Alfred Stevens, Georgetown, assignor to Josiah Starling, Manheigan, Me.—*Seam-Puttying Machine.*—August 3, 1869.

Claim.—1. The presser-blocks C C. and adjustable plates *e e*, in combination with a frame or block, A, having a recess for holding the putty, all constructed and arranged to operate substantially as herein described.

2. A seam-puttying machine, composed of the frame A, having a recess, B, the presser-blocks C C, their levers D D, and springs *c c*, the blocks E E, and plates *e e*, the gauge J, the refuse-box G, the scraper *g*, and smoothers H I, combined, when arranged as set forth.

93,366.—John Storer, New York, N. Y.—*Hot-Blast Pressure-Gauge.*—August 3, 1869.

Claim.—1. The protecting-tubes *f g*, fitting and sliding within each other, in combination with the case A, piston B, cross *c*, and spring *d*, substantially as and for the purpose described.

2. In combination therewith, the secondary piston D, elevated above piston B, guiding the latter, and carrying the index *a*, as set forth, for the purpose described.

93,367.—John H. Teahl, Eberly's Mill, Pa.—*Railway-Rail Chair.*—August 3, 1869.

Claim.—A railroad-rail, constructed with two bearing surfaces, said surfaces being at right angles to each other, and formed with a concavity on the under side of that portion of the rail which rests on the sills, in combination with a convex chair, or a convex bed-piece, constructed as described, operating substantially as and for the purpose set forth.

93,368.—John H. Thomas and Phineas P. Mast, Springfield, Ohio.—*Machine for Distributing Fertilizers.*—August 3, 1869.

Claim.—1. The stirrers or plates C, having their periphery serrated, and otherwise constructed substantially as described.

2. The shaft B, having the plates C and arms or rods D attached, and all arranged to rotate within a hopper, substantially as and for the purpose set forth.

93,369.—John H. Thomas, Phineas P. Mast, and Charles O. Gardiner, Springfield, Ohio, assignors to John H. Thomas and Phineas P. Mast.—*Grain-Drill.*—August 3, 1869.

Claim.—1. The combination of the eccentric R, lifting-bar B, and the swinging-plate G, for the purpose of throwing the driving-wheels in and out of gear by the act of raising or lowering the drill-tubes, substantially as described.

2. The spring-arm I, attached to the swinging-plate G, and arranged to operate substantially as described, to prevent injury to the teeth of the wheels when thrown into gear.

3. The combination of the eccentric R, slotted stirrup H, and spring-arm I, with the swinging-plate G, as set forth.

4. The sliding-bars C and D, having the drag-bars W attached thereto, and arranged to operate as described.

5. The guard or lip *g*, arranged, in relation to the wheels *p* and *h'*, substantially as described.

6. The cups J, provided with the internal ledge or projection *e*, substantially as and for the purpose set forth.

7. The conductors K, constructed substantially as described, in two parts, and held together by the pin K, as set forth.

8. A conductor, K, pivoted to the cups which contain the feed-rollers, substantially as and for the purposes set forth.

9. The plates U, provided with grooves or recesses, for receiving, holding, and guiding the cross-bars C D, as shown and described.

10. The combination of the rock-shaft E with its arms *o*, connecting-rods *c* and *c'*, cross-bars C D, and lever O, with rod *n*, arranged to operate substantially as described.

11. The combination, in a grain-sowing machine, substantially such as is herein described, of the devices for sowing grain in drills, and also sowing it broadcast between the drills simultaneously, substantially as set forth.

93,370.—John H. Thomas, Phineas P. Mast, and Charles O. Gardiner, Springfield, Ohio, assignors to John H. Thomas and Phineas P. Mast.—*Grain-Drill.*—August 3, 1869.

Claim.—1. The fixed bar H and the sliding-bar G, each having a portion of the drag-bars attached thereto, and all arranged to operate substantially as and for the purpose described.

2. The conductor C, constructed substantially as described, and pivoted to the under side of the hopper, or to a stationary spout, D, secured to the under side of the hopper, substantially as herein set forth.

3. The plates *n*, secured to the front part of the frame, and arranged to secure the sliding-bar G, with its drill-teeth, in place, substantially as set forth.

93,371.—James E. Thomson and James Tillinghast, Buffalo, N. Y.—*Seal-Lock.*—August 3, 1869.

Claim.—The combining, with the locking-bar B, a series of significant seals, 1b, 2a, &c., applied substantially as and for the purpose herein set forth.

93,372.—Ruggles S. Torrey, Bangor, Me.—*Bee-Hive.*—August 3, 1869.

Claim.—A bee-hive, consisting of the sections B B', comb-frames *b b b*, with troughs *i i i*, glass C, top D, and bottom E, provided with wire-netting *d*, all combined, arranged, and operating substantially in the manner and for the purpose described.

93,373.—Pieter van Dÿk, The Hague, Holland.—*Water-Elevator.*—August 3, 1869.

Claim.—The arrangement of the tipping-buckets for lifting water, in combination with the man-engine, substantially as specified.

93,374.—Henry Wadsworth, Duxbury, Mass.—*Cultivator.*—August 3, 1869.

Claim.—The cultivator G *g* H, connected to the axle A by the single universally turning eye K and vertical sliding-belt C, adjustable by means of the nut C' or its equivalent, and provided with the handles I, or their equivalents, whereby it may be manipulated, all substantially in the manner and for the purpose herein set forth.

93,375.—William V. Wallace, New York, N. Y.—*Railway-Car Coupling.*—August 3, 1369.

Claim.—1. A car-coupling for railway-cars, when constructed and arranged in the manner and for the purpose herein described.

2. The construction and combination of the link B, hook A, with the draw-head or bumper D, in the manner and for the purpose herein described.

3. In a car-coupling, the arrangement and adjustment of the link and hook upon the same rod or bolt, within the bumper or draw-head, in the manner herein described.

4. The arrangement herein shown and described, so that the link may be either raised above or depressed below the bumper or draw-head, when not in use.

93,376.—Daniel Weaver, Dayton, Ohio.—*Fifth-Wheel for Carriages.*—August 3, 1869.

Claim.—The within-described fifth-wheel or circle-iron, when constructed as described, with the axle pivot-hub *d'*, and corresponding recessed boss *b*, and with the radial arm G, substantially as and for the purpose specified.

93,377.—John Wells, Baltimore, Md.—*Steam-Generator.*—August 3, 1869.

Claim.—The combination of the return-pipe or

pipes K, with the cylinders A B C, pipes F F, and jacket N, when said parts are constructed and arranged substantially as described and shown, and the return-pipes are made to connect the bottom of cylinder B with the lower end of cylinder A, substantially as herein set forth.

93,378.—RICHARD WELLS, Bloomington, Ill.—*Railway-Car Coupling.*—August 3, 1869.

Claim.—1. The combination of the cross-bar C with the pin Q or R, and the posts N and springs O, substantially as specified.

2. The combination of the cross-bar C, provided with one or more link-pins, and suitable return-springs O, with the cords or chains I and J, and pulleys L and K, when constructed and operating substantially as shown and described.

93,379.—GUSTAVUS WERLICH, Watertown, Wis.—*Blasting-Charge.*—August 3, 1869.

Claim.—The plug A, shaped as described, and inserted in the drill-hole, with its beveled or inclined side immediately in contact with the blasting-charge, whereby it is caused to assume the same form as the plug, a packing of sand or other suitable material being placed above the latter, as herein set forth and shown, for the purpose specified.

93,380.—EDWARD WHITELEY, Cambridge, Mass.—*Portable Steam-Apparatus for Greenhouses.*—August 3, 1869.

Claim.—1. The boiler B, consisting of the hollow dome *j*, with its flues *o* and the hollow ring or base *i*, connected by a series of pipes, *k*, and surrounded with a casing, in combination with the "flow" and "return" pipes N O, constructed and operating substantially as described.

2. The removable top plate L, with its flanges *t v*, in combination with the casing C, provided with a groove, *s*, substantially as set forth.

3. The smoke-casing I, supported upon a flange, *n*, in combination with the boiler B and the top plate L, substantially as set forth.

93,381.—ORIN M. WHITMAN, North Haverhill, N. H.—*Railway-Car Coupling.*—August 3, 1869.

Claim.—The combination and arrangement of the auxiliary pin-supporter and its operative spring with the main pin-supporter and the link-holder, applied to the draw-bar, substantially in the manner and so as to operate therein as set forth.

93,382.—ARETUS A. WILDER and JOHN WILDER, Detroit, Mich.—*Washing-Machine.*—August 3, 1869.

Claim.—The combination, in a washing-machine, of the cylindrical case A, with door E, turning eccentrically upon journals, and provided with wedge-shaped ribs I, hollow journal F, drip-pipe H, and handle G, all arranged and operating as herein described.

93,383.—JAMES D. WILLOUGHBY, Shippensburgh, Pa.—*Steam-Engine.*—August 3, 1869.

Claim.—1. The construction of the induction and eduction valve H^3, with packing upon its surfaces, which serves to prevent the passage of steam from one of its ends to the other, substantially as shown and described.

2. The construction of the cut-off valve H^3, substantially as and for the purpose described.

3. The combination and arrangement of the valves H^2 H^3 and induction-ports *i i'*, substantially as shown and described.

4. The construction of the link L^1, substantially as shown and described.

5. The combination of the link L^1, eccentric rods G^2 and G^3, and eccentrics F^2 and F^3, substantially as shown and described.

6. The combination of the link L^1, valve-rod H^1, valve H^3, which it moves, substantially as shown and described.

93,384.—CHARLES WOLFF, Washington, D.C.—*Propelling-Apparatus.*—August 3, 1869.

Claim.—The grooves *a*, block *c*, and set-screws H, in combination with chain K, its buckets, as described, wheels B, C, and D, when the same are constructed and arranged substantially as and for the purposes set forth.

93,385.—HENRY BROOK WOODCOCK, Low Moor, England.—*Low-Grade Steel for Axles, Tires, &c.*—August 3, 1869.

Claim.—The process, substantially as herein described, of manufacturing metal possessing the qualities hereinbefore described, by mixing steel with crude iron in the process of puddling, substantially as herein described.

93,386.—GEORGE W. N. YOST, Corry, Pa.—*Railroad-Car Wheel.*—August 3, 1869.

Claim.—1. The combination of a main wheel, disk, and main tire, A, B, and C, when made with a circular, oval, or diamonded groove, *e e' x*, between them, substantially as and for the purpose described.

2. The combination of an elastic felloe, D, when made to fit the said groove *e e' x*, with the said wheel, disk, and tire A, B, and C, substantially as and for the purpose described.

93,387.—DAVID D. YOUNG, Dayton, Ohio.—*Pessary.*—August 3, 1869.

Claim.—1. The improved pessary, constructed substantially as described.

2. The hinged adjustment, composed of the hinges *e e*, nut *n*, and rod *o*, constructed and arranged substantially as described, and for the purposes specified.

93,388.—PETER ZIMMERMAN, Sylvan, Pa.—*Ash-Hopper.*—August 3, 1869.

Claim.—An ash-hopper, having frame A, sides B, and lock-bars *s* and *v*, when all the parts are constructed and arranged substantially as and for the purposes specified.

93,389.—F. W. ZOCHERT, Watertown, Wis.—*Coffee-Roaster.*—August 3, 1869.

Claim.—The cap D, having the doors E E, when combined with the supporting-ring C and roasting-cylinder A, all arranged and operating substantially as herein shown and described.

93,390.—R. L. JONES, Sacramento City, Cal.—*Ladies' Chemise.*—August 3, 1869.

Claim.—A chemise, so constructed as to prevent the bulky folding of the chemise beneath the corsets, by connecting the waist and skirt portions thereof by means of a band, belt, tapes, or strings, substantially as and for the purposes herein set forth.

93,391.—EDWARD A. LOCKE, Boston, Mass.—*Revenue-Stamp for Barrels.*—August 3, 1869.

Claim.—A stamp, the body of which is made of paper or other suitable material, and having a removable slip of metal or other material, displaying thereon a serial number or other specific identifying mark, corresponding with a similar mark upon the stub, and so attached that the removal of such slip must mutilate or destroy the stamp.

2. In a paper revenue-stamp for indicating the contents of a cask, and having thereon a number designating the number of gallons or other measure, providing the stamp, and also its stub or check-piece, with corresponding digital numbers, to be punched out to indicate the units, substantially as described.

3. In combination with a paper stamp, having a check-piece or stub, from which it is detached when applied for use, a coupon slip, whose coupons are to be secured to the face of the stamp, as and for the purpose described.

93,392.—P. W. YARRELL, Littleton, N. C.—*Tide-Water Wheel.*—August 3, 1869.

Claim.—1. The wheel G, constructed of the buckets J, of the curved form, as stated, and having their lower ends beneath each other, substantially as and for the purposes described.

2. The provision for operating a water-wheel in the same direction, by the rise and fall of tides, substantially as described.

93,393.—THOMAS J. ADAMS, Portsmouth, Ohio.—*Railway-Rail Splice and Chair.*—August 10, 1869.

Claim.—As an improved article of manufacture,

the fish-plate B, having the base-plate *a*, and the toe-piece or clutch *b*, all rolled or made of one piece, as set forth, and to be applied substantially as herein shown and described.

93,394.—Benjamin Arnold, East Greenwich, R. I.—*Machine for Mending Stockings.*—August 10, 1869.

Claim.—1. The band C, in combination with the block Q, and plate *x*, or its equivalent, substantially as described, and for the purpose set forth.

2. The hook *p*, or its equivalent, operating to catch a stitch in a row of stitches previously made, and spread and hold it so that the needle shall pass through it, substantially as described, and for the purpose set forth.

3. The combination of mechanism for producing a rotary feed-motion to form a row of stitches, with mechanism for producing a vertical feed-motion, substantially as and for the purpose set forth.

4. Mending or filling up a hole in a stocking or other fabric, by making successive rows of chain-stitches around the opening, the outer row being taken in the edge of the fabric, and the rows joined together, substantially as herein set forth.

93,395.—Thomas Atkinson, Memphis, Tenn.—*Bee-Hive.*—August 10, 1869.

Claim.—1. The removable comb-frames B B and C C, made with hinges R R and clasps S S, when arranged and operated as described, and for the purpose specified.

2. The combination of the sliding-doors E and F with the removable comb-frame B B, the whole arranged as described, and for the purpose specified.

93,396.—William W. Atteberry, Chesterfield, Ill.—*Clevis.*—August 10, 1869.

Claim.—An improved plow-clevis, formed by the combination of the main clevis A, adjusting-gauge D, double tree clevis G, having a hook, K, formed upon the forward end of its upper arm, and connecting-clevis H, with each other, said parts being constructed and arranged substantially as herein shown and described, and for the purpose set forth.

93,397.—Daniel B. Ayres, Brooklyn, Mich.—*Fence.*—August 10, 1869.

Claim.—The combination of the posts A, the wires B, the pickets C, and the subsidiary wire *a*, when constructed, arranged, and operating as and for the purposes aforesaid.

93,398.—W. C. Barber, Van Wert, Ga.—*Flood-Fence.*—August 10, 1869.

Claim.—An improved water-fence, formed by stringing the outer ends of the poles or rails A upon wires or rods B, supported at top and bottom with suitable supports, leaving the inner ends of said poles or rails A free to be laid crosswise upon each other, in the manner of a worm-fence, substantially as herein shown and described, and for the purpose set forth.

93,399.—Frances Lee Barnes, for herself, and as executrix of the estate of S. H. Barnes, deceased, New York, N. Y.—*Corset-Steels.*—August 10, 1869.

Claim.—As a new article of manufacture, the corset-spring, made thicker in the middle, as shown, and tapering gradually from the middle toward both ends, as herein set forth, for the purpose specified.

93,400.—D. C. Battey and Carl L. Svensson, Topeka, Kans.—*Chimney-Cowl.*—August 10, 1869.

Claim.—The chimney A, provided with the collar K and perforations *a* in its lower end, combined with the pipe J and rotating-elbow B, having the V-shaped vane H and tube F G, the latter being extended across beyond the vertical portion of the elbow B, all constructed and arranged as herein shown and described, for the purpose specified.

93,401.—Spencer Bentley, Green Oak, Mich.—*Ditching-Machine.*—August 10, 1869.

Claim.—1. The hoe D, and stops E and F, and crank G, in connection with driving-pulley H, belt I, and driving-wheel A, when constructed and operating substantially as and for the purposes specified.

2. The machine described, consisting essentially of the frame C, shovel M, conveyer N T B, hoe D, and bearing-wheels K L, the whole being combined and operated as and for the purpose set forth.

93,402.—Amos S. Blake, Waterbury, Conn.—*Telescopic Quadrant-Hinge.*—August 10, 1869.

Claim.—An improved hinge, made in parts, so constructed as to slide upon each other, in the manner of a telescope, for the purpose set forth.

93,403.—John D. Blaker, Newtown, Pa.—*Breech-Loading Fire-Arm.*—August 10, 1869.

Claim.—1. The combination, with the parts *a b* of the barrel, hinged as described, of the catch *c*, spring-catch *e*, and disconnecting-lever *f*, when arranged substantially as specified.

2. The combination, with the parts *a b* of the barrel, hinged together as described, of the discharging spring-hook *h*, substantially as specified.

3. The combination, with the hammer and parts of the barrel, when hinged as described, of the cord *k*, arranged as specified.

4. The arrangement, with the part *b* of the barrel, when hinged to the part *a*, as described, of device for simultaneously disconnecting the catches *e c*, discharging the shell and cocking the hammer, substantially as specified.

93,404.—Albert Booth, Springfield, Ill., assignor to A. Booth, Son & Co., same place.—*Coupling for Carriages.*—August 10, 1869.

Claim.—1. The disk C, provided with the lugs *e c*, and hub *x*, in combination with the plate E, provided with the flange *e*, lugs *e' e'*, and flanged arms K K, all constructed and arranged substantially as and for the purpose specified.

2. The combination of the axle A, the head-block or bolster B, the disk C, provided with the lugs *e c* and hub *x*; the flanged plate E, provided with the flanged arms K K; the spring F, the bolts D, G, and I, the clamps *d* and H, the stretchers L L, and the forked brace M, substantially as herein set forth, and for the purpose specified.

93,405.—W. A. Bowyer, Helen Furnace, Pa.—*Lifting-Jack.*—August 10, 1869.

Claim.—1. The lifting-jack, consisting of the stand A, notched slide B, lever D, rod E, spring *b*, and click *c*, all combined and operating substantially as herein shown and described.

2. The combination of the L-shaped frame F and sliding-hook G, with a lifting-jack, constructed and arranged substantially as herein shown and described.

93,406.—Edward Brady, Philadelphia, Pa.—*Manufacture of Iron.*—August 10, 1869.

Claim.—Mingling or mixing and manipulating, by common mechanical processes, iron or iron-ore which may be crushed, or any molten iron or metal, with sulphate of potassa, sulphate of calcia, sulphate of soda, and sulphate of alumina, or with any sulphates of the metals of the alkalies, earths, or alkaline earths, pulverized, and both may be dried or roasted, or may have been assimilated to about equal degrees of temperature, and the smelting and a fusion and decomposition of the iron-ore or melted iron and dried sulphates being effected by the usual methods in any ordinary furnace or vessels, the chemical changes and results consequent thereupon separating, evolving, and combining and depositing the impurities of carbon, phosphorus, silica, sulphur, &c., and leaving the molten iron pure, and it may be converted into malleable iron and steel, substantially as above described and set forth.

93,407.—Henry F. Breneman, Rapho Township, assignor to himself and Martin L. Greider, Lancaster County, Pa.—*Railway-Car Coupling.*—August 10, 1869.

Claim.—The combination and arrangement of a vibrating and adjustable hook-stem, on a pivot, P, within a case, A, said stem terminated by a hook-end, H, and open guard, G, resting on the rounded notched lip of the shield or bumper B, all constructed and operating substantially as and for the purpose specified.

93,408.—F. E. Brown, Springville, Iowa.—*Shutter-Worker.*—August 10, 1869.

Claim.—The combination and arrangement of the guide-rod B, provided at one end with a handle, *a*, and set-screw, D, for securing it in any position, and the pivoted arm *c* jointed as described, and hinged to the blind, as and for the purposes above set forth.

93,409.—James H. Bruce, Nashville, Tenn.—*Ruling-Machine.*—August 10, 1869.

Claim.—1. An independent clamp for each extension-pen, substantially as and for the purpose set forth.

2. The clamp D, constructed as described, in combination with the strip A and beam B of a ruling-machine.

93,410.—John Burnham, Batavia, Ill.—*Insulator for Lightning-Rods.*—August 10, 1869.

Claim.—The housings D C, provided with pipes I, in combination with the staples J L, glass H, and rod G, as and for the purpose set forth.

93,411.—John Butler, New York, N. Y.—*Compound Oil for Producing Gas.*—August 10, 1869.

Claim.—An improved gas-oil, compounded of the ingredients, and in about the proportions and manner substantially as herein described and set forth.

93,412.—Nathan Buttler, Otterville, Mo., assignor to himself and D. S. Butler, same place.—*Cultivator.*—August 10, 1869.

Claim.—1. The bolster E, hinged to the axle B, and beveled upon its rear lower edge, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the rearwardly projecting arms J, sliding-seat L, and foot-rest or platform M, with the hinged bolster E and axle B, substantially as herein shown and described, and for the purpose set forth.

3. The notched plow-standards G, adjustably secured to the hinged bolster E by means of the detachable loops H, in combination with the said hinged bolster E and axle B, substantially as herein shown and described, and for the purpose set forth.

4. An improved cultivator, formed by the combination of the wheel A, axle B, tongue C, hinged bolster E, arms J, sliding-seat L, foot-rest or platform M, and plow-standards G, with each other, substantially as herein shown and described, and for the purposes set forth.

93,413.—A. W. Calder, San Francisco, Cal.—*Mode of Making Corundum-Wheels.*—August 10, 1869.

Claim.—The metallic center, placed in the corundum or emery wheel, in the manner and for the purposes substantially as above set forth.

93,414.—William C. Champlin, Allegheny City, Pa.—*Steam-Engine.*—August 10, 1869; antedated August 3, 1869.

Claim.—1. The adjustable cut-off, in which the pawl *c'*, at the end of each lifter, *c*, shall operate against the ends of the segmental head *d''* and wing *o'*, the latter being adjustable, and all arranged substantially as set forth.

2. The frame *e*, mortised or slotted to receive the sliding-blocks *o*, and hung on the shaft *d*, and connected to an independently operating shaft, *f*, arranged substantially as hereinbefore set forth.

3. The sliding-guide *i*, with inclined slots *s*, and the bolts *s'*, for adjusting the wings *o'* through the blocks *o*, and furnished with a screw, *e''*, all constructed and arranged substantially in the manner above set forth.

93,415.—L. H. Cobbs, Montgomery, Ala.—*Sewing-Machine.*—August 10, 1869.

Claim.—The combination, with the needle-arm B and crank-pin A, or oscillating needle-post C, of the plates D and D', or E and E', and their adjusting-screws and nuts, substantially as described.

93,416.—Ira Cogswell, Jr., La Salle, Ill.—*Vise.*—August 10, 1869.

Claim.—The combination of the adjustable connection of the jaws with the support A, the adjustable connection of the holder A with the holder F, and the adjustable connection of the holder F with the permanent holder K, all substantially as specified.

93,417.—Hudson W. Conkling, Tecumseh, Mich.—*Saw-Mill.*—August 10, 1869.

Claim.—1. The combination of the slides D, the guide-bars C, provided with horizontal slots *c*, embracing the studs B, and the cross-head *d*, when constructed, arranged, and operating as and for the purposes above described.

2. The levers F, the links E and G, the rocker-arm H, the rock-shaft I, the bearings *g*, and the hand-lever K, when arranged and operating as and for the purposes aforesaid.

93,418.—Samuel B. Cranford, Upper Marlborough, Md.—*Bee-Hive.*—August 10, 1869.

Claim.—1. The combination with the slides M, in the doors *a' a'*, of the wire gauze I, in the front of the hiving-box, substantially as and for the purpose specified.

2. The combination of the inclined cleats N, with the lower side edges of the hiving-box H, and with the sliding-bottom C, substantially as herein shown and described, and for the purpose set forth.

93,419.—Wilson Crawford, Streator, Ill.—*Ditching-Machine.*—August 10, 1869.

Claim.—1. The combination and arrangement of the front cross-bar A, longitudinal bars E F, short cross-bar G, rear cross-bar K, and wheels D and H, with each other, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the detachable longitudinal bar I and elevator M with the axle C, of the wheel D, and with the frame K G E F A, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the band P, pulley O, guide and tension-pulley Q R, guide-pulley S, drive-pulley T, shaft U, and bevel-gear wheels V W, with each other, with the shaft N, of the drive wheel H, and with the elevator M, substantially as herein shown and described, and for the purpose set forth.

4. The combination of the plow A' B' and bar or rod C', with the front cross-bar A, detachable longitudinal bar I, and elevator M, substantially as herein shown and described, and for the purpose set forth.

5. The combination of the plows A' B' and F' G', and rods or bars E' and H', with each other, and with the front cross-bar A and seat-frame Y, substantially as herein shown and described, and for the purpose set forth.

6. The combination of the levers L', lever spring-catches M', curved catch-bars N', and chains I', with each other, with the seat-frame Y, and with the plows A' B' and F' G', whether one or both of said plows are used, substantially as herein shown and described, and for the purpose set forth.

93,420.—William Dashner, Point Pleasant, W. Va.—*Gun-Lock.*—August 10, 1869.

Claim.—The improved gun-lock herein described, when all the parts are constructed and arranged substantially as specified.

93,421.—James D. Davies, East New York, N. Y.—*Sad-Iron Polisher and Glosser.*—August 10, 1869.

Claim.—The improved polishing and glossing implement A, provided with the polishing-surfaces B and C, and the glossing-sack for holding spermaceti or other similar substances, all substantially as specified.

93,422.—Alexander De Puy, New York, N. Y.—*Printers' Galley.*—August 10, 1869.

Claim.—A printers' galley, provided with tubular ribs B B B, filled with wood, D D, or composition, arranged and constructed as described, for the purposes set forth.

93,423.—William Derr, Tiffin, Ohio.—*Hay-Elevator.*—August 10, 1869.

Claim.—The master-wheel A, working in pinion

B, turning shaft C, in combination with loose spool D and ratchet-wheels E H, lever F, spring G, and rope M, arranged and operated substantially as described.

93,424.—JACOB DINGEE, Downington, Pa.—*Milk-Cooler.*—August 10, 1869.

Claim.—A milk-cooler, consisting of the vessels A, B, and F, the vessel B, having the vertical pipe C, the inverted conical cover *a*, and the supply-pipe D, while the vessel F is perforated near the rim, all substantially as and for the purpose herein shown and described.

93,425.—SAMUEL EASTER, Charlestown, Mass.—*Sash-Lock.*—August 10, 1869.

Claim.—The combination and arrangement of the flaring recess *e*, the bolt-bar *c*, the shaft *h*, pallet *g*, by means of which the bolts *a b* are actuated and secured in position either when projected or withdrawn.

93,426.—JOHN M. EATON, Charlestown, Mass.—*Composing-Stick.*—August 10, 1869.

Claim.—1. The formation of a longitudinal groove upon the inner face of the back, fitted to receive the head of a clamping-bolt, in such a manner that the gauge may be set at any desired point by slightly slacking the holding-nut, substantially as described.

2. In combination with the groove E, the use of the clamping-bolt F, and the thumb-nut G, arranged and applied substantially as described.

93,427.—JOHN FLEMING, Erie, Pa.—*Cooking-Stove.*—August 10, 1869.

Claim.—The registers D, as shown and described, in combination with the tubes E and A, constructed and operating substantially as and for the purposes set forth.

93,428.—JACOB AUGUSTUS FOLSOM, South Bend, Ind.—*Spurs for Excelsior Machines.*—August 10, 1869.

Claim.—The circular knives C, in connection with the arbor A, when constructed as described, and operating as spurs in machines employed in the manufacture of excelsior, substantially as set forth.

93,429.—CYRUS G. FRENCH, Springfield, Ill.—*Flasks for Vulcanizing Rubber Plates for Setting Teeth.*—August 10, 1869.

Claim.—1. The within-described flask, consisting of the rings or sections A and B, secured together by means of the spring-strips C, substantially as described, and for the purpose specified.

2. The spring-strips C, provided with the catches or detents *c*, when applied to the rings or sections A and B, or to said sections and the detachable cover A′, substantially as shown and described.

93,430.—J. W. GILLIAM, Elkton, Ky.—*Plow.*—August 10, 1869.

Claim.—1. The improved plow-supporting frame, constructed and arranged for adjusting the plows, substantially as specified.

2. The combination, with the said plow-supporting frame, of the plows E, provided with the branched shanks and hinged braces, substantially as specified.

93,431.—WILLIAM GOWEN, Bartlett, Tenn.—*Hand-Plow.*—August 10, 1869.

Claim.—1. The adjustable frame B, constructed as described, in combination with the beam A, as and for the purpose set forth.

2. The combination of the detachable shovel-plow C with the adjustable plow-frame B and beam A, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the detachable turn-plow D, with the adjustable plow-frame B and beam A, substantially as herein shown and described, and for the purpose set forth.

4. The combination of the detachable scraper E with the adjustable frame B and beam A, substantially as herein shown and described, and for the purpose set forth.

93,432.—GEORGES GROS, Bordeaux, France.—*Pocket-Box for Percussion-Caps, &c.*—August 10, 1869.

Claim.—The within-described metallic sliding-box, without hinges, formed in parts, adapted to be operated by the thumb and finger of one hand, and consisting of the body B, cover A, spring E, and stops *m* and *b*, constructed and arranged for joint operation, substantially as and for the purposes herein set sorth.

93,433.—C. B. GUY, Postville, Iowa.—*Velocipede.*—August 10, 1869.

Claim.—1. A velocipede, consisting of a reach, which has the semicircular extensions *a b*, in which the crank-shafts B have their bearings, and of the wheels C C and E, the wheels C being laterally adjustable, substantially as and for the purpose herein shown and described.

2. The saucer-shaped wheels C C, placed with their faces opposite, and adjustable substantially as herein shown and described, for the purpose as set forth.

93,434.—JOHN G. HAM, Newnan, Ga.—*Seed and Manure Dropper.*—August 10, 1869.

Claim.—The saws G, arranged as described, in combination with the fingers K, adjustable gates F, and hopper A, as specified.

93,435.—J. HENRY HAYWARD, New York, N. Y.—*Portable Gasometer.*—August 10, 1869.

Claim.—1. The movable piston-head or compresser, with its several parts, employed for the purpose of containing, hermetically retaining, compressing, and expelling the gas, in a uniform manner, by spring-power or its equivalent, substantially as described.

2. The center-rod and its several parts, applied for the purpose of guiding and supporting the movable piston-head squarely up and down the retort, without external friction; also, as it is applied, as a means of ingress and egress for the contents of the retort, through its center, at the top or botttom ends, essentially as set forth.

3. The sleeve-cup, and its several parts, employed for the purpose of preventing the closing of the vent-holes at the bottom of the rod, by the rubber sleeve-collar, for the purpose and by the means as substantially described.

4. The center-rod sleeve and its several parts, as applied in Fig. No. 1, and shown in detail in Fig. No. 5, used for the purpose of securing a movable gas-tight joint on the rod, without friction, in lieu of the ordinary methods of packing and stuffing, which may also be here employed, as herein set forth.

5. The second method of securing a movable gas-tight joint on the rod, with its several parts, as shown in Fig. No. 4, essentially as herein specified.

6. The peculiar method of uniting the lining or packing, with the head and bottom of sheet-metal, and thus securing a gas-tight joint between the two substances, as shown in Fig. No. 3, and herein fully described.

7. The method of suspending and fastening the swinging-apparatus, by the bottom cross-bars, to a moving body, essentially as set forth.

93,436.—HENRY HEBBARD, New York, N. Y.—*Finger-Guard for Holding Hot Corn.*—August 10, 1869.

Claim.—As my invention, the shield or guards B, with the handle A and points C, constructed substantially as shown and described, for the purpose of holding ears of corn.

93,437.—GEORGE H. HENKEL, Hartford City, Ind.—*Cab and Cradle.*—August 3, 1869.

Claim.—The combination of the extension-pieces H H, the adjusting-transverse pieces I, the prop G, lever F, rocker D, and posts E, the whole constructed and operating as described.

93,438.—JOHN HEUERMANN, Davenport, Iowa.—*Horse-Power.*—August 10, 1869.

Claim.—1. The sliding-shaft D, provided with four pinions, *d*, and coupling-cars D′, at each end, substantially as and for the purpose set forth.

2. In combination with the above, the stops E E, substantially as described.

93,439. — NEWELL HINMAN, Sparta, Mich.—*Horse Hay-Fork.*—August 10, 1869.

Claim.—The combination of the tines A and B, and the locking-dog F, when the said tines A constitute a bifurcated shank, C, and all arranged substantially as specified.

93,440.—JOHN P. HISLEY, Syracuse, N. Y.—*Buckle.*—August 10, 1869.

Claim.—A buckle, composed of frame A, *c c*, serrated cam *b*, and sliding tongue-plate D *d*, all constructed and operating as and for the purpose herein set forth.

93,441.—GEORGE H. HOLMES, New Brunswick, N. J.—*Take-Up for Looms.*—August 10, 1869.

Claim.—The slotted lever J, pawl *k*, ratchet-wheel J, gear-wheel G, the rod L, spring O, nut *p*, and arm *m*, the "lay" B, and cloth-beam F, of the loom, when arranged, with reference to each other, substantially as herein shown and described, for the purpose specified.

93,442.—JULIUS HUBBARD, Montgomery, Ohio.—*Lamp-Burner.*—August 10, 1869.

Claim.—The arrangement of the top A, the bottom C, the chamber B, and any proper wick passing through these parts into the oil of a lamp, and surrounded with salt in the chamber B.

93,443.—ROBERT HUMPHREY, Albany, N. Y.' assignor to himself and R. C. BLACKALL, same place.—*Railway Break-Block.*—August 10, 1869.

Claim.—The metallic wedge C, having its lower edge concave, and carrying the elastic block, arranged as described, for holding the rectangular link B in the transverse slot formed in the upper edge of the brake-shoe A, the wedge being held with its lower edge in contact with the lower bar of the link, by means of the bolt D, passing through the brake, wedge, and link, as herein set forth and shown, for the purpose specified.

93,444.—THOMAS E. HUNT, La Fayette, Ind.—*Sewing-Machine Table.*—August 10, 1869.

Claim.—The device C, for extending and forming a part of a sewing-machine table, as herein shown and described.

93,445.—ANTHONY ISKE, Lancaster, Pa.—*Reclining-Chair.*—August 10, 1869.

Claim.—1. The arrangement of the flange D, hooks E, open slots *a*, on the hinged pieces A^1, A^2, A^3, and A^4, in combination with the headed pins *b* and plates X, on the several parts B, F, C, and P, substantially in the manner shown, and for the purpose specified.

2. In combination with the said arrangement of the parts aforesaid, the perforated disk *f*, on part A^1 of the hinged frame, with the disk L, on the adjustable table-support I J K, with its binding-screw M, when constructed and applied in the manner and for the purpose set forth.

93,446.—C. S. JENKINS, Landsdale, Pa.—*Windmill.*—August 10, 1869.

Claim.—1. The wind-wheel, formed by the combination of the wheels C D and wings E, with each other and with the shaft A, substantially as herein shown and described, and for the purpose set forth.

2. The hub c^1 c^2 of the wheel C, formed in two parts, substantially as herein shown and described, and for the purpose set forth.

3. The detachably pivoted wings E, to the hub c^1 c^2, and to the rims c^3 d^2 of the wheels C D, substantially as herein shown and described, and for the purpose set forth.

4. The combination of the two-armed lever or shaft N, connecting-rod P, and forked lever O, with each other and with the vertical shaft H and hub d^1 of the wheel D, substantially as herein shown and described, and for the purpose set forth.

93,447.—P. C. JOHNSON, Central City, Colo.—*Horseshoe.*—August 10, 1869.

Claim.—The lugs *d*, when formed by the incisions in the side of the sliding-calks, and bent down into recesses in the raised portions, *a*, of the shoe, to form a locking-device, in combination with the dovetail connections *a a c*, all constructed, arranged, and operated as described.

93,448.—BENJAMIN JOHNSON, Carrollton, and WILLIAM JOHNSON, Hanover, Ohio.—*Cutter-Bar for Harvesters.*—August 10, 1869.

Claim.—1. The stationary cutters D, having their forward ends concave, the bar B, provided with the adjustable part *b'*, the cutters C, sickle-bar E, when all combined and arranged with the guards A, as herein shown and described, for the purpose specified.

2. The cutters or sickles C, extended in the rear of the sickle-bar E, in combination with the adjustable part *b'* of the bar B, substantially as herein shown and described, for the purpose set forth.

93,449.—HORACE K. JONES, Hartford, assignor to the HART MANUFACTURING COMPANY, Kensington, Conn.—*Machine for Graduating Carpenters' Squares.*—August 10, 1869.

Claim.—1. The combination of the cams G and bar F with the tool-holders H and tools I, when the parts are constructed and arranged substantially as herein described.

2. The combination of the bar F, spring *s*, tool-holder H, and gauge K, all constructed and arranged substantially as described.

3. The construction of the tool and socket, so that the edge of a tool fits into a V-shaped recess, the angle of which is in line with the working-point of the tool, substantially as and for the purpose herein described.

4. The arrangement of the several sets of tool-holders and tools upon the successive bars F, in the manner described, so that only one line is cut by the same graver, and the several lines of graduation are cut by successive tools, at certain distance to the right or left, substantially as herein described.

5. Regulating the length of the graduated lines, by means of the ends of the bars F acting upon the cams G, substantially in the manner described.

93,450.—EBENEZER L. KELLY, Reading, Mich.—*Grain-Separator and Clover-Cleaning Machine.*—August 10, 1869.

Claim.—The arrangement of the vibrating-bar A with the cords F, sheaves G, friction-rollers H, and sieve C, in any grain-separator or clover-cleaning machine, when operating substantially as and for the purposes herein described.

93,451.—J. A. KIRKPATRICK and G. W. HORNBY, Evansville, Ind.—*Apparatus for Drilling Metal.*—August 10, 1869.

Claim.—1. The combination of the ratchet-feed wheel C, pawl L, lever F, and operating pins I, in the driving-wheel, when all arranged as specified.

2. The combination, with the feeding-screw, ratchet-wheel, and pawl, of the rod N, block M, yoke Q, tripping-arm P, spring-holding plate O, and spring U, all substantially as specified.

93,452.—JACOB J. KISER, Sulphur Springs, Ind.—*Apparatus for Utilizing Wells as Refrigerators.*—August 10, 1869.

Claim.—1. The arrangement of the pump, in connection with a well-refrigerator, in such a manner that the pump will serve the purpose of a guide to the shelving C, a support to the central fixed guide-rod D, a support for the windlass F, and a stop to arrest the ascent of the shelving, substantially as before described.

2. The conical hood H of the shelving, constructed and arranged in such manner that the ascent of the shelving will open the hinged covers G of the well automatically, and maintain them in a position to be closed automatically by the descent of the shelving, substantially as before described.

3. The pump B, located as described, in combination with the refrigerator shelving C, the conical opening hood H, the stop *a*, to limit the ascent of the shelving, and the windlass F, for raising and lowering the shelving into the well, arranged and constructed substantially as before described.

93,453.—P. G. KLEINPETER, Plaquemine, La.—*Cane and Stubble Shaver.*—August 10, 1869.

Claim.—1. A cane-stubble shaver, consisting of the horizontal knife A, and vertical shank B, to be attached to the landside of a plow, substantially as and for the purpose herein shown and described.

2. The rake D, attached to the outer end of the stubble-shaver, substantially as and for the purpose herein shown and described.

93,454.—JAMES LARKIN, Detroit, Mich.—*Vise.*—August 10, 1869.

Claim.—1. The construction and arrangement of the jaws A B, actuating-screw D, provided with annular shoulders N O, and the sheath E, formed with a circular collar at one end, all fitted together, substantially as described.

2. The combination of the screws D I, operated as described, to maintain the parallelism of the jaws, with the sheath *v*, for turning off chips, dirt, and refuse and falling material, as set forth.

93,455.—WILLIAM D. LEAVITT, New Orleans, La.—*Corn-Sheller.*—August 10, 1869.

Claim.—1. Terminating the shells by a series of fingers, 1, 2, 3, 4, 5, 6, and so disposing these fingers as that they shall pass between and interlock each other, substantially as shown and described, for the purpose set forth.

2. The combination of the shells A, when they terminate in fingers 1, 2, 3, 4, 5, 6, with a short upper jaw, D, and a flat spring, E, substantially as described, for the purpose set forth.

93,456.—JAMES E. LINES, Bryan, Ohio, assignor to himself and JOHN W. SMITH, same place.—*Clothes-Pin.*—August 10, 1869.

Claim.—A clothes-pin, formed of a single piece of wire, with one arm turned or twisted once or more around the other arm, and the ends flattened and resting against each other, substantially as shown and described, for the purpose specified.

93,457.—WILLIAM LONG, West Troy, and JAMES GARAND, Troy, N. Y.—*Bung.*—August 10, 1869.

Claim.—The cast-metal bush B, for bungs, having the flange *f*, recess *g*, screw-thread *s*, and projections *e*, when all the parts are constructed as described, for the purpose specified.

93,458.—WILLIAM LOTTRIDGE, Charles City, Iowa.—*Grain-Binder.*—August 10, 1869.

Claim.—1. The arrangement of the receiver E, griping or condensing jaws F F^1, twister G, and tucker L, as herein described, for the purpose specified.

2. The discharger M, constructed as described, in combination with the spring M^3, loose crank M^4, pin M^6, on the wheel M^5, and the slotted receiver E, substantially as described, for the purpose specified.

3. The arrangement of the griping-jaws F F^1 with relation to each other, and the lever F^4, yoke F^7, crank F^8, grooved supports, and slotted and fixed bearings, substantially as herein shown and described, for the purpose specified.

4. The arrangement of the twister G G′, with reference to the griping-jaws F F^1 and tucker L, whereby it is adapted to operate in the manner described, for the purpose set forth.

93,459.—T. A. MACAULAY, Northampton, Mass.—*Tension-Device for Sewing-Machine.*—August 10, 1869.

Claim.—1. The combination, with the disk *a*, of the disk *b*, having the covering rim, with the plate *d*, as and for the purpose set forth.

2. The combination, with a tension mechanism, constructed substantially as described, of the spring *e* and guard d^1, substantially as and for the purpose set forth.

93,460.—T. A. MACAULAY, Northampton, Mass.—*Needle-Holding Block for Sewing-Machines.*—August 10, 1869.

Claim.—The combination, with the needle-bar, of the needle-block *a*, having the slot d^3, and set-screw, by which it is attached to the needle-bar, and also provided with an opening and set-screw, for confining the needle, substantially as described.

93,461.—WILLIAM C. MARSHALL, Hartford, Conn.—*Bell-Rope Supporter.*—August 10, 1869.

Claim.—The construction of a bell-rope supporter, substantially as shown and described, as an improved article of manufacture.

93,462.—JAMES MCELROY, Allegheny City, Pa.—*Churn.*—August 10, 1869.

Claim.—1. The clip *o*, having a loose or removable jaw, *x*, adjustable by a stem, *t*, in a sleeve or socket, *n*, the latter being attached to a sliding-box, *l*, substantially as and for the purposes set forth.

2. In a churn-attachment, the sliding-box *l* and shaft *k*, adjustable in a rotating arm, *h*, in combination with a frame, *c*, so made as to be attached by a bracket, *b*, to the barrel of the churn, substantially as described.

93,463.—R. S. MERSHON, Zanesville, Ohio.—*Bobbin for Sewing-Machine Shuttles.*—August 10, 1869.

Claim.—As an article of manufacture, a shuttle-bobbin, having one of its projecting journals stationary, and the other arranged to move longitudinally in the bobbin, a spring to press on the movable journal, and a pin or projection in the bobbin, entering a groove in the movable spindle, to prevent its falling out, all constructed as described.

93,464.—M. MICKELSON, Ashland Mills, Oreg.—*Truck-Plow.*—August 10, 1869.

Claim.—1. The arrangement, together with the tongue and the frame, of the pivot-bolt D, yoke E, and set-screws F, all substantially as specified.

2. The combination, with the frame and axle, of the bent rod H, lever I, and levers M O, when arranged substantially as specified.

3. The axle, constructed in two parts, hinged together, and otherwise arranged as specified, for governing the plane of the truck, as described.

93,465.—C. W. MONSON, Upton, Iowa.—*Leather-Rolling Machine.*—August 10, 1869.

Claim.—The combination of the rollers A D, fixed housings B, movable housings E, and foot-treadle, when all arranged as specified.

93,466.—AUGUSTUS MOORE and JOHN AYLWERD, San José Mission, Cal.—*Carriage Pole and Shafts Combined.*—August 10, 1869.

Claim.—The device described, consisting of the thills *a a*, uniting to form the pole B, evener *f*, braces *c c*, and cap *g*, the whole being constructed, arranged, and operated in the manner described, for the purpose set forth.

93,467.—D. G. MORRIS, Catasauqua, Pa.—*Machine for Bending Car-Hooks.*—August 10, 1869.

Claim.—The combination of the former B, the straight forked lever G, and the roller I, which performs the double function of bending the turn of the hook and clasping ends thereof, successively, with the pair of retaining brackets D E, arranged out of line with the space between the said former and roll.

93,468.—FRANZ MÖRTH, Vienna, Austria.—*Combined Furnace and Steam-Generator.*—August 10, 1869.

Claim.—1. The combination and arrangement of the boilers *a b c*, with each other and with the furnace thereof, substantially as herein set forth.

2. The arrangement of the hot-air space or chamber with the upper surface of the boilers *a* and *c*, with reference to each other and the hot-water boiler *b*, when constructed substantially as herein described.

93,469.—ROBERT DAVID NAPIER, Birkenhead, England.—*Brake for Machinery.*—August 10, 1869.

Claim.—The within-described arrangement of the pins or joints *c f g*, relatively to each other, and to the lever *c*, brake-band *b*, and wheel *a*, so that as the end joined to *g* is tightened, the end joined to *f* is slackened, but to a less extent, for the purposes herein set forth.

93,470.—A. Onslow, Jersey City, N. J.—*Exhaust-Nozzle Valve Device.*—August 10, 1869.

Claim.—1. In combination with a valve for closing the exhaust-nozzle of a steam-engine, the auxiliary cylinder F, with its piston K, and with the mechanism connected therewith for operating the valve, substantially as shown and described.

2. The cylinder F and piston K, in combination with the passage L, whereby to open and close automatically the exhaust-nozzle of a steam-engine, substantially as herein described.

93,471.—D. K. Overhiser, Williamsport, Pa.—*Churn-Dasher.*—August 10, 1869.

Claim.—The tubes D and E, fitted one within the other, and provided with the holes *d e* and pin E^2, or its equivalent, combined and arranged as represented, relatively to each other, and the parts A and A′ of the rod, or handle of the churn-dasher, as and for the purposes herein set forth.

93,472.—P. C. Perkins, Mishawaka, Ind.—*Windmill.*—August 10, 1869.

Claim.—1. A windmill, so constructed and arranged that the wind-wheel may, by turning upon its vertical axis, have its face brought into a parallel or nearly parallel line with the sides of the vane or rudder, substantially as and for the purpose set forth.

2. Arranging the wind-wheel, or wind-receiving surface, upon the arms or frame H, at one side of the center of its vertical axis, substantially as and for the purpose set forth.

3. The arrangement of the rudder, with reference to the socket F and frame or support E′, substantially as and for the purpose set forth.

4. The combination and arrangement of the socket F, frame or arm H, lever G, and cam *c*, substantially as and for the purpose specified.

5. The combination and arrangement of the rudder C, rope or chain K, pulleys *b* and *b′*, and rod K′, substantially as and for the purpose specified.

6. The combination of the eye-bolts *e*, pipe I′, and the frame A, substantially as and for the purpose specified.

93,473.—Charles A. Peterson, New York, N. Y.—*Piano-Forte.*—August 10, 1869.

Claim.—The plates I, having the supporting-studs *c*, formed on their under sides, and provided on their upper surface with the agraffes J and central block or wire rest K, all constructed and arranged as herein shown and described, and for the purpose set forth.

93,474.—W. Gray Phillips, Brooklyn, N. Y.—*Police-Nipper.*—August 10, 1869.

Claim.—An improved police-nippers, formed by the combination of the two parts A B, and spring-catch C, with each other, said parts being constructed, arranged, and operating substantially as herein shown and described, and for the purposes set forth.

93,475.—L. C. Prindle, Chicago, Ill.—*Newspaper-File.*—August 10, 1869.

Claim.—1. The band-clasp B, when constructed and operating in a filer, substantially as and for the purposes specified.

2. The wire E, when constructed and operating in a filer, substantially as and for the purposes shown and described.

93,476.—C. H. Proessdorf and E. Bauch, Boston Highland, Mass.—*Woven Hose for Water, &c.*—August 10, 1869.

Claim.—As an improved article of manufacture, woven hose or water-pipe, made water-tight by the compound herein set forth.

93,477.—William J. Rand, Brooklyn, E. D., N. Y.—*Process of Preparing Iceland and Irish Moss for Use in Food.*—August 10, 1869.

Claim.—1. Both Iceland moss and carrageen, ground, powdered, cut up, shredded, or in any manner disintegrated or dissolved, and prepared either in its natural state, or mixed with sugar, or any other edible substance or substances suitable for the purpose set forth, and put up in packages, for the convenience of the consumer and the trade, as a new commercial article.

2. The above-described processes, substantially as and for the purpose set forth.

93,478.—William J. Rand, Brooklyn, E. D., N. Y.—*Manufacture from Iceland Moss and Carrageen.*—August 10, 1869.

Claim.—Iceland moss and carrageen, cleansed and put up in suitable packages or boxes for the consumer and the trade, as a new commercial article.

93,479.—George W. Rogers, New York, N. Y.—*Stair-Rod.*—August 10, 1869.

Claim.—As an improved article of manufacture, the combination of the pins *b*, firmly inserted in the inner ends of the recesses *a*, with the pins *c*, having eyes to receive the pins *b*, as herein described, for the purpose specified.

93,480.—Israel M. Rose, West Hampton, N. Y.—*Embroidering-Attachment for Sewing-Machine.*—August 10, 1869.

Claim.—1. The embroidery-attachment to sewing-machines, when composed of the vibrating-arm E, oscilating pinion C, hook *c*, and rim *a*, all arranged in connection with the presser-foot, or its equivalent, substantially as described, and operating as set forth.

2. The combination of the swinging-plate E, with the reciprocating needle-carrier, the former being arranged with reference to the latter, and being operated thereby, substantially in the manner specified, to vibrate, directly or indirectly, an annular ring, pinion, or hub, provided with a hook thereon, as set forth.

93,481.—Augustus Ruoff, Detroit, Mich.—*Metallic Bung with Automatic Vent.*—August 10 1869.

Claim.—As a new, cheap, and superior article of manufacture, the metallic bung with automatic vent, herein described, consisting of the annular ring A, the bung D, provided with vent-hole F, and valve H.

93,482.—Samuel I. Russell and James H. Cole, Chicago, Ill.—*Roofing Composition.*—August 10, 1869.

Claim.—A roofing composition, composed of the substances herein specified, and prepared substantially as described.

93,483.—Thomas Ryan, Scott Bar, Cal.—*Process for Forming the Hub and Spokes of Wrought-Iron Wheels.*—August 10, 1869.

Claim.—Constructing the hubs and spokes of wheels of a single piece of metal, by substantially the method described.

93,484.—John F. Seaman, Cortlandville, N. Y.—*Carriage-Jack.*—August 10, 1869.

Claim.—The construction and arrangement of a wagon-jack, consisting of the lever B, having the slot D, with a shoulder beveled from the upper side, and a cavity or depression on the under side, at the inner terminus of the slot, the step C, and the tapering double-notched standard-board A, all arranged as and for the purpose set forth.

93,485.—Henry F. Shaw, West Roxbury, Mass.—*Mechanical Movement.*—August 10, 1869.

Claim.—As a new mechanical movement, the series of cams C C′ C″, actuating a corresponding fluted bar or compound wheel, substantially as described, and for the purpose set forth.

93,486.—Henry F. Shaw, West Roxbury, Mass.—*Clutch.*—August 10, 1869; antedated August 5. 1869.

Claim.—The eccentric L, operating substantially as described, and for the purpose set forth.

93,487.—John Shaw, Clayton, Del.—*Weather-Strip.*—August 10, 1869.

Claim.—The hinged flap F, adapted to be thrown up by the threshold D, when the door is swung open, and held against the shield E by means of the hook formed upon the sliding-spring rod G, catching under

the plate *h*, attached to said flap, as herein shown and described.

93,488.—GILBERT SMITH, Highland Falls, N. Y. —*Clothes-Wringer.*—August 10, 1869.

Claim.—1. In a twisting wringer, the hollow sliding-ring D, adapted to receive the clothing through its interior into the net-work M *m*, as herein specified.

2. In combination with a twisting wringer, the inclined trough B, jaws B^1, and set-screws C, adapted to support the parts B B^1 B^2, M *m*, and twisting means E G H, all combined and arranged as and for the purposes herein set forth.

93,489.—MARIE T. SMITH, New York, N. Y.—*Corset-Fastening.*—August 10, 1869.

Claim.—The hooked-shaped clip for corsets, constructed as described, and arranged to protrude through the seam formed upon the edge of the corset and extend back over the busk, in the manner herein set forth, for the purpose specified.

93,490.—WILLIAM M. SMITH, Augusta, Ga.—*Hoisting-Machine.*—August 10, 1869.

Claim.—1. The combination of the differential pulley-blocks A B and C D, and the peculiar arrangement of the endless ropes K and L, with operating devices, substantially as and for the purposes herein set forth.

2. In combination with the above, the driving-pulleys T and W, driving-wheel H, gear-wheels Z and *d*, substantially as described.

3. The spring-clamps, represented by Figs. 4 and 5, substantially as and for the purposes herein set forth.

93,491.—NICOLOUS SODERSTROM, Chicago, Ill. —*Mangle.*—August 10, 1869.

Claim.—The combination of the roller J, provided with bearings K, sliding-block L, spiral springs N, stationary block M, block O, screw S, India-rubber springs *x*, block P, and friction-wheels R, with the roller G, provided at either end with crank-handles H, and rotating upon friction-wheels F, and with the roller D pivoted in bearings, which support friction-wheels F, and rest upon spiral springs E, which in turn rest upon a suitable block, and rotating upon friction-wheels C, pivoted upon a suitable block, resting upon India-rubber springs B, which in turn rest upon a suitable block, and with the hinged table-leaves T, all in connection with frame A, constructed and arranged as and for the purposes above set forth.

93,492.—ISAAC H. SPENCER, North Providence, R. I., assignor to ALBERT N. BULLOCK, ALVA C. BULLOCK, and EDWIN R. CLARK.—*Turning-Lathe.* —August 10, 1869.

Claim.—1. The semicircular cutter D, in combination with the cutter-bed C and the vertical carriage B, or their equivalents, when constructed and operating substantially as described.

2. The auxiliary cutters E, in combination with the cutter D, when arranged to operate substantially as described, for the purposes specified.

93,493.—LUCAS STADLER, Bowen, and WILLIAM H. STAATS and AUGUST C. SCHWANKE, Le Prairie, Ill.—*Stalk-Cutter.*—August 10, 1869.

Claim.—1. The shaft E, provided with cutters F and arms G, in connection with the drag-teeth D, frame C, truck A, pulleys B and H, and the belts R, when arranged and operating substantially as and for the purposes herein set forth.

2. In combination with the above-named parts, the bars L and M, caster-wheel N, and lever O, when constructed and operating substantially as and for the purposes described.

93,494.—ANREW JACKSON STEVENS, San Francisco, Cal.—*Steam-Cultivator.*—August 10, 1869.

Claim.—1. The revolving plow-cylinder, having the plows secured thereon, and adjustable in the pedestals, and the system of gearing transmitting motion between the engines, the plow-cylinder, and the driving-wheels, in combination therewith, substantially as herein described, and for the purposes as set forth.

2. The adjustable frame of knives, (set in rear of plow-cylinder,) which slides up and down on the guide-bars, constructed substantialy as herein described, and for the purposes as set forth.

93,495.—JAMES B. STOREY and ISAAC N. ROSS, Butler, Pa.—*Sled-Brake.*—August 10, 1869.

Claim.—The adjustable dogs 5, pivoted to the cranks or elbows 4 of the rock-shaft 3, which has also a center-crank or elbow, to which is pivoted the connecting-rod 9, jointed to the elbow 7, on the sliding-roller 2, all constructed, combined, and arranged as herein shown and described.

93,496.—DANIEL B. STRONG and WILLIAM BUSKIRK, Winchester, Mo.—*Shingle Machine.*—August 10, 1869.

Claim.—The gauge-plate L, in combination with the spindle *b*, slots *f f*, set-screws *e e*, and temper-screws *d d d d*, substantially as and for the purposes set forth.

93,497.—WILLIAM H. SWEETLAND, Marblehead, Mass.—*Pegging-Jack.*—August 10, 1869.

Claim.—The disk C, ratchet R, and dog *s*, when applied to a pegging-jack, substantially as and for the purposes specified.

93,498.—N. A. THORNTON, Conikee, Ala., assignor to himself and MILES L. THORNTON, Lumpkin, Ga.—*Tanning Composition.*—August 10, 1869.

Claim.—In a tanning liquor, the combination of catechu, common salt, and sulphuric acid, in the proportions and manner herein described.

93,499.—THEODORE R. TIMBY, Saratoga, N. Y. —*Toilet Pin-Case.*—August 10, 1869.

Claim.—The toilet pin-case herein described, consisting of a box or receptacle, B, a diaphragm, D, to receive the pins, and a sliding-bottom, F, to elevate or support them, substantially in the manner set forth, either with or without the cover C.

93,500.—WILLIAM TOWNSEND, Seneca Falls, N. Y.—*Loom.*—August 10, 1869.

Claim.—1. The governors F and G, constructed as described, and acting in combination directly with the harness-frames, substantially as herein set forth, for the purpose specified.

2. The sliding-plate *u*, and the parts connected therewith, and marked *a' e' c' v z x*, in combination with the harness or heddle-frames of a loom, arranged substantially as described, for the purposes specified.

3. The friction-plate *f'* and spring *h'*, in combination with the heddle-frames, arranged substantially as and for the purposes described.

4. The combination of the bar D and rock-bars *h h* with the governors F G, arranged as herein described, for the purpose specified.

93,501.—JOHN E. TREAT, Oxford, Mich.—*Permutation-Padlock.*—August 10, 1869.

Claim.—1. In combination locks, the grooved lip N and the hasp A, when provided with the flange O, arranged and operating in the manner and for the purpose herein set forth.

2. In combination with the above, the lock-bar B, provided with studs H, the slotted bolt C, and pin *c*, collars D, G, and E, and bolt-stud *d*, the tumblers F, provided with the recesses I, slots J, and feathers L, and the combination rings K, with their slots M, when constructed, arranged, and operating substantially as and for the purposes herein shown and specified.

93,502.—CALVIN G. UDELL, Chicago, Ill.—*Extension-Ladder.*—August 10, 1869.

Claim.—The combination of the ladders A and D, the strip C, and pieces K, for the purpose of locking the tops of the ladders together, when used as a step-ladder, when constructed and operating substantially as herein set forth.

93,503.—THOMAS W. VAN TASSEL, Washington, D. C., assignor to himself and WILLIAM BEAMAN, same place.—*Bird-Bath.*—August 10, 1869.

Claim.—Constructing a bird-bath of glass, wood,

and isinglass, consisting of the frame A B C D, filled with glass and isinglass, with an aperture therein for the entrance of the bird, and a door in the roof thereof, for supplying the bath with water, substantially as and in the manner described.

93,504.—JOHN H. VICKERS, Norwich, Conn., assignor to NORWICH LOCK COMPANY.—*Combined Knob Latch and Lock.*—August 10, 1869.

Claim.—Pivoting the tumblers of a tumbler-lock upon the hub C of a knob-latch, mechanism combined therewith to facilitate the manufacture and the compactness of the combined mechanism, as herein set forth.

93,505.—JOHN A. WELLS, Holly Springs, Miss.—*Can-Opener.*—August 10, 1869.

Claim.—The frame A, adjustable holding-lever D, screw B, and cutter C, constructed, arranged, and operating in combination with each other, substantially as herein shown and described, for the purposes set forth.

93,506.—CHARLES A. WENTWORTH, Boston, Mass., assignor to ALVIN C. NORCROSS, same place.—*Key Ring and Check.*—August 10, 1869.

Claim.—An improved key-ring, formed by the combination of the open ring A and washers B and C with each other, said parts being constructed and operating substantially as herein shown and described, and for the purpose set forth.

93,507.—EDWARD WIARD, Louisville, Ky., assignor to B. F. AVERY, same place.—*Expanding Double-Shovel Plow.*—August 10, 1869.

Claim.—1. Adjustably connecting the plow-standards to the plow-beam, by means of sockets, formed in the upper ends of said standards, and the hollow spindles E, substantially as herein shown and described, and for the purpose set forth.

2. The plow-standards C, made of a thin plate, with a flange upon both sides of its forward edge, substantially as herein shown and described, and for the purpose set forth.

3. The slotted brace-rods F and posts or arms G, in combination with the standards C and beam A, whether said braces be placed in front or rear of said standards, substantially as herein shown and described, and for the purpose set forth.

4. An improved expanding double-shovel plow, formed by the combination of the plows D, standards C, hollow spindles E, brace-bars F, posts or arms G, beam A, and handles B, with each other, substantially as herein shown and described, and for the purposes set forth.

93,508.—H. C. WILCOX, West Meriden, Conn., assignor to the MERIDEN BRITANNIA COMPANY, same place.—*Casket-Handle.*—August 10, 1869.

Claim.—The thin metal tube, combined with the levers *b*, each having a boss, *b'*, and with the screw-bolt *e* and nuts *f*, substantially as shown and described.

2. The casket-handle, as shown and described, and consisting of the parts enumerated in the preceding claim, and combined with the plates *a*, for receiving the fulcrum-pins, as a new article of manufacture.

93,509.—WILLIAM H. WOODS, San Francisco, Cal.—*Device for Operating Cocks or Steam-Cylinders.*—August 10, 1869.

Claim.—The inclined bars D, slotted arms C C, set-screws G G, and valves F F, arranged as described, and operating in the manner and for the purpose set forth.

93,510.—AARON G. AIKIN, Somerton, Ohio.—*Combined Corn-Planter and Cultivator.*—August 10, 1869.

Claim.—1. In connection with the shaft R, slide K, lever Q, and rock-shaft T, constructed to operate as described, the upright bent arm *u*, when made vertically adjustable, substantially as and for the purposes specified.

2. The device for raising and depressing the plows, seed-box, &c., the same consisting of the rock-bar O, lever L, and eccentrics *i i*, the latter being so constructed as that, when the lever L is thrown down against the axle, the bearing-point of the eccentrics runs forward of the vertical line of its upper end, and forms a lock, as and for the purpose specified.

3. In connection with a seed-planter, and for the purpose of operating as a covering-plow, the plows J J, when constructed with the parts v v^1 v^2, and supported by the part *n*, all constructed and arranged substantially as described.

93,511.—J. F. ANDREWS, Lancaster, Pa.—*Sewing-Machine.*—August 10, 1869.

Claim.—1. The combination, with the needle-bar E, of the portions d^2, d^3, d^4, and the sliding-socket d^1, for operating the needle-bar, substantially as and for the purpose described.

2. The tension-spring F, with its adjusting screw F^1 and projection F^2, in combination with take-up f^1 and pivoted arm f^1, all arranged and operating substantially as described.

3. The shuttle-operating shaft D^1, having the adjustable nut d^7, in combination with socket d^1, as and for the purpose set forth.

4. The needles e^3 and e^4, in combination with the looper e^2, and with its arms, e, e^1, e^2, and adjusting-screws e^6, with clutch E, constructed, arranged, and operated substantially as described

5. The needle-bar E^2, the portions d^2 d^3 d^4, rod D^1, arm D^2, shuttle-carrier D^3, and rods d d, when combined and arranged as and for the purpose described.

93,512.—JAMES B. AUSBOURNE, Milwaukee, Wis., assignor to himself and HIRAM MALLORY, same place.—*Lifting-Jack.*—August 10, 1869; antedated August 5, 1869.

Claim.—A lifting-jack, consisting of fulcrum-post A, lifting-beam B, lever C, and check D, when constructed to operate substantially as described.

93,513.—ARMAND BANARÉ, Paris, France.—*Speed-Indicator for Ships.*—August 10, 1869.

Claim.—1. The arrangement of the revolving helix and air-cylinder, with which it is combined, in a frame connected with the vessel in the manner specified, and consisting of guards and blades, constructed and arranged as herein described, so that the apparatus, while floating independently of the vessel, and following in its wake, may be maintained in proper position to communicate accurate movement to the register, as shown and set forth.

The combination, with the submerged air-cylinder, of the brass casing for the same, constructed as described, so as to protect the cylinder from the force of the water, at the same time that the water is admitted around the cylinder, as and for the purposes stated.

93,514.—JOHN BEAL, Port Gibson, N. Y.—*Implement for Slitting and Joining Rags for Carpets.*—August 10, 1869.

Claim.—The implement for slitting and looping the ends of rags, herein described, composed of the knife D, the rest E, and the post or stem F, combined and constructed substantially as set forth.

93,515.—WILLIS S. BRONSON, Hartford, Conn.—*Base-Burning Stove.*—August 10, 1869.

Claim.—1. The horizontal radiating flues d d^1 d^2, more or less in number, constructed substantially as described, in combination with a fuel-magazine, *b*, air-passage *i*, conducting-tubes *f*, substantially as set forth.

2. The combination of the system of horizontal radiating flues d, d^1, and d^2, and pipe *h*, with a direct-draught pipe, h^1, arranged to operate substantially as set forth.

93,516.—WILLIS S. BRONSON, Hartford, Conn.—*Base-Burning Cook-Stove.*—August 10, 1869.

Claim.—1. The magazine *d*, elongated, and shelving at its bottom substantially as set forth.

2. The arrangement of a water-reservoir, *j*, beneath the oven, and back of the fire-pot, substantially as set forth.

3. A hot-closet, *k*, arranged back of the water-reservoir *j*, and beneath the oven, substantially as set forth.

4. The arrangement of the fire-pot *e*, fuel-magazine *d*, oven h^2, reservoir *j*, and hot-closet *k*, substantially as set forth.

5. The flues h^5, arranged substantially as shown and set forth.

93,517.—Mary E. Capen, Aurora, Ill.—*Stove-Attachment.*—August 10, 1869; antedated August 3, 1869.

Claim.—The stove-attachment shown, consisting of the brackets C, set-screw *g*, one or more perforations, *f*, and one or more projections, *d*, all constructed substantially as set forth, and for the purpose described.

93,518.—William H. T. Clark, San Francisco, Cal.—*Stuffing-Box.*—August 10, 1869.

Claim.—The movable cylinder D, with the inclosed disks *b b*, rings *d*, and the elastic disks *h*, substantially as herein described.

93,519.—John J. Clark and Thomas Clark, Elgin, Ill.—*Rabbeting-Machine.*—August 10, 1869.

Claim.—The laterally adjustable cutter-heads F F^2, in combination with the hinged table L, curved spring-frame P, and guide *m*, when all the parts are constructed and operated as described, for the purpose set forth.

93,520.—Francis Cramer, Chess Springs, Pa. *Horse Hay-Fork.*—August 10, 1869.

Claim.—A horse hay-fork, consisting of the tines A A, with handles B B, having rings G G, the lugs C C, toggle-levers E E, link F, clevis D, and cords H H, when all are constructed, arranged, and operating as described.

93,521.—Loring Coes, Worcester, Mass.—*Monkey-Wrench.*—August 10, 1869.

Claim.—The combination of the thrust-bearing of the screw, the tongue, the nut at the end of the tongue, the strut, (interposed between the thrust-bearing and the nut,) and the handle, the whole constructed to operate substantially as before set forth.

93,522.—Isaac F. Davis, Rockford, Ill.—*Nail-Extractor.*—August 10, 1869.

Claim.—The implement described, consisting of the shanks A A′, having the jaws D D′ and head C, when arranged to operate as and for the purpose set forth.

93,523.—Jonathan Dennis, Jr., Washington, D. C.—*Distilling Alcoholic Spirits and Liquors.*—August 10, 1869; antedated February 10, 1869.

Claim.—1. Injecting and mixing or mingling atmospheric air or gas with the alcoholic vapor while it is in an aeriform or gaseous state, and before it is condensed, for the purpose of neutralizing or destroying the fusil-oil and other deleterious oils and gases, and giving the liquor so distilled the quality technically termed age by liquor-dealers.

2. Inserting a pipe into the goose-neck of the still, or into the pipe that connects the still or retort with the worm or condenser, to conduct air or gas into the vapor or gaseous products of distillation, by the suction of the vapor from the still, or to convey the air from an air-pump, bellows, or other air-propelling device, into the vapor distilled, before it is condensed.

3. Arranging the mouth of the pipe that conducts the air into the goose-neck or pipe, from the still or retort to the worm or condenser, so that the blast of air blown in shall propel the vapor forward in the goose-neck or pipe, toward and through the worm or condenser, substantially as described.

4. Introducing the air or gas into the vapor, at such a temperature as will render it the most available in acting on the vapor from the retort, to produce the greatest benefit to the product of distillation.

5. Utilizing the air or gas blown in, or introduced into the vapor, to improve the product of distillation, by using it to propel the vapor or products of distillation forward into and through the worm, or through the worm or condenser, substantially as described.

6. In combination with the introduction of air or gas into the alcoholic vapor or products of distillation, the application and use of an air-pump, fan, or other pneumatic device, to draw the vapor from the retort, and force it into or through the worm or condenser.

7. Arranging an ice-box at the end of the condenser, to condense whatever may remain in the vapor or air flowing from the water-condenser that is capable of being condensed at the temperature of the ice-box.

93,524.—Charles Dold, Mason, Ohio.—*Wagon-Brake.*—August 10, 1869.

Claim.—In a wagon-brake, constructed as described, the spring D, lever A *a*, and spring-pawl G *g′ g* H, constructed, arranged, and combined substantially in the manner and for the purpose set forth.

93,525.—William B. Eltonhead, Philadelphia, Pa.—*Match-Machine.*—August 10, 1869.

Claim.—1. The screw-shafts K K and K′, gear-wheels K‴, nuts H‴, knife-table H″, knives I, in combination with shaft C, having grooved cams J J, rock-shafts J′ J′, with their arms, pawls, and ratchet-wheels *l l*, constructed and arranged to operate together, in the manner and for the purpose substantially as described.

The combination of the main-shaft C, gear-wheel C′, shaft D, sliding grooved cam E, rock-shaft G, and its arms, screw-shaft H, nut H′, knife-table H″, and knives I, constructed and arranged to operate together, in the manner and for the purpose described.

3. Slot X, in the rim of revolving-wheel B, having spring-plates *b b* and screw-bolt *b′ b′*, arranged to operate in the manner and for the purpose substantially as specified.

4. The combination of screw-shafts L L, nuts L′ L′, push-rods L″ L″, and ratchet-wheels Q Q, when constructed to operate in the manner and for the purpose substantially as described.

93,526.—Jeremiah Fisher, Reading, Pa.—*Treating Clay and Drying Bricks.*—August 10, 1869.

Claim.—The arrangement, herein described, of the two-storied structure, as shown, provided with the clay-pit C, pug-mill D, truck L, elevator E, with its turn-table M and hoist F, hot-air cap G, with its fans I J, and traveling-windlass H, upon its tracks *c c*, all constructed and operated substantially as and for the purposes herein set forth.

93,527.—George Gibbons, Meriden, Conn.—*Addressing-Machine.*—August 10, 1869.

Claim.—1. The mode of mailing or directing newspapers or periodicals simultaneously with the printing of the same, substantially in the manner and for the purpose as herein set forth and described.

2. The hinged links *a a a*, each bearing a subscriber's name, in combination with the block E and feeding-device F, when applied to any hand cylinder, or revolving-type printing-machine, in the manner and for the purpose substantially as herein described.

93,528.—Thomas S. Gilbert, Birmingham, Conn., assignor to himself and George F. Bushnell, same place.—*Corset.*—August 10, 1869.

Claim.—1. A corset, formed of a series of tapes, provided with pockets for stays, connected together with gore-pieces, substantially as described.

2. In combination therewith, a zone, provided with vertical pockets, for the reception of the corset-stays, substantially as described.

93,529.—M. L. Gorham, Rockford, Ill.—*Seeding-Machine.*—August 10, 1869.

Claim.—1. A seed-distributing wheel, B, with that portion of its periphery between the seed-cups beveled upon one side, for the purpose set forth.

2. A seeding-wheel, B, constructed with hub-ends clutched, to receive clutched stirrers, secured to shaft *b*, as and for the purpose set forth.

3. Spout E, and trough *h*, in combination with seed-distributing wheel B, as and for the purpose set forth.

4. The hood *l* and pin O, in spout E, as and for the purpose set forth.

93,530.—E. S. Gregory, Lockport, N. Y.—*Cultivator.*—August 10, 1869.

Claim.—The slotted metal plate D, constructed as described, in combination with the clamp-screw *f*, and bars *g g*, arranged to operate substantially in the manner and for the purpose specified.

93,531.—John Cornell Hackett, Sacramento, Cal.—*Passenger and Station Register.*—August 10, 1869.

Claim.—The combination with the station-indicator C, of the registering-device, consisting of the perforated rim D, and springs L and K, operated by the eccentrics M and N, connected with the car-seats, the whole being constructed and arranged substantially as described, for the purposes set forth.

93,532.—Ivory C. Ham, Charlestown, Mass.—*Device for Attaching Traces to Vehicles.*—August 10, 1869.

Claim.—The hollow bolt A, with its shoulders *b b*, and its nut C, in combination with the bar D, provided with a T-shaped hook, *h*, and the spring *c*, when the same are constructed and arranged, in reference to each other, substantially as and for the purpose described.

93,533.—George Haneline, Akron, Ohio.—*Animal-Trap.*—August 10, 1869.

Claim.—The jaws B B′ and trip E, as arranged, in combination with the ring A, and operated by the spring C, in the manner substantially as described, and for the purpose set forth.

93,534.—Carl Hinz, San Francisco, Cal.—*Mortising-Chisel.*—August 10, 1869.

Claim.—The combination, with a mortising-chisel, A, of an adjustable chisel, D, the parts being constructed and arranged substantially as described.

93,535.—John Hughes, Buchanan, Pa.—*Lantern.*—Augnst 10, 1869.

Claim.—1. The combination and arrangement of the external spring-catch G G′, the hinge *b*, the base-ring *a* of the guard-frame, and the removable or loose globe A, the whole being constructed as described, and so operating that, by a pressure of the thumb upon the spring in an outward direction, the globe-guard will be uncatched from the oil-reservoir stand, and can be turned over on its hinge a full half-circle, and the globe removed for cleaning, and then, by turning it back, the outward pressure of the base-ring upon the spring-catch will force said catch out of the way, and said ring fall below the hook of the catch, and be caught and retained thereby in a firm manner, all as set forth.

2. The combination of the base-ring *a*, which is straightened at the point where it is hinged to the flange *e*, with the said flange, which is constructed to support said ring at all points, and also the portion *g* of the glass globe, and with the external spring catch G G′, all arranged, constructed, and operated in the manner herein described and shown.

93,536.—James M. Keep, New York, N. Y.—*Copying-Press.*—August 10, 1869.

Claim.—1. Surrounding the screws D D with casings D′ D′, as and for the purpose specified.

2. Providing the platen B with lifting-stays E E E, as and for the purpose set forth.

93,537.—Luke Kellogg, Leon Centre, N. Y.—*Pump.*—August 10, 1869.

Claim.—The box *i*, provided with the valve *k*, in combination with the connecting-rod *h*, the said box and rod being arranged to operate in a horizontal direction, and with the lever *e*, connecting-rod *d*, handle *b′*, pump *b*, and passages *a′ a*, the latter passage being turned in a horizontal direction, so as to receive the box *i* and rod *h*, and fit the whole apparatus for use in shallow water, substantially as described.

93,538.—J. Dwight Kellogg, Jr., Northampton, Mass.—*Portable Cooking-Furnace.*—August 10, 1869.

Claim.—The combination of the cylinder A, fire-pot *a*, and pedestal *c*, as and for the purpose specified.

93,539.—Jacob Kemper, Philadelphia, Pa.—*Method of Weaving Galloon.*—August 10, 1869.

Claim.—The method herein described of weaving galloon, and raising thereon pile-loops, formed by laying the weft-threads around strands of horse-hair, or equivalent material, substantially as set forth.

93,540.—John Thomas Jones, New York, N. Y., assignor to the Singer Manufacturing Company, same place.—*Baster-Guide for SewingMachines.*—August 10, 1869.

Claim.—1. The baster-guide, hereinbefore described, consisting substantially of the combination of a set of traveling-points with a holding-plate, to maintain the engagement of the cloth with the points, substantially as before set forth.

2. The combination of the said set of traveling-points and holding-plate with a gauge, to determine the position of the cloth as it enters the implement, substantially as before set forth.

3. The combination of the said set of traveling-points and holding-plate with a gauge, to determine the position of the cloth as it leaves the implement, substantially as before set forth.

4. The combination of the said set of traveling-points to holding-plate, and the swinging-frame, substantially as before set forth.

93,541.—George G. Joyce, Baltimore, Md.—*Can-Opener.*—August 10, 1869.

Claim.—The guards or guides C C, when used in combination with the cutting-blades A B, substantially in the manner and for the purposes described.

93,542.—Alicia Lynch and Mary L. Moffat, Brooklyn, N. Y.—*Slate-Frame.*—August 10, 1869.

Claim.—The washers *c c′*, secured by the springs *a a*, in combination with the slate-frame, substantially in the manner and for the purpose set forth.

93,543.—B. F. McCarty, J. W. Orr, and R. J. Orr, Florence, Ga.—*Combination-Plow.*—August 10, 1869.

Claim.—The combination of beams A D F, spreaders I J, bolts N *m*, plow-standards E G O, bolt *r*, braces H H, standard C, and handles B B, all constructed to operate together, substantially in the manner and for the purposes set forth.

93,544.—Clark S. Merriman, Afton, Iowa.—*Submarine Clothing.*—August 10, 1869.

Claim.—1. The construction and arrangement of a submarine suit of clothing, with spaces intervening between the inner and outer linings thereof, and tubes connected with such spaces, so that the suit of clothing, or the several parts thereof, may be inflated, in the manner and for the purpose herein described.

2. The construction and arrangement of the jacket and pantaloons of a submarine suit of clothing, so that the lower portion of the jacket and the upper portion or waist-band of the pantaloons shall have firmly attached to them elastic pieces of India rubber, when the same is combined with a metallic band, with outwardly projecting flanges thereupon, surrounding the waist of the wearer, into which band the elastic rubber is fitted and adjusted, and secured therein by a belt or strap, in the manner and for the purpose herein described.

3. The supplemental head-piece F, in combination with a suit of submarine clothing, when the same is constructed and arranged in the manner and for the purpose herein described.

93,545.—Isaac M. Milbank, Greenfield Hill, Conn.—*Metallic Cartridge.*—August 10, 1869.

Claim.—1. The metallic disk *e*, having a cavity for the fulminate, in combination with the sheet-metal cartridge-case, when the said disk and case are united around the edges of the cavity, for the purposes and as set forth.

2. The disk, with a cup-shaped edge, when secured within the sheet-metal cartridge-case by solder or other adhesive material, as specified.

93,546.—Isaac M. Milbank, Greenfield Hill, Conn.—*Metallic Cartridge.*—August 10, 1869.

Claim.—1. A sheet-metal cartridge-case, in which the [illegible] is strengthened and stiffened by the metal

itself, that is melted to cause it to flow into intimate contact with the sheet-metal of said case, as set forth.

2. A tubular socket for the fulminate or cap, extending inward from the center of the sheet-metal base of the case, when combined with the metal melted around such socket and within the base of the metallic case, for the purposes set forth.

93,547.—GEORGE R. MOORE, Philadelphia, Pa.—*Valves for Water-Closet Pipes.*—August 10, 1869.

Claim.—1. The combination of the solid-headed valve-barrel A, projection E, packing P, cap I, and valve-stem B, substantially as and for the purposes herein set forth.

2. The aperture *o* and plug-screw *d*, combined and arranged, in relation to the chamber *c* and discharge-pipe G, substantially in the manner and for the purpose herein set forth.

3. The groove or enlargement *a*, constructed and arranged, in relation to the chamber *c* and packing *b*, substantially in the manner and for the purpose herein set forth.

93,548.—NICHOLAS V. MORELLE and LOUIS J. MORELLE, Newark, Wis.—*Stump-Extractor and Press Combined.*—August 10, 1869.

Claim.—In combination with a combined stump-puller and press, the arrangement and employment of the shaft E, rope or chin H, pulley I, pivoted frame c^2, pulley *k*, hook *h*, frame *m*, tub and plunger L, the frame, consisting of the parts A B C D, *a b*, and arms *e*, when the whole is constructed and arranged substantially as and for the purpose set forth, to operate as specified.

93,549.—H. W. NEAL, Sidney, Ohio, assignor to JASON MCVAY, same place.—*Plow.*—August 10, 1869.

Claim.—1. In combination with the swinging-beam E, lever *h'*, operating substantially as and for the purpose specified.

2. The foot-lever *g'*, pulley G, chain H, and swinging-beam E, all combined to operate substantially as and for the purpose specified.

3. The combination of foot-lever *h'*, with pivoted pawl *h* thereto, ratchet-wheels *e' f'*, pulley G, and pawl e^2, substantially as and for the purpose set forth.

93,550.—JAMES L. NELSON, Lewisburgh, W. Va.—*Churn.*—August 10, 1869.

Claim.—The combination of the balance-wheel C, shaft B, adjustable crank D, slotted lever G, and spring *h*, with the bench A, all arranged to operate substantially as herein shown and described.

93,551.—THEODORE OAKLEY, Booneville, N. Y.—*Clothes-Drier.*—August 10, 1869.

Claim.—The device described, consisting of the post *a a b b*, rivets *c*, bars *d*, steady-bar *e*, and cross-bar *f*, when the parts are arranged in such connection with each other that they may be folded into small space, as and for the purpose described.

93,552.—A. W. OWEN and JAMES BARNES, East Canton, Pa.—*Screw-Plate.*—August 10, 1869.

Claim.—Constructing screw-cutting dies *a a* on the enlarged extremities of the spring-forks *b b*, projecting from, but in one piece with, the stock A, and combining therewith the clamp *d* and set-screw *c*, substantially as described.

93,553.—HIRAM PLUMMER, Brooklyn, N. Y., assignor to himself and WILLIAM E. DOUBLEDAY & Co., New York City.—*Sewing-Machine.*—August 10, 1869.

Claim.—1. The feeding-clamp herein described, consisting of the upper spring-arm *d*, connected with the slotted sliding-plate *a'*, supporting the lower feeding-surface *c*, when all are constructed, arranged, and operated as described.

2. The gauge *l*, for the edge of the material, combined with the reciprocating feed, having two moving and pressing surfaces, one on each side of the material, substantially as set forth.

3. The gauge *o* and auxiliary presser *p*, in combination with the spring-clamping surfaces *c* and *d* as and for the purposes set forth.

4. The guide-slot *s* and pin *r*, in combination with the feeding-mechanism aforesaid, for the purposes set forth.

5. The feeding-mechanism, fitted to swing upon the pin that passes through the center of the coil of braid to be sewed, substantially as and for the purposes set forth.

93,554.—H. B. QUICK, Horicon, Wis., assignor to himself and HIRAM BARBER, same place.—*Device for Regulating the Feed in Seeding-Machines.*—August 10, 1869.

Claim.—The arrangement of the guide-pins and agitators I I, in connection with the slots in the metal-strip E, and the reciprocating-board C, substantially as and for the purpose specified.

93,555.—WILLIAM RIDDLE, 10 Larkhall Lane, England.—*Packing-Device.*—August 10, 1869.

Claim.—The combination of the flat band, having its ends formed into loops, without slitting, with a spear inserted through the loops, as described.

93,556.—DANIEL T. ROBINSON, Boston, assignor to WILLIAM B. WICKES, Sharon, Mass.—*Cabinet-Bedstead.*—August 10, 1869.

Claim.—1. In bureau-bedsteads, in which the bed-bottom consists of two portions hinged together, a spring, or the equivalent thereof, so applied and arranged as to contract and elevate the hinged portions, substantially as herein described, and for the purposes set forth.

2. The combination and arrangement of the door or cover *c* and leaf *d*, hinged together, and provided with the links *f f*, slotted ears *i i*, and the catch-bars *k k*, and socket *j j*, or their equivalents, in manner and for the purpose before explained.

93,557.—DANIEL T. ROBINSON, Boston, assignor to WILLIAM B. WICKES, Sharon, Mass.—*Extension Dining-Table.*—August 10, 1869.

Claim.—1. The combination of the movable auxiliary leaves of an extension dining-table, with its primary leaves or end-portions, in such manner that by turning of a shaft in one direction, such auxiliary leaves shall be automatically elevated into a plane horizontal with the said primary leaves and end-portion, and, when the shaft is turned in an opposite direction, shall be lowered beneath the closing primary leaves, in the manner substantially as herein described.

2. As a means of effecting the elevation of the auxiliary leaves, the duplicate series of lifting-grades, the traversing of such grades being effected by the racks *n o* and pinions *l l'*, or their equivalent devices, the whole being in manner and for the purpose substantially as before explained.

3. In combination with the auxiliary leaves *e e'*, and the primary leaves *a a'* and *b b'*, and their operating-mechanism, the spring-catches *f f'*, and *g g'*, operating in manner as explained.

93,558.—JOHN RUNYON, Marshall Township, and GEORGE INGERSOLL, Marshall, Mich.—*Plow.*—August 10, 1869.

Claim.—In combination with a plow, the coulter C, having its cutting-end *e* bent to land, at a suitable angle, and arranged relatively with the plow, substantially in the manner and for the purpose set forth.

93,559.—JAMES F. RUSSELL, Franklin, Ohio.—*Grain-Separator.*—August 10, 1869; antedated August 5, 1869.

Claim.—The combination and arrangement of fans M B, in relation to concave *b*, aprons *f g*, shoe *n*, and carriers C F, in the manner and for the purpose substantially as described.

93,560.—WILLIAM SANDERSON, New York, N. Y.—*Cutlery.*—August 10, 1869.

Claim.—The manufacture or formation of handles of a suitable core of composition, enveloped by a casing or covering, and the two united or connected and formed around the tang by compression, substantially as set forth.

93,561.—Edward Sauter, Hartford, Conn.—*Double Faucets.*—August 10, 1869.

Claim.—A double faucet, constructed and arranged substantially as herein described.

93,562.—Ph. I. Schopp, Louisville, Ky.—*Device for Holding Lids to Cups, &c.*—August 10, 1869.

Claim.—The device for attaching the cover, by means of the jointed ring A, rubber-packing B, and connecting-link C, when arranged to operate as herein described.

93,563.—H. Julius Smith, Boston, Mass.—*Electrical Machine.*—August 10, 1869.

Claim.—1. A generating-plate and a flat condenser, placed parallel to each other within the same casing, substantially as described.

2. A Leyden jar or condenser, constructed of vulcanized rubber and metallic plates, substantially as described.

3. So arranging the jar or condenser that the forward motion of the crank, to generate electricity and charge the jar, moves the jar forward through a small arc, whereby its terminals are moved away from the discharging-knobs.

4. The device for discharging the jar by the retrograde motion of the crank, bringing the posts 1 and 2 into contact with the projections from knobs V and W.

5. Placing the firing-points of the condenser at a distance from the collecting-points, substantially as described.

6. The stop X, limiting the forward movement of the jar, substantially as described.

7. The combination of a generating-plate, a condenser, and a casing, made air-tight, as described, by packing or a rubber band, together with knobs in the casing, and their projections, by which the condenser is discharged, substantially as described.

93,564.—Henry E. Stager, Milwaukee, Wis.—*Automatic Boiler-Feeder.*—August 10, 1869; antedated July 31, 1869.

Claim.—1. Valve H, diaphragms L and M, and ring I, arranged substantially as described.

2. The arrangement of the valve H with the yoke, resting on stem R, fulcrum E, and lever C, substantially as described.

3. Pipes F and G, in combination with valve H, sheets A and B, and ring I, whereby to increase and diminish pressure by alternations of steam and water, substantially as described.

93,565.—William H. Terpening and Clinton W. Terpening, Geneseo, Ill.—*Lamp-Extinguisher.*—August 10, 1869.

Claim.—As a new article of manufacture, the within-described extinguisher, consisting of the sections C and C, stems *c* and *c'*, star-wheel D, and shaft *d*, all constructed and arranged to operate substantially as and for the purpose shown.

93,566.—Jonas Tramblie, Sandwich, Ill.—*Washing-Machine.*—August 10, 1869.

Claim.—The beater D, having the holes *m m* and the ribs *e e*, when hung on swinging-arms *d d*, provided with a handle, H, and arranged in a tub, A, having vertical ribs *c c*, arranged with relation to the ribs *e e* and holes *m m*, as shown, for the purposes herein set forth.

93,567.—W. W. Underhill, Boston, Mass.—*Copying-Press.*—August 10, 1869.

Claim.—1. The combination and arrangement of platen D, table A, standards E E, springs S S, drawer-wedge H, and lever K, in a letter-press, substantially as described.

2. The drawer-wedge H, serving as a drawer and a wedge, as herein set forth.

93,568.—Hiram Veazey, East Hampton, Conn.—*Sleigh-Bell.*—August 10, 1869.

Claim.—The combination of the bell *a*, the pillar *e*, and the spurs *f f*, all constructed and arranged as described, for the purpose described.

93,569.—Hiram Veazey, East Hampton, Conn.—*Sleigh-Bell Fastening.*—August 10, 1869.

Claim.—1. The washer *e*, made as described, and interposed in the manner described between the bell and the belt, for the purpose set forth.

2. The combination of the teated bell *a*, the rivet *d*, the washer *e*, and the belt *c*, the whole constructed and arranged as described, for the purpose described.

93,570.—Job A. Warden, Minnesota Junction, Wis.—*Knee-Clasp for Horses, &c.*—August 10, 1869.

Claim.—The link A A A, in combination with clasp or hinge B, for the purposes set forth, substantially as described.

93,571.—James White, Cleveland, Ohio.—*Apparatus for Holding Hat-Blocks.*—August 10, 1869.

Claim.—1. The adjustable head or table D, in combination with the notched flange E, and rod F, when arranged and operating substantially as and for the purpose set forth.

2. The clamps G, adjustable head or table D, in combination with the notched flange E, rod F, and standards C, in the manner substantially as described, and for the purpose set forth.

93,572.—Rollin White, Lowell, Mass.—*Revolving Fire-Arm.*—August 10, 1869.

Claim.—1. In combination with a revolving cylinder and a cartridge-ejector, consisting of a central sliding-rod, with radial teeth, or equivalent projections, to seize and carry out the cartridge-cases, a ratchet, to revolve the cylinder, made on or attached to the cylinder, substantially as herein shown and described.

2. In combination with a plunger and ejector, unconnected, as described, a lever to operate the plunger, substantially as described.

3. A spring, interposed between the plunger and the ejector, whether the same are connected by a swivel-joint or unconnected, substantially as and for the purpose set forth.

4. In combination with the cartridge-ejector E, the serrated or roughened teeth *i i*, substantially as and for the purpose described.

93,573.—John Whitehead and John McKeever, New York, N. Y.—*Hoop-Skirt.*—August 10, 1869.

Claim.—1. The apron *d*, removably attached at the sides of the open space, which extends from the top to the bottom of the skirt, and covering said space, substantially as and for the purpose herein described.

2. A skirt, formed with an open front extending throughout its length, and provided with a removable apron, *d*, and a removable bottom part, *a*, which does not continue entirely around the skirt, but is attached to the tapes at the sides of the opening, in the front of the skirt, substantially as and for the purposes herein shown and described.

93,574.—David H. Whittemore, Worcester, Mass.—*Apple Parer and Slicer.*—August 10, 1869.

Claim.—1. The combination of the carriage with its holder and the screw, operating substantially as above set forth.

2. The combination of the projection J on the screw with the holder K and its stud *i*, substantially as described.

3. The arrangement and combination of the holding device, consisting of the fork and its shaft, with the paring and slicing device, consisting of the carriage, knives, holder, and slide-rod, the screw-shaft or driving-apparatus, and the solid frame, when constructed and operating in the manner and for the purposes above set forth and described.

93,575.—John P. Adams, New York, assignor to himself, Henry S. Chandler, and Marcus Ormsbee, Brooklyn, N. Y.—*Revolving Ice-Pitcher and Coffee-Pot.*—August 10, 1869.

Claim.—1. The combination of a slop-bowl with a vessel arranged to tilt, revolve, or both, adapted to table use, and arranged to operate substantially as herein shown and described.

2. The improvement in revolving vessels of the character herein described, which consists in mount-

ing the revolving member upon a spindle, so arranged, relatively to its socket, that friction only results from the contact of the surfaces between the under side of such member and the upper side of the base, adjacent to the center, and between the vertical sides of the spindle and the inner side of the socket, substantially as shown and described.

93,576.—William Altick, Dayton, Ohio.—*Machine for Driving Posts.*—August 10, 1869.

Claim.—1. In a machine for driving fence-posts, the construction and arrangement of the post C, ram or hammer D, guides E E, pulleys K and J, tripping-hook I, stop-pin T, substantially as and for the purposes set forth.

2. The adjustable arms H H, secured to the movable cross-bar G, by means of a bolt or key, substantially as and for the purposes specified.

93,577.—Joshua E. Ambrose, Lombard, Ill.—*Lantern.*—August 10, 1869.

Claim.—1. Providing the globe A with a dome, substantially as and for the purposes specified.

2. Combining with a globe, constructed substantially as described, a deflecting surface, for the purposes set forth.

3. The combination, with the band G, of the plates of mica, or some equivalent material, as and for the purposes described.

93,578.—Joseph Anthony and Thomas B. Purves, Greenbush, N. Y.—*Piston-Packing.*—August 10, 1869.

Claim.—The construction and arrangement of the self-setting packing-ring E, having holes H, and grooves I and J, with the uncut or steam-tight inside ring D, substantially as and for the purpose described.

93,579.—T. H. Arnold, Troy, Pa.—*Hay-Elevator.*—August 10, 1869.

Claim.—1. The locking-dog *a*, so constructed and connected with the carrier B as to perform the double purpose of retaining the carrier in position while elevating the load, and of preventing the descent of the fork during the return motion of said carrier, substantially as specified.

2. In combination with the carrier, having its locking hook and dog operating as above, the stationary piece *b*, whereby the carrier is retained and the rope liberated simultaneously, in the manner substantially as shown and described.

93,580.—Joseph R. Bailey, Woonsocket, R. I., assignor to himself and Selden A. Bailey, same place.—*Tool-Holder.*—August 10, 1869.

Claim.—The shank, with its angular groove, the strap, with its angular groove, the gib C, and key C′, in combination with a cutting-tool, substantially as and for the purpose set forth.

93,581.—Joseph R. Bailey, Woonsocket, R. I., assignor to himself, Selden F. Bailey, and Orin Freeman.—*Hay-Loader.*—August 10, 1869.

Claim.—1. The combination of the roller B with the endless rake E, substantially as and for the purpose set forth.

2. The combination of the truck A, adjustable after-rake G, adjustable apron F, adjustable frame C, arched bars C^1, clearing-rake C^2, endless rake E, and roller B, substantially as shown and described.

3. The combination and arrangement of the truck A, adjustable frame C, arched bars C^1, endless rake E, and adjustable apron F, with slotted bars *f*, substantially as shown and described.

93,582.—Anna E. Baldwin, Newark, N. J.—*Milk-Separator.*—August 10, 1869.

Claim.—The milk-separating apparatus, consisting of the vessel A, provided with perforated removable shelves C, lid B *b*, and straining-faucets D *c d*, all arranged to operate substantially as herein described.

93,583.—Anna E. Baldwin, Newark, N. J.—*Milk-Cooler.*—August 10, 1869.

Claim.—The milk-cooling apparatus, consisting of vessel A, tube B, lid *a b*, when provided with paddles C D, and handle E, and faucets *e e′*, substantially as and for the purposes described.

93,584.—David S. Beals, Adrian, Mich.—*Railway Draw-Bar.*—August 10, 1869.

Claim.—1. The draw-head E, constructed with the enlargements or shoulders *e e′*, as represented and described, for the purposes set forth.

2. The combination of the draw-head E, shoulders *e e′*, draw-bar F, disks G H, pin I, spring J, and sills B C, constructed and arranged substantially as described, for the purpose set forth.

93,585.—Jacob H. Beidler, Adrian, Mich.—*Ax.*—August 10, 1869.

Claim.—The ax herein described, having a series of grooves on one or both surfaces, substantially as and for the purposes specified.

93,586.—Charles A. Bikle, Hagerstown, Md., assignor to himself and John W. Garner, same place.—*Grain-Separator.*—August 10, 1869.

Claim.—1. The pivoted sectors C, provided with bars D, and the slots E, or their equivalent devices, for regulating the register and blast, substantially as set forth.

2. The above, in combination with the board F and weighted arms of the sectors, or bar G, substantially as set forth.

3. The peculiar construction of the toothed roller I, for separating the chaff, substantially as described.

93,587.—E. Blunt, Jr., New York, N. Y.—*Coffee-Pot.*—August 10, 1869.

Claim.—The within-described new combination and arrangement, to wit, the cold-water vessel C, with the conical plug E *e*, for letting down its contents at will, and the whistle I, mounted outside on the independent tube H, all substantially as and for the purposes herein set forth.

93,588.—Joseph Bond, Jr., Newark, N. J.—*Sewing-Machine.*—August 10, 1869.

Claim.—1. A spool-case, constructed substantially as described, and retained by, and having the within-described motion imparted to it, in a stationary spool-case holder, in combination with a rotating hook, for seizing the loop of needle-thread and carrying it round the said spool-case.

2. The combination of the said revolving hook with a roller, *q*, or any equivalent device, for imparting the within-described motion to the spool-case, and thereby maintaining between the latter and the spool-case holder an unobstructed opening for the free passage of the thread.

3. The rib o^1, on the spool-case, adapted to the groove in the periphery of the roller *q*, as and for the purpose herein set forth.

4. The hook *m*, in its shoulders *x* and x^1, and notch x^2, the whole being constructed and arranged for operating on the loop, substantially as described.

5. The eccentric on the shaft H, the strap *h′*, and rod *j*, arranged to slide in the said needle-arm, all combined and operating substantially as set forth.

6. The foot D, with its slot and set-screw, in combination with the presser-bar C, and its dovetailed triangular projection *f* fitted loosely to the slot, as and for the purpose described.

7. The combination of the recessed conical end of the bolt F, and the plate C, adapted to the end of the needle-arm E, and arranged for the reception and removal of the needle, substantially as set forth.

8. The box, forming a part of the frame of the machine, inclosing the working-parts below the work-plate, and having at one side a hinged portion, B′, as set forth.

93,589.—Seth D. Bowker, Kansas City, Mo.—*Miter-Box.*—August 10, 1869.

Claim—The arrangement of the table A, back-rests B, and slide-rests G G′, with the sector C, radius-plate E, and saw-guides F, when constructed to operate substantially as and for the purposes set forth.

93,590.—J. H. Brinton, Thornbury, Pa.—*Grapple.*—August 10, 1869; antedated August 6, 1869.

Claim.—A cord, F, connected to the jaws A A′ of grapple, and having a ring or eye, *k*, at its outer end, for the passage of the operating-rope, all substantially as and for the purpose described.

93,591.—Homer Brooke, New York, N. Y.—*Glass-Mold.*—August 10, 1869.

Claim.—1. A glass-mold, for forming articles having one or more depressions in them, made in sections, as described, so that the one section which has a rising and falling motion will leave the depressions free from contact with the mold, while the outer surrounding portion to such cavity or cavities remains embedded in, and continues supported on, the mold, substantially as and for the purpose or purposes herein set forth.

2. The combination, with sectional mold, constructed to operate substantially as described, of a clearance channel, or passage or passages, arranged in relation to the joint established for play of the one mold-section through the other, to provide for the escape of dirt and oil, essentially as specified.

3. The sectional mold A B, constructed substantially as shown and described.

93,592.—Heman P. Brooks, Waterbury, Conn.—*Buckle or Slide for Hoop-Skirt Bands.*—August 10, 1869.

Claim.—In the frame of a slide or buckle, the space *f*, formed in one side, for the introduction or removal of the free end of the band, combined with the bar *h*, fixed or hung to the said frame, substantially as set forth.

93,593.—Willard P. Brooks, Bloomington, Ill.—*Three-Horse Equalizer.*—August 10, 1869.

Claim.—A draught-equalizer, having plate A, hook B, chain C, and clevis D, constructed and arranged substantially as specified.

93,594.—O. B. Brown, Malden, Mass.—*Optical Instrument.*—August 10, 1869.

Claim.—1. An instrument combining the principles of the phenakistoscope and magic-lantern, so constructed that it may be used either as an attachment to an ordinary magic-lantern or as a separate and independent instrument, substantially as shown and described.

2. So combining detachable transparent plates with the slider of a magic-lantern or similar instrument as to represent moving figures upon a wall or screen, substantially as shown and described.

3. The combination of the polygonal plates with the annular gear-wheel, substantially as shown and described, for the purpose specified.

4. Imparting an intermittent rotary motion to the transparent plates when inserted in place in the slider, by the means substantially as shown and described.

5. Representing the figures upon a wall or screen as arranged in a semicircle or less than a semicircle, by the means substantially as shown and described.

6. The revolving perforated disk, for alternately cutting off and admitting the light, in combination with the mechanism for imparting an intermittent rotary motion to the transparent plates, substantially as shown and described.

93,595.—Thomas Carr, Bristol, Great Britain.—*Machine for Disintegrating, Dispersing, and Mixing Fertilizers and other Materials.*—August 10, 1869; patented in England October 22, 1868.

Claim.—The mounting of each of the two sets of cages upon the end of a separate shaft, the two shafts being placed end to end, and in pedestals or plumber-blocks, substantially as hereinbefore described, and illustrated by the drawings.

93,596.—William Carter, Columbus, Ind.—*Device for Applying Steam to Wool, &c.*—August 10, 1869.

Claim.—The combination and arrangement of induction--pipe A, the surrounding perforated pipes or jackets C and E, forming the chambers B and D, and head J, with flanges, to which the jackets are screwed, and the eduction-pipes F, G, and H, furnished with stop-cocks, and connecting the induction-pipe A and chambers B and D with the waste-pipe I, all combined and arranged to operate in the manner substantially as set forth.

93,597.—Charles Chinnock, Brooklyn, N. Y.—*Injector for Insect-Powders.*—August 10, 1869.

Claim.—The disk A, constructed or provided with air-vents *b*, in combination with the nozzle E, back disk B, flexible jacket C, and spiral spring D, essentially as and for the purpose or purposes herein set forth.

93,598.—Thomas J. Clark and George M. Clark, Higganum, Conn.—*Mechanical Movement.*—August 10, 1869.

Claim.—The combination of the lever A, with its two rods C D, guides E E, and operated by the jointed connecting-rods F H, so as to produce the movement herein described.

93,599.—Thomas J. Coulston, Springville, assignor to E. S. Shantz and Joseph Johnson, Royer's Ford, Pa.—*Fuel-Reservoir or Base-Burning Stove.*—August 10, 1869; antedated May 25, 1869.

Claim.—1. Adjustably securing the two parts A and A′ of the reservoir together by means of the interlocking projections 3 4, or their equivalents, constructed and operating together substantially as and for the purpose described.

2. The employment of the catches, each consisting of the parts *b″* and 7, in combination with the flange B and reservoir A A′, the same being constructed and applied substantially as and for the purposes specified.

3. In combination with the reservoir A A′, constructed as described, the bail C, applied and operating substantially as and for the purpose described.

93,600.—Thomas J. Coulston, Springville, assignor to E. S. Shantz and Joseph Johnson, Royer's Ford, Pa.—*Hinge for Stove-Lid.*—August 10, 1869; antedated May 25, 1869.

Claim.—A hinge, consisting of the two parts *a′ b′*, cast simultaneously with the respective plates, and the hinge completed, by simply adjusting the two parts together, substantially as set forth and described.

93,601.—Edward J. Creasey, Philadelphia, Pa.—*Refrigerator.*—August 10, 1869.

Claim.—1. The provision-chamber F, having an arched or peaked roof, *a*, in combination with the surrounding casing B, forming an ice-reservoir above, and a water-reservoir around the chamber F, substantially as set forth.

2. The arrangement described, in respect to the provision-chamber F, and ice-receptacle H, of the tubes *j* and *j′*.

93,602.—James M. A. Dew, Chicago, Ill,, assignor to himself and Oswell A. Bogen, same place.—*Railroad-Lamp.*—August 10, 1869; antedated April 6, 1869.

Claim.—1. The solid metallic part or ring *a*, of the lamp-supporting ring A, provided on the inside with several projections or lips, *b*, *b*, for the purpose of effecting a coupling with lugs *f f* of the lamp, in the manner substantially as herein set forth and described.

2. The solid metallic part or ring F, made on the lamp L, and provided with the sections of rings or lugs *f f*, arranged and operating, in connection with the lips *b b* of the ring *a*, in the manner substantially as set forth and described.

3. The combination of the ring *a*, provided with the projections *b*, stop *b′*, and catch or screw *c*, with the ring F, provided with the projections *f* and holes *o*, all constructed and arranged to operate substantially as described.

4. The link R, of any desirable shape, provided with two or three spurs, *r r′ r″*, and used to connect arms of the railroad-lamp brackets, in the manner substantially as set forth.

93,603.—Daniel Dorrity, Pont-Audemer, France, assignor to Farrell Dorrity, New York City, N. Y.—*Printers' Quoin.*—August 10, 1869.

Claim.—The combination, with the laterally adjustable face plate or plates, of the inwardly project-

ing fixed screws connected therewith, the hollow female-threaded screw-gears, arranged to gear with or operate the fixed screws, and having their axes parallel and the intermediate screw-wheel having its axis at right-angles to the screw-gears, and serving to drive the latter, substantially as specified.

93,604.—GEORGE D. EMERSON, Calumet, Mich.—*Friction-Clutch.*—August 10, 1869.

Claim.—The cam-rollers D, consisting of the cylindrical parts *h h*, on which one end of the links *i i* are mounted, the angular parts *o*, to which the levers *l* are secured, and the eccentric journals *f*, in combination with the friction-segment C C, the webs *b b*, and bearings *k k*, to which the other ends of the links *i i* are jointed, when the parts are constructed and operate together substantially as described.

93,605.—WILLIAM EMMONS and DAVID A. WELLS, Saudwich, Ill.—*Corn-Cultivator.*—August 10, 1869.

Claim.—1. The combination of the frame A, axle C, and pivoted bars D D, all substantially as set forth.

2. The lever L, in combination with the cams, or their equivalents, when used to elevate both beams at once, substantially as specified.

3. Securing the handles to the beams, by means of a thumb-screw, so that they can be regulated at will, substantially as set forth.

4. The levers L, M, and N, rod O, pawl P, and ratchet H, when arranged to operate substantially as set forth.

5. In combination with the above, the beam I, bars E, chains R, frame A, metal plates D, and shoes H, when all are combined, as set forth.

93,606.—PERRY FINLEY, Memphis, Tenn.—*Enameling Wood and other Solid Materials with Hard Rubber.*—August 10, 1869.

Claim.—Subjectiug India rubber or gutta-percha, in solution, and applied as an enamel or coatiug, and mixed with sulphur, whether with or without other ingredients, to the curing action of heat, for the purpose of affecting its qualities or properties, as described.

93,607.—RANDALL FISH, Washington, D. C.—*Deodorizing-Compound.*—August 10, 1869.

Claim.—The deodorizer, herein described, compounded in the manner and of the ingredients substantially as described.

93,608.—CHARLES H. FISKE, Lowell, Mass.—*Shuttle for Loom.*—August 10, 1869.

Claim.—1. The combination of the stationary clamp *b* and movable clamp *e*, when held in position by a positive locking-device, substantially as and for the purposes herein specified.

2. The locking-device, as described, consisting of the lateral latch *j*, lip *k*, bed-piece *h*, and spring *l*, in combination with the movable clamp *e*, as specified.

93,609.—DAVID A. FOOT and AVERY CHADWICK, Winona, Minn.—*Lightning-Rod.*—August 10, 1869.

Claim.—1. A hollow, star-shaped copper lightning-rod, provided at its lower end with a solid copper discharging-point, plated with silver, and its upper end with one or more receiving-points, the whole constructed and arranged substantially as herein described.

2. The combination of the former A, die D, and metallic rod *g*, constructed substantially as herein described, for the purpose of drawing star or similar shaped lightning-rods, as set forth.

93,610.—JOHN G. FOSTER and GEORGE W. TOWNSEND, Boston, Mass.—*Submarine Rock-Drilling Machine.*—August 10, 1869.

Claim.—1. The improved supporting-frame of our drilling-apparatus, the said frame being composed of double-platform plates, upper columnar supports, and oblique adjustable legs, arranged with each other, substantially in the manner herein represented and described.

2. The connection of the upper platform-plate *f g* of our improved drilling-apparatus with the lower platform-plate of said apparatus, by means of hinges and a clamp or clamps, or the equivalents thereof, substantially in the manner and for the purpose herein set forth.

3. Operating the drill by means of the forked and slotted clutch *m n*, substantially in the manner herein set forth.

4. The arrangement of the winding guide *r* with the lifting-clutch *m n*, substantially in the manner and for the purpose herein set forth.

5. Our peculiar mode of applying power to th lifting-clutch *m n*, from a rotating or reciprocating first mover, located in a suitable floating vessel, to wit, by means of the connection of the said first mover above, with the lifting-clutch below, by means of the readily adjustable line *z*, the direct-lifting chain or line *o*, and the pulley-block *u*, substantially in the manner herein set forth.

6. When a drill is operated by means of a lifting-clutch, substantially in the manner herein set forth, combining a ratchet-wheel with the drill-shaft, and a spring-detent for said wheel, with one of the platforms of the supporting-frame of the drilling-apparatus, or other suitable support, substantially in the manner and for the purpose herein represented and described.

93,611.—DANIEL D. FRANKLIN, Flora, Ill., assignor to himself and J. S. UNDERWOOD, same place.—*Cultivator.*—August 10, 1869.

Claim.—1. The combination and arrangement of the draught-bar A′, bent-rods C′, fastened to the lower ends of the standards E, so as to vibrate freely, and permit the driver on his seat to rock the machine and raise the cultivator-teeth, substantially as described.

2. Hinging the cultivator-beams H and N, and the pivots of the rods C′, in the standards E, so near the axles of the carrying-wheels that the machine can vibrate freely on the pivots of the carrying-wheels, while in motion, substantially as described.

3. In combination with the stock and removable share, the lip on the stock, for covering and holding the point of the share, substantially as described.

93,612.—HENRY S. GOLIGHTLY and CHARLES S TWITCHELL, New Haven, Conn., assignor to NEW HAVEN FOLDING-CHAIR COMPANY, same place.—*Bending-Machine.*—August 10, 1860.

Claim.—The apparatus herein described, consisting of the back A and ends B, with the strap C, constructed so as to be bound together, and operate in the process of bending, substantially as herein set forth.

93,613.—JAMES E. GRANNISS, New York, N. Y.—*Machine for Making Bullets.*—August 10, 1869.

Claim.—The arrangement of the rollers *e*, *f*, and *g*, and adjustable segmental grooved dies *h*, *k*, and *l*, in the manner specified, so as to reduce the slug by successive stages into a globular form, substantially as set forth.

93,614.—CHARLES HAMMOND, Philadelphia, Pa.—*Cleaver.*—August 10, 1869.

Claim.—The ferrule D, having a socket for receiving the handle A, to which the ferrule is secured, and wings *f f*, arranged to grip the blade of a cleaver or other like instrument, and riveted or otherwise secured to the latter, all substantially as and for the purpose herein set forth.

93,615.—ANNA HANCOCK, New York, N. Y.—*Sewing Machine.*—August 10, 1869.

Claim.—The combination, with the needle-bars *d* and *e*, of the disk D, operating as a crank through a wrist-pin, *c*, to the one needle-bar, *d*, and carrying or having formed on it an eccentric, F, to actuate the other needle-bar, *e*, from the same side of the main frame, and overhanging end of the driving-shaft, substantially as specified.

93,616.—HENRY HAYWARD, New York, N. Y.—*Hat.*—August 10, 1869.

Claim.—As a new article of manufacture, a head-covering, composed of a layer of open-worked hair-cloth, secured by felting to one, or between two layers of felting-material, substantially as described.

93,617.—Georges Felix Henry, Ivar Axel Ferdinand Bang, François Roch Charles Monestier, and Jean Pierre Albin Figuier, Paris, France.—*Material for Lubricating Wool and other Animal Fibers.*—August 10, 1869.

Claim.—Employing solutions of chloride of calcium, chloride of magnesium, chloride of zinc, or other suitable hygroscopic deliquescent salts, or combinations of them, with or without the addition of ammonia, or other suitable alkaline bodies, for the lubrication of sheep's or other wool, or other similar animal textile fibrous materials, when the said materials are to be submitted to combing, carding, spinning, or other similar operations.

93,618.—Philipp Herbert, St. Louis, Mo.—*Gang-Plow.*—August 10, 1869.

Claim.—1. The axle-bar *a*, tree-journal B, and sector and pawl devices for connecting the wheel A^2 with the axle A, substantially as set forth.

2. The front-board F′, pivot *g*, link *h*, and pole G, connected adjustably by the slot *f* and set-screws *f′*, substantially as set forth.

3. The standard I, lever L^1, bar L^2, fulcrum K, links *l*, and cross-bar *l′*, arranged in combination with the plow-beams M, substantially as set forth.

4. The lever O, crank O^1, link P, and roller P, supporting and operating the front end of the beams M, substantially as constructed and arranged.

5. The plows N, standards *n*, pins n^3, arms n^1, and pivot n^2, when operating substantially as set forth.

93,619.—L. Hillman, Newton, N. J.—*Measuring and Folding Cloth.*—August 10, 1869.

Claim.—The combination and arrangement, upon the frame B, of the standards D D, slides E E, clasps G G, disks P P, guides O O, rollers H K, indicator L, and wheels S, T, and U, all substantially as shown and described.

93,620.—Amos Hornor, Ross, Ind.—*Clothes Rack and Drier.*—August 10, 1869.

Claim.—The standards A and E, staples *c*, pins *n*, lugs *a* and *s*, windlass D, frame H, bars *u*, caps *y*, and cords *v* and *v′*, when constructed and arranged to operate as shown and described.

93,621.—C. C. Johnson, Springfield, Vt.—*Wagon.*—August 10, 1869.

Claim.—1. The wagon or cart, having a quadrangular body composed of side-boards, end-boards, and bottom-board, connected by means of the four pairs of grooves *k l*, top bars *h i*, and bolts *n*, substantially as described.

2. In combination with the body, the pole *g*, interlocked with the axle *e* by means of a notch in each, substantially as described.

93,622.—Frederick Kalteyer, San Antonio, Tex.—*Compound for Destroying Vermin in Cattle.*—August 10, 1869.

Claim.—A liniment, composed of the ingredients, in the proportions substantially as and for the purpose specified.

93,623.—Cyrus M. Kelsey, Mount Vernon, Ohio.—*Vulcanizing Rubber for Dental Plates and for other Purposes.*—August 10, 1869.

Claim.—1. As an improvement in the method of vulcanizing India rubber, the use of a sand-bath, combined with a flask, in the manner above substantially set forth.

2. In combination with a sand-bath and flask, for vulcanizing India rubber, the employment of a thermometer, substantially in the manner described.

3. In combination with a sand-bath and flask, for vulcanizing India rubber, the employment of a trypiece, substantially in the manner above set forth.

4. In combination with a sand-bath and flask, for vulcanizing India rubber, the employment of a trypiece and thermometer, substantially in the manner set forth.

93,624.—George Kennedy, Philadelphia, Pa., assignor to himself and F. R. Harbaugh, same place.—*Neck-Ties.*—August 10, 1869.

Claim.—1. A tie, or imitation tie, adapted for being secured in front of a collar by a button or stud, in combination with an adjustable clasp, applied so as to cover and conceal the button or stud, substantially as described.

2. The concealing clasp, and its button-hole, adapted for attachment to a collar or tie, substantially as set forth.

3. The clasp, slotted at one end, and having at the opposite end a button-hole, substantially as specified.

93,625.—Jerome Kidder, New York, N. Y.—*Electro-Magnetic Machine.*—August 10, 1869.

Claim.—1. An additional helix, introduced into the primary circuit of an electro-magnetic machine, operating substantially as and for the purpose herein set forth.

2. The arrangement of the relation of the vibrating hammer E with a fixed magnet, D, so that in its oscillations the hammer will not strike said magnet, substantially as and for the purpose set forth.

3. The additional point of fixture of the spring to be free or fixed, at option, as at H, constructed and operating substantially as and for the purpose herein set forth.

93,626.—William B. Kimball, Peterborough, N. H.—*Clothes Rack and Stand.*—August 10, 1869.

Claim.—The construction and arrangement of the stand *b*, with pivoted legs *c c*, the revolving head *d*, with holes *e e* therein, the arms *f f*, with links *g g* and staples *h h*, and the removable top *i*, substantially as and for the purposes herein specified.

93,627.—I. Lancaster, Baltimore, Md.—*Harvester.*—August 10, 1869.

Claim.—1. The draught-pole, combined and arranged with the driver's seat D, the slotted bearing *b*, and the clevis E, substantially as described.

2. The angle-bar K, arranged and operating substantially as herein explained.

3. The fulcrum-plate O, actuated by the lever R, and held in position by the spring F, in combination with the lever P, substantially as described.

4. The studs *u*, friction-rollers S, bolt *x*, nut *y*, partition-piece W, and washer, combined and arranged substantially as hereinbefore set forth.

93,628.—Michael Lehman, Cincinnati, Ohio.—*Cutter-Head.*—August 10, 1869.

Claim.—1. The cutter-head A, in combination with the bits B B, and caps C C, and steel plates E E, constructed and arranged with reference to each other, and for the purpose substantially as set forth.

2. The bits B B, in combination with the adjusting-screws *b b* and caps C C, when the same are constructed substantially as and for the purpose described.

3. The adjusting-screws *b b* and their plates *e e*, in combination with the notches *n n*, when all the parts are constructed substantially as described.

93,629.—William J. Lynd, Golden City, Colo. Ter.—*Process of Preparing Coke from Colorado and other Coals.*—August 10, 1869.

Claim.—The process, substantially as herein described, of making coke from coals, such as are herein referred to.

93,630.—William Maguire, Baltimore, Md., assignor to himself and Francis B. Loney, same place.—*Platform-Scale.*—August 10, 1869.

Claim.—1. The method of compensating for the wear of the knife-edges or steel points on the levers of platform or similar scales, by means of an adjustable wedge, K, and adjustable block, I, with their set-screws *g* and *n*, constructed and arranged to operate substantially as herein described.

2. The plate L, having rigidly attached to it a post, F, with a second lever, E, mounted therein, and loosely connected to a stationary pin, *l*, for the purpose of preserving the accuracy of the scales, while allowing the position of the point of connection of the rods H with the scale-beams to be varied or changed, substantially as herein described.

3. The plate L, second lever E, and adjustable block I, with their connections, in combination, when so arranged that the knife-edges of the levers, and the point about which the plate L moves, shall

all be in the same vertical plane, substantially as herein described, and for the purpose set forth.

93,631.—Gottlieb Maulick, Trenton, N. J., assignor to himself and Thomas P. Marshall, same place.—*Planing-Teeth for Saws.*—August 10, 1869; antedated August 6, 1869.

Claim.—The arrangement of the planers B upon a saw-blade, as herein described.

93,632.—Alexander McBride and William P. McBride, Lowell, Mich.—*Bed-Bottom.*—August 10, 1869.

Claim.—The arrangement of the frame A, cross-pieces D and F, rubber bands *e* and *o*, nuts *n*, and springs C and G, when all are combined to form a bed-bottom, substantially as set forth.

93,633.—Alexander McFarland and Charles W. Peck, Paterson, N. J.—*Spindle and Bobbin-Tubes for Spinning-Machine.*—August 10, 1869.

Claim.—1. An inner spindle-tube, C, with pulleys C′ and foot *c*′, in combination with an outer spindle-tube, D, pulley D′, and foot *d*′, spindle *a*, and oil-cup E, substantially as shown and described.

2. In combination with an inner spindle-tube, D, outer spindle-tube C, spindle *a*, and drum B, the cord *c*′ *c*′, arranged as shown and described.

93,634.—John C. Miller, Danville, Ky.—*Side-Saddle.*—August 10, 1869.

Claim.—As an article of manufacture, a side-saddle, constructed in the manner as herein shown and described.

93,635.—L. F. Muhlinghaus, Brooklyn, E. D., N. Y.—*Washing-Machine.*—August 10, 1869.

Claim.—The construction and arrangement of the tub A, having its bottom of a single piece of metal, with internal corrugated sides, and braced by the longitudinal strips *s*, to which the handles and gudgeons *a* are secured, in connection with rolls *g g g*, arranged in relation to the curved bottom, with a space between them, combined for the purpose described.

93,636.—Robert Newton, Jerseyville, Ill.—*Rolling-Cutter for Plows.*—August 10, 1869.

Claim.—In a revolving cutter, the wooden bushing D, substantially as described, and for the purpose set forth.

93,637.—Archibald Nimmo, Philadelphia, Pa., assignor to himself and Thomas Moran, same place.—*Mechanism for Operating Shuttle-Boxes of Looms.*—August 10, 1869.

Claim.—1. Two or more levers, M M′, in combination with a wheel, G, having as many sets of pegs or openings as there are levers, each set being devoted to one lever, when the levers are rendered operative and inoperative by the mechanism herein described, or any equivalent to the same, and when the lever which operates is caused to control the pattern-chain, all substantially as set forth.

2. In combination with the wheel G, the lever-controlling wheel K, operating substantially as specified.

93,638.—Charles H. Parker, Boston, Mass.—*Bridge.*—August 10, 1869.

Claim.—The combination of two distinct systems of bridging, composed of a cantilever or cantilevers, with a wholly or partially fixed anchorage, free to expand at its unsupported end or center of a span, where two meet, with a system of independent girder, supported at both ends, and covering the same clear span as the cantilever, and free to expand toward the abutments or points of support, the chord or chords of one system being distinct and separate from the chord or chords of the other, substantially as herein shown and set forth.

93,639.—Hugh Quinn, Charlestown, Mass.—*Elastic Trace-Connection.*—August 10, 1869.

Claim.—1. The arrangement of the box A, abutment *d*, pivot *e*, helical spring C, and the movable arm B, provided with the trace-button, as explained.

2. The combination and arrangement of the spring-guard D with the radial arm B, the helical spring C, the abutment *d*, and the box A, and the slot *c* thereof, the whole being substantially as and for the purpose specified.

93,640.—Julio H. Rae and Thomas T. Davis, Syracuse, N. Y.—*Mode of Desulphurizing Auriferous Pyrites and other Sulphuret-Ores.*—August 10, 1869.

Claim.—1. Desulphurizing auriferous pyrites, and other sulphuret-ores, by means of peat, or other equivalent fuel, in the mode substantially as above described.

2. Mixing the ores of metals combined with sulphur, arsenic, antimony, or other refractory matter, with wet or green peat, or equivalent fuel, and afterward drying and burning the mixture, substantially as and for the purpose described.

93,641.—Cleanthus A. Reed, Madison, and James M. Campbell, Beaver Dam, Wis.—*Harvester.*—August 10, 1869.

Claim.—1. The combination of the tread or bearing wheel B, loose wheel C, provided with the pins *e*, eluteh L, and crank-rod T, all constructed and arranged substantially as described.

2. The rake H, jointed to the pivoted rod J, supported on the guide-rod O, and guided in its movements by the stop *m*, and guide *g*, or their equivalents, substantially as herein set forth.

3. The arrangement of the wheel E, shaft N, with its arms *a* and F, and rod *b*, for operating the rake, as herein shown and described.

93,642.—Artemas Rogers, Panesville, Ill.—*Extension-Ladder.*—August 10, 1869.

Claim.—The hook M, with its shield N, in combination with the rope I, and rollers D, and the roller D′, with the circular slot H′, arranged and constructed substantially as herein described, and for the purpose set forth.

93,643.—James M. Rohrer and John H. Bassler, Pine Grove, Pa.—*Kiln for Roasting Ores.*—August 10, 1869.

Claim.—1. The water-boxes *c*, constructed and operating substantially as and for the purposes described.

2. The escape-pipes *d*, in combination with the water-boxes *c*, when arranged and operating as herein specified

3. The lifting-pans *u* and *s*, in combination with the boxes in which they sit, and the lifting and dumping apparatus therewith connected, when constructed and operating substantially as described.

4. The process herein shown and described for saturating ores with salt water, and coating them with clay, for the uses and purposes specified.

93,644.—John P. Schmucker, Lattasburgh, Ohio.—*Till-Lock.*—August 10, 1869; antedated August 4, 1869.

Claim.—1. The combination of the follower E, provided with projection *d*, spring *c* and *e*, shaft F, corrugated wheel G, rack D, and spring *b*, all substantially as and for the purposes herein set forth.

2. The arrangement of the knob H, shaft F, pin I, with its spiral spring and rod *i*, and plate C, all substantially as and for the purposes herein set forth.

3. A lock so constructed that, to open the same, it shall be necessary to press the knob and spindle of the lock downward and sideways before the latch or bolt can be reached and moved thereby, substantially as herein set forth.

93,645.—Thomas Sim, Baltimore, Md.—*Process and Apparatus for Extracting Oil from Vegetable and other Matters.*—August 10, 1869.

Claim.—1. The process and apparatus for separating oil from vegetable and other matter, substantially as herein set forth.

2. The filter or perforated diaphragm C, employed at the upper part of the vat A, to retain the solid matter and allow the overflow of oil and bisulphide, as described.

3. The inclined annular trough I, and the spring pins or holders D, each in combination with the filter C, for the purposes stated.

4. The gate, consisting of the vat-bottom R, and receiver-cover S, arranged to operate in combination, substantially as and for the purposes set forth.

5. The receiver or drying chamber T provided with the agitators W, arranged to operate in any manner substantially as set forth.

6. The combination of the slides S′, ways *s′*, cover S, vat-bottom R, and connecting-screw P, substantially as described.

93,646.—HAVILAH M. SMITH and WILLIAM C. SMITH, New York, N. Y.—*Floor for Buildings.*—August 10, 1869.

Claim.—1. The strips *d*, upon the beams *a*, combined with the fire-proof material, introduced at *f*, above the deafening *b* or *c*, substantially as and for the purposes set forth.

2. The double lathing *k n*, with the intervening plastering *l* and furring *m*, in combination with the plastering *o* of the ceiling, as and for the purposes specified.

3. The combination of the double lathing and plastering of the ceiling with the deafening and fire-proof material below the floor-boards, substantially as and for the purposes set forth.

93,647.—THEODORE STEINWAY, New York, N. Y.—*Piano-Forte Action.*—August 10, 1869.

Claim.—1. The arrangement of wedges F, under the standards D, of the metallic action-frame, substantially as shown and described.

2. The arrangement of a rounded foot on the bottom end of a "pilot," *c*, in combination with a concave socket in the bearing piece D, attached to each key, substantially as and for the purpose set forth.

3. The screws *h*, passing loosely through holes in the top bars of the metallic standards D, and being retained by transverse pins passing through grooves in their shanks, in combination with the key-rail I, substantially as described.

4. The arms *k*, on the metallic standards D, in combination with the hammer-rail J, provided with slots to admit the screws *l*, substantially as set forth.

93,648.—NATHAN B. TYLER, Warren, Ohio.—*Saw-Set.*—August 10, 1869.

Claim.—The combination of the two jaws, B and C, having their set-screws J, K, and I, adjusting-gauge D, and hammer-set F, when constructed and arranged together, to form a saw-set, substantially as described.

93,649.—EDWARD VAN WINKLE, Paterson, N. J.—*Friction-Brake for Cotton-Lapping Machine.*—August 10, 1869.

Claim.—The arrangement of the elbow-lever H and its adjustable weight I, in combination with the male and female cones F G, substantially as shown and described, for the purpose set forth.

93,650.—GEORGE J. WARDWELL, Rutland, Vt., assignor to the STEAM STONE-CUTTER COMPANY, New York City.—*Elastic Pitman for Stone-Channeling Machine.*—August 10, 1869.

Claim.—Jointed levers C C, provided with links *h h* on their longest arms, and with a spring arranged above their fulcrum, substantially as set forth, and for the purposes described.

93,651.—HIRAM J. WATTLES, Rockford, Ill.—*Cultivator.*—August 10, 1869.

Claim.—1. The frame C, when constructed substantially as described, for the purpose set forth.

2. The arms F F, when provided with the pulleys *f f*, and used in connection with the lifting-levers E E, as and for the purpose described.

3. The slotted wedge h^2, when used in combination with the bars *h*, as described, for the purpose set forth.

4. The evener K, having the clevises *k k*, when combined with the draught-bars k^1 k^1, in the manner and for the purpose described.

5. The cultivator described, consisting substantially of the frame C, lifting-devices E E, beams H, standards I, and draught-devices K *k*, when combined and used as and for the purpose described.

93,652.—DWIGHT M. WELCH, Middle Haddam, Conn.—*Attaching Bells to Straps.*—August 10, 1869.

Claim.—Attaching bells to straps by means of solder, in the manner and for the purpose substantially as above described.

93,653.—ROLLIN WHITE, Lowell, Mass.—*Revolving Fire-Arm.*—August 10, 1869.

Claim.—1. In combination with a revolving many-chambered cylinder, and a cartridge-ejector revolving therewith, and moved by a reciprocating non-rotating carrier, *w*, a swivel-joint, to allow the ejector to turn independently of the carrier, substantially as described.

2. The cartridge-ejector and many-chambered cylinder, in combination with a lever to operate the ejector, substantially as described.

3. In combination with the many-chambered cylinder and cartridge-ejector, a projecting flanch, *t*, around or partially around the end of each chamber, substantially as described, to prevent the cartridge-case from binding in the ejector, as set forth.

4. In combination with the revolving cylinder and ejector, the tube *i*, substantially as and for the purpose described.

93,654.—EDWARD WHITEHEAD, Cincinnati, Ohio.—*Removable Calks for Horseshoes.*—August 10, 1869.

Claim.—1. The shiftable and double-lipped clip B *b b′*, C, when used in connection with the detachable and screw-threaded calk D *d*, substantially as herein described, and for the purpose set forth.

2. In combination with the elements of the preceding clause, the extended lip *e* and set-screw *f*, substantially as set forth.

93,655.—A. B. WILCOX, Lowell, Mass.—*Suspenders.*—August 10, 1869.

Claim.—The arrangement of the elastic straps A A, leather piece B, lining E, looped buckle C, and straps D D, all substantially as set forth.

93,656.—OMAR WILSON, Sandusky City, Ohio.—*Device for Adjusting and Buttoning Neck-Ties.*—August 10, 1869.

Claim.—As an article of manufacture, a combined neck-tie fastener and buttoner, formed of one piece of wire, and operated substantially as set forth.

93,657.—ORIN F. WOODFORD, Chicago, Ill., assignor to JAMES E. MILLER, same place.—*Stop-Cock Box for Water and Gas Mains.*—August 10, 1869.

Claim.—The tube D, attached to the shell B of the stop-cock, or to the supply-pipe, in such a manner as to form a water-tight case extending up to the surface, and inclosing the stop-cock A, as and for the purpose herein set forth.

93,658.—MICHAEL ZWIEBEL, Pottsville, Pa.—*Hydrant.*—August 10, 1869.

Claim.—1. In combination with the post A, casing B, cap C, bottom plate D, and nipple E, the stop F, screwed into the nipple E, and provided with glass seat *d*, the elbow G, pipe H, and nozzle I, all constructed and arranged to operate substantially as and for the purposes set forth.

2. In combination with the subject-matter of the foregoing clause, the key L, wrench K, and rod J, having handle M and collar *i*, all substantially as and for the purposes herein set forth.

93,659.—ABRAHAM MCKEON, Rutherford Park, N. J.—*Composition Cement for Pavements.*—August 10, 1869.

Claim.—The combination of the said materials, pine tar and rosin, and the combination of these two materials with brimstone, when found necessary, as and for a cement, to be used and employed with sand, gravel, and other hard substances of small size, as above described, in the making of concrete pavements, flaggings, walks, roofs, and floors.

93,660.—T. C. THEAKER, Bridgeport, Ohio.—*Railway-Car Seat.*—August 10, 1869.

Claim.—1. In the described chair, the supporting-frame, composed of the side pieces A A′, rod *b*, and

brace *c*, substantially as and for the purposes shown and described.

2. The segment D, pinion D′, and hanger or supporting-frame C, all substantially as and for the purposes set forth and described.

3. The combination of the shaft F, screw or worm-pinion F′, wheel E′, pinion D′, and segment D, all substantially as and for the purposes set forth.

4. The regulating slide pieces *h*, substantially as set forth, in combination with the slide *g*, or its equivalent, substantially as and for the purposes set forth.

5. The combination of the arms *k*, slides *h*, and *g*, all substantially as shown and described.

6. The combination of the knob or crank *f*, shaft F, screw-pinion F′, pinion E, pinion D′, and cog-segment D, all substantially as set forth, and for the purpose of oscillating the chair-seat.

93,661.—JOSHUA E. AMBROSE, Lombard, Ill.—*Vapor-Burner.*—August 17, 1869.

Claim.—1. Combining with the deflector and packing-tube, the inner tube, provided with the notches, as and for the purposes set forth.

2. The combination of the tube, constructed as shown in Fig. 2, with a deflector, provided with a bottom, D, arranged as shown and specified, for the purposes set forth.

93,662.—ROBERT W. ARCHER, Rochester, N. Y.—*Head-Rest for Dentists and Barbers' Chairs.*—August 17, 1869.

Claim.—1. The arrangement, with the bearing B and slotted plate C, as described, of the packing-strips *i i* and screw D, provided with the cross-arm *g* and head *e*, the whole operating in the manner and for the purpose specified.

2. In combination with the above, the arrangement of the screw G, nut *l*, and connecting-arm *m*, for producing the vertical adjustment, substantially as described.

93,663.—EGBERT BABCOCK and THOMAS B. FARRELL, Laurens, N. Y.—*Tool-Holder for Holding Tools while being Ground.*—August 17, 1869.

Claim.—1. The bar A, provided at one end with the pin *a*, whereby the same may be fixed in a wall, at any desired point, thus allowing free movement of the broad slotted end in every direction, as set forth.

2. In combination with the bar A and pivoted plates *e*, the catch *f*, substantially as described, for the purpose specified.

93,664.—WILLIAM B. BENNETT, Providence, R. I.—*Mode of Mounting Ornamental Crosses.*—August 17, 1869.

Claim.—The improvement in the mounting of ornamental crosses, composed of jet, glass, shell, &c., which consists in the construction of the four cup-shaped tips, from or in a single piece of sheet-metal, solid at the back, or soldered, cut, bent, and applied substantially in the manner described, for the purposes specified.

93,665.—HERMAN BERNHEIMER and HENRY NEWMAN, New York, N. Y.—*Buckle.*—August 17, 1869.

Claim.—The combination of the tube C with the buckle herein described and shown, substantially in the manner and for the purpose set forth.

93,666.—CHARLES BLAIR, Collinsville, Conn., assignor to the COLLINS COMPANY, same place.—*Manufacture of Ax-Bit.*—August 17, 1869.

Claim.—The method herein described of elongating the lips of ax-bit blanks, for the purpose specified.

93,667.—JOHN BOWLES, Augusta, Ga.—*Fruit-Gatherer.*—August 17, 1869.

Claim.—1. The guards F, secured, at top, to the standards D, and adapted to yield at their lower parts, substantially as and for the purposes specified.

2. The annular knife A *a*, in combination with guards F, to prevent the contact of the fruit therewith, substantially as set forth.

3. The yoke B, hinged to the ring A, substantially as described, so that the latter may be presented to the fruit at any proper angle.

93,668.—DANIEL BRASILL and D. A. MULLANE, New Orleans, La.—*Bone-Black Equalizer.*—August 17, 1869.

Claim.—The cylinders A A′, when provided with the circumferential circles of saw-like teeth B B′, so adjusted as to create the zigzag opening *a* between the cylinders, and the machine as otherwise constructed and arranged, substantially as herein described, for the purpose set forth.

93,669.—JOSEPH BUCHTEL, Portland, Oreg.—*Photographic Plate-Holder.*—August 17, 1869.

Claim.—The two movable upright pieces E E′, with their dovetail-grooves N N′, the four springs J J J′ J′, and two springs I I′, the vials F F′, attached to springs G G′, these vials and springs made of India rubber, glass, or other material, incorruptible by nitrous silver, the ways D D′, the supporting-points L L′, H H′, with the adjusting-screws K K K′ K′, made as described, and for the purposes set forth.

93,670.—E. L. BUCKUP, Stapleton, N. Y.—*Reel for Winding Yarn.*—August 17, 1869.

Claim.—The combination of the guide-bar F, oscillating stops *f g*, slotted rod *d*, and wheel C, constructed as described, for the purpose specified.

93,671.—HEMAN D. BURGHARDT, Pittsfield, Mass., assignor to himself and GEORGE S. WILLIS, Jr., same place.—*Railway-Car Axle.*—August 17, 1869.

Claim.—The arrangement and combination of the duplex boxes *a a*, the independent axles B′ C′, their external boxes D D, the support-bars E E, and the truck-frame A, the whole being substantially as specified.

93,672.—M. E. BURLINGAME, Willett, N. Y.—*Clothes-Pin.*—August 17, 1869.

Claim.—The coiled-wire spring, in one piece, in form as shown, C B A P, guide-hook *b*, and catch or holder *d*, *a*, and *e*, as shown and described.

93,673.—ADAM CHAMBERS, Unionville, N. Y.—*Manger.*—August 17, 1869.

Claim.—The arrangement of the pivoted catch-wire *f*, weighted rod *i*, and cords *l l*, provided with pins *n n′*, when combined with the doors *b z*, and weighted cords *w w*, in the manner and for the purpose specified.

93,674.—LASSLO CHANDOR, St. Petersburg, Russia, assignor to CASSIUS M. CLAY.—*Vapor-Burner.*—August 17, 1869.

Claim.—1. In combination with the wick-tube A, having the enlargement *a*, and either with or without the tube H, the cap C, when constructed as shown, whereby it is adapted to be adjusted to regulate the discharge of gas between itself and the tube A to the flame at the top, substantially as specified.

2. The combination, with the flanged cap C, and tube A, of the perforated non-conducting tube E, when arranged substantially as specified.

93,675.—JOSEPH E. CHAPMAN, Cannon Falls, Minn.—*Hot-Air Furnace.*—August 17, 1869.

Claim.—1. Protecting the walls C of a hot-air furnace and the casing A by a coating of plaster of Paris, or its equivalent, substantially as and for the purposes described.

2. The combination, in a hot-air furnace, of the fire-box F, with its tubes I and the radiator G, with its tubes *m* and *n*, arranged substantially as described.

93,676.—LEWIS S. CHICHESTER, New York, N. Y.—*Coal-Elevator.*—August 17, 1869.

Claim.—An apparatus for transferring coal or similar material from one vessel to another, the same consisting in the frame *e*, supported by the float *e*, and carrying the chute *f*, in combination with the swinging-buckets *g*, suspended by the bail *h*, and operated by the rope or chain *i*, and drum *d*, substantially as set forth.

93,677.—Lewis S. Chichester, Brooklyn, N. Y.—*Apparatus for Elevating and Weighing Coal, &c.*—August 17, 1869; antedated August 5, 1869.

Claim.—The windlass or barrel *e*, mounted upon the scale-beam, in combination with the revolving wheel *k*, and bucket, to contain the material to be elevated, substantially as and for the purpose set forth.

93,678.—John Churchill, Bristol, Conn.—*Trunk and other Handles.*—August 17, 1869.

Claim.—The combination of the handle B and plates A A, when combined and arranged so as to form a connection by a quarter turn of the plates A A, as described.

93,679.—William T. Clement and Edward V. Foster, Northampton, Mass.—*Machine for Rolling Hoe-Blanks.*—August 17, 1869; antedated August 4, 1869.

Claim.—1. In combination with revolving rolls B C, the construction of the projecting dies B^1 C′, together with their arrangement on the projecting or overhanging portions of the revolving rolls, as described, said dies being adapted for spreading the blanks laterally in the manner described.

2. In combination with revolving rolls B C, the construction of the projecting dies B^2 *b*, together with their arrangement on the revolving rolls, as described, said dies being adapted for drawing the blank, and giving form to the central rib on the surface of the hoe, in the manner described.

3. The combination and arrangement of the dies B^1, C′, B^2, and *b*, on the continuously revolving rolls B C, to form a machine adapted to perform all the several operations required simultaneously or successively, substantially as herein set forth.

93,680.—Peter Conrath, Freeburgh, Ill.—*Gang-Plow.*—August 17, 1869.

Claim.—1. The taps and bolts *f*, beam F, and guide E, when constructed and operating substantially in the manner and for the purposes set forth.

2. A self-adjusting carriage gang-plow, with plows P, levers H, spring-catches *k* and chains G, sliding-rods N, and grooved boxes O, levers L and M, and taps and bolts *f*, beam F, and guides E, constructed and operating substantially in the manner and for the purposes set forth.

93,681.—Charles Crenshaw, Bartlett, Tenn.—*Vine-Cutter.*—August 17, 1869.

Claim.—The vine-cutter, constructed, as described, of the laterally adjustable parallel bars A, when beveled upon their lower inner edges, and provided at their rear ends, upon the beveled sides, with the inclined angular cutters C, and upon their upper sides with the laterally adjustable handles and braces D E, all arranged and operating as described, for the purpose specified.

93,682.—Conrad J. Crounse, Clarksville, N. Y.—*Wagon-Brake.*—August 17, 1869.

Claim.—1. The combination of the levers *m m*, draw-rods *f f*, with the fulcrum-bar *e*, when the said fulcrum is attached to the pole in the manner substantially as described, for the purpose set forth.

2. The sliding-socket C, working on the end of the pole B, and the backing-bar *g*, in combination with the levers *m*, draw-rods *f f*, and brake-bar *e*, substantially as and for the purpose set forth.

93,683.—G. W. Dalbey, Carrollton, Miss.—*Machine for Upsetting Tires.*—August 17, 1869.

Claim.—1. A tire and band shrinker, consisting of the bars B C, of which one is pivoted, of the levers D E F, links *b e*, and clamping-plates *f g*, all arranged and operating substantially as herein shown and described.

2. The levers E F, when pivoted together and to the bars B, as shown, whereby they are adapted to be swung up for the purpose of operating as clamps, in connection with the plates *f f*, as set forth.

3. The levers E F, when tapered in front of their pivots *e e*, and curved toward each other, substantially as herein shown and described, to be accommodated to small rings, as set forth.

4. The slotted plate G, when used as a guide, and in combination with the clamp *h*, as a retainer for the movable bar C, as set forth.

93,684.—Charlton H. Davis, San Francisco, Cal.—*Rock-Drill Point.*—August 17, 1869.

Claim.—Rock-drill points, provided with one or more notches or recesses, *b*, substantially as herein shown and described, and for the purpose set forth.

93,685.—F. W. Dean, Tremont, Ill.—*Door-Latch.*—August 17, 1869.

Claim.—1. The combination of plate C, weighted latch *b*, and levers *e* D, constructed and arranged in the manner shown and described.

2. The combination of cover or pull B with the several parts aforesaid, when arranged as described.

93,686.—John G. Dillaha, Waco, Tex., assignor to himself, Robert M. Boone, and Nathan D. Bailey, Chicago, Ill.—*Power-Apparatus for Vehicles.*—August 17, 1869.

Claim.—1. The two rims A A, having the inside flange and teeth, or the equivalent thereof, in combination with the crank-shaft, pinions, and the frame of the vehicle, substantially as herein set forth and described.

2. The combination of the two rims A, the truck, frame, crank-shaft, and pinions, with one or more guide-rollers, G, or the equivalents of said devices, substantially as set forth.

3. The last, in combination with the axle I and wheels M, substantially as set forth.

93,687.—Moses W. Dillingham, Amsterdam, N. Y.—*Pencil-Sharpener.*—August 17, 1869.

Claim.—1. The parts A and B, jointed together, and so formed that they may be converted into either a cone or a tube, substantially as and for the purposes described.

2. The combination of a pencil-sharpener with a pen-holder, substantially as described.

93,688.—William H. Downing, Pioneer, Pa.—*Pipe-Wrench.*—August 17, 1869.

Claim.—The pipe-wrench, consisting of the plate A, toothed disk B, lever C, swivel-pins *d e*, and connecting-screw D, all arranged and operating substantially as herein shown and described.

93,689.—A. E. Dupas, New Orleans, La.—*Electro-Magnetic Engine.*—August 17, 1869.

Claim.—1. The tri-pole magnet, having its central pole B formed with a curved top, while the side poles B B″ are provided with corresponding curved but more extended heads D D, in the manner and for the purpose as described.

2. The rotating hollow cylindrical armature C, provided with a central axis, F, or its equivalent, for the purposes herein described.

3. The combination of the tri-pole magnet B B′ B″ with the oscillating frame E E, and the rotating hollow cylindrical armature C, as herein stated, to operate as described.

4. The above combination, in combination with pitman H, crank J, fly-wheel G, double eccentric K, and commutators L and M, when these parts are constructed, arranged, and operate substantially as set forth.

5. The electro-magnetic machine, as herein described, as a whole, in combination with a sewing-machine, when the two are united in the manner and by the means substantially as herein described, and the motion of the needle is controlled by means of a friction arm or brake, W, operated by a treadle-lever, *x*, as set forth.

93,690.—Jeptha Dyson, Philadelphia, Pa.—*Hand Seed-Planter.*—August 17, 1869; antedated August 4, 1869.

Claim.—1. Covering-plates D^2, applied to the sheath D, beneath a flange or guard-plate D^1, said sheath being constructed with a perforated bottom plate, E, to receive through it the pistons or plungers *b* on the main body of the implement, substantially as described.

2. Sheath D, applied upon the lower end of a tubular stock, A, and constructed to operate substantially as described, in combination with a rod, C, a

spirally flanged drum, C′, and oscillating distributing-plate F, the latter being applied to the bottom of the hopper, substantially as described.

3. Fitting the oscillating plate F within a fixed ring, S, upon a perforated bottom plate, *g*, in combination with a holding-down bridge, *t*, applied within the hopper, substantially as described.

4. The combination of oscillating distributer F and spirally flanged drum C′, with a spring-bridge, *t*, which latter serves to hold said distributer down in place and also as a cut-off or striker, and pieces H H, applied within the hopper B, and operating substantially as described.

5. The barrel J, interposed between the bridges *t* and *k*, and containing a spring, *j*, applied so as to operate upon the rod C, substantially as described.

6. Beveled overhanging fillers *f′*, applied to distributer F, substantially as described.

7. Division-plates *a*, applied in a chamber at the base of the hopper B, in combination with distributing-plate F, substantially as described.

8. The perforated foot-plate E, ribbed on its upper side, and made with a downward flaring cavity in the center of its bottom side, substantially as described.

93,691.—James B. Eads, St. Louis, Mo.—*Gun-Carriage.*—August 17, 1869.

Claim.—1. The improved device above described, or its equivalent, for utilizing the recoil of heavy guns, consisting of the vibrating-frame B, shafts C, gears I I, springs K K, pinions *b b*, shaft J, ratchet *d*, and pawl *e*, all substantially as shown and set forth.

2. The above device, in combination with the spring-cushions H H, arranged on the frame D, as and for the purpose specified.

93,692.—Ezra Emmert, Franklin Grove, Ill.—*Cultivator and Harrow Combined.*—August 17, 1869.

Claim.—1. The combination of the vertically swinging tooth, its notched shank, and its locking-detent, all constructed as set forth, for joint operation.

2. The combination of the pivoted beams A A, pivoted cross-piece D, and brace *c*, with the pivoted link C, all constructed and operating as described, for the purpose specified.

3. The combiuation of the triangular frames, the pivoted brace *a*, connecting their rear ends, the front connectiug pivoted braces *c c*, the pivoted links C C, and the draught-beam B, all these parts being constructed for joint operation, substantially as set forth

93,693.—George M. Fenley, Medora, Ind.—*Fruit-Crate.*—August 17, 1869.

Claim.—The wedge-shaped slide H and spring-catches I and F, combined with the cover or cap E, and hinged parts A A′ and B and B of a fruit-box, all constructed and arranged to operate as set forth.

93,694.—Edward Fleming, Ann Arbor, Mich., assignor for one-half to G. A. Pease, same place.—*Rain-Water Cut-Off.*—August 17, 1869.

Claim.—The flexible adjustable elbow, consisting of the tubes C and D, with joint and slide, all substantially as described.

93,695.—Henry F. French, Boston, Mass.—*Teeth for Cultivators.*—August 17, 1869.

Claim.—The cultivator-tooth, formed from a square bar, and pointed, and curved at the point diagonally, as shown and described.

93,696.—L. P. Garner, Ashland, Pa.—*Steam-Pump.*—August 17, 1869.

Claim.—The engine A, pumps C and D, connecting-rods B F, wheels E, weighted forked lever L, link H, and tappet and valve-rod G, all arranged substantially as specified.

93,697.—L. P. Garner, Ashland, Pa.—*Steam-Engine Piston-Packing.*—August 17, 1869.

Claim.—1. The arrangement of the wedges C C and spring H, as specified.

2. The construction and arrangement of the piston, solid in the center, two adjustable followers, one at each end, and both open to admit the steam to pass through to the rings and jointed bars, as set forth.

93,698.—Thomas S. Gates and Alexander H. Fritchey, Columbus, Ohio.—*Vapor-Burner.*—August 17, 1869.

Claim.—In a vapor-burner, provided with an auxiliary vertical tube, open at both ends, and with an orifice, serving as an auxiliary jet for heating, the making of such orifice so as to communicate directly from the generating-chamber G to the vertical tube, as and for the purpose described.

93,699.—John Gearing, Pittsburgh, Pa.—*Conductor for Rolling-Mills.*—August 17, 1869.

Claim.—The improved conductor above described, consisting essentially of the several parts specified, all constructed and fitted together, as and for the purpose set forth.

93,700.—William Gee, New York, N. Y.—*Soda-Fountain.*—August 17, 1869.

Claim.—The tube A, having an exterior screw-thread on its outer, and a flange, C, on its inner end, the cap I, screw-nut H, bush D, and packing G, whereby the exterior and interior walls of the vessel are embraced, all constructed, arranged, and operating together, as and for the purpose specified.

93,701.—William Gerhard, Jr., Florence, Mass.—*Floor for Malt-Kilns.*—August 17, 1869.

Claim.—The malt-kiln floor, consisting of the wires B B, which are wound around the cross-bars A, to form a smooth upper surface, substantially as herein shown and described.

93,702.—Edwin Gillis, Battle Creek, Mich.—*Washing-Machine.*—August 17, 1869.

Claim.—As an improvement on tubes or other receptacles, to be secured at and from the periphery of an open washing-machine cylinder, the triangular troughs *c*, constructed substantially as herein described, and arranged and operated as and for the purpose set forth.

93,703.—J. W. Gilmer and W. H. De Valin, Sacramento, Cal.—*Carriage-Spring.*—August 17, 1869.

Claim.—1. The combination, with the double wooden C-springs, of a wooden spring-bar, for supporting the body of the carriage or other vehicle, extending between and connected with said springs by means of links, substantially as and for the purposes specified.

2. A wooden spring, constructed of two or more layers or strips, and covered with hide or its equivalent, substantially in the manner and for the purposes described.

3. The covering of the wooden C-springs and spring-bar, which support the vehicle, as specified, with hide or its equivalent, as aforesaid, substantially in the manner and for the purpose set forth.

93,704.—James Glober, Omaha City, Nebr.—*Machine for Double-Seaming Sheet-Metal.*—August 17, 1869.

Claim.—The combination of the levers *s*, *r*, and *t*, posts *u*, and long box *o*, with the main frame *a*, arranged, operating, and constructed as and for the purposes set forth.

93,705.—James Glober, Omaha City, Nebr.—*Machine for Turning the Edges of Sheet-Metal.*—August 17, 1869.

Claim.—The frame *a*, wheels *b c*, conical rollers *d d*, grooved rollers *e e*, handles *i*, rollers 1, 2, 3, 4, (the rollers 1 and 4 being adjustable by means of the movable boxes *m m*,) and thumb-screw *n n*, all constructed and arranged to operate as and for the purposes set forth.

93,706.—James Glober, Omaha City, Nebr.—*Machine for Pressing Down the Seams in Sheet-Metal.*—August 17, 1869.

Claim.—The rollers *c n*, table *l*, with guides *d d*, in combination with the grooved rollers *e e*, and roller *g*, constructed to operate as and for the purpose set forth.

93,707.—JOHN GRABACH, Clyde, Ohio.—*Carriage-Axle.*—August 17, 1869.

Claim.—The spindle A, provided with the oil-reservoir *c* behind its shoulder *b*, with the adjustable slide B in the reservoir, and with the spiral groove or grooves *g* in front of the shoulder, all arranged, combined, and operating substantially as herein shown and described.

93,708.—W. S. GRAVES, Kansas City, Mo., and A. S. CAPRON, Grass Lake, Mich.—*Clothes-Drier.*—August 17, 1869.

Claim.—A clothes-drier, consisting of a double bottom, E K, cylinder G, standards C, hoops D, flange B, and cylinder H, operated by shaft F and gearing N P, as set forth.

93,709.—HENRY P. GREGORY, Plattsburgh, N. Y.—*Registering-Apparatus for Spinning-Mules.*—August 17, 1869.

Claim.—1. The combination of the wheel E and pivoted lever F′, with the gear-wheel G, gearing H H′, and the drawing-rollers or drum-shaft, substantially as described, for the purpose specified.

2. The combination of the bar A, sliding catch-bar *c*, pivoted lever F′, weight L, and pin I, with the wheel E, for gearing and ungearing with the rollers, substantially as herein shown and described.

3. The combination, with the bar A, sliding catch-bar *c*, the wheel G, and the gearing H H′, of the weighted wheel E and lever F′, substantially as and for the purpose specified.

93,710.—GEORGE V. GRIFFITH, Fort Wayne, Ind.—*Machine for Forming Plow-Handles.*—August 17, 1869.

Claim.—The vertically reciprocating frame B, combined with the horizontally reciprocating frame C, and constructed and operating substantially in the manner and for the purpose set forth.

93,711.—JAMES MADISON HALE, Georgia Plains, Vt.—*Sash-Frame and Fastener.*—August 17, 1869; antedated August 5, 1869.

Claim.—The combination of the grooved sashes B B, and their notched plates, with the double guide-plates C C, bolts *d d*, lugs *e e*, and spring *g*, all constructed and operating substantially as and for the purposes herein set forth.

93,712.—ROBERT HAM, Troy, N. Y.—*Grate.*—August 17, 1869.

Claim.—1. Forming the central part of the fire-grate surface, with and by means of the detached pivot D, operating as set forth, and provided with arms *c c′* and *b b′*, substantially as described.

2. Arranging and supporting the fire-grate A A on a loose or detached center pivot, D, forming parts of its fire surface, and movable in horizontal directions with said fire-grate, but immovable when supporting said grate, so as to dump on a line with its shank F at any point of its range of vibratory movement, substantially as described.

93,713.—JAMES HENDERSON, New York, N. Y.—*Manufacture of Iron and Steel.*—August 17, 1869; antedated August 4, 1869.

Claim.—The process, substantially as herein described, of applying, for decarbonizing crude molten iron by means of boxes or like vessels, closed at top and opened at the bottom, to contain the decarbonizing substances, the said boxes, or equivalent, being introduced in the molten metal substantially as and for the purpose specified.

93,714.—J. M. HENRIE, Vandalia, Iowa.—*Rat-Trap.*—August 17, 1869.

Claim.—1. The combination of the hinged part F with the cover E, stop M, and spring O, substantially as specified.

2. The combination with the cover and weighted cord, of the locking-bar V and dog W, substantially as specified.

3. The improved trap, above described, all its parts being constructed and arranged, with reference to each other, as shown and set forth.

93,715.—JOHN HILL, Charlotte, Mich., assignor to himself and WILLIAM ADAMS.—*Bench-Shears.*—August 17, 1869.

Claim.—In the construction of bench-shears, the combination of a circular disk, inclosed by or attached to one of the shear-blades, and connected to the other blade by a stirrup or other equivalent device, pivoted eccentrically to said disk and mechanism, by means of which said disk may be rotated, the combination being and operating substantially as described.

93,716.—ISAAC HOLLIDAY, South Brooklyn, N. Y., assignor to himself and J. S. DEAN, same place.—*Guard for Circular Saws.*—August 17, 1869.

Claim.—The hood D, pivoted to the upright C, when said hood embraces the upper portion of the saw, and is adapted for adjustment with relation thereto, by means of the supporting bar E, all arranged as described, for the purpose specified.

93,717.—HENRY JACOBS, Fayetteville, Tenn.—*Remedy for Murrain in Cattle.*—August 17, 1869.

Claim.—The murrain-remedy herein described, composed of the ingredients set forth.

93,718.—THOMAS JORDAN, Brooklyn, N. Y.—*Carpet-Beater.*—August 17, 1869.

Claim.—The chains *s*, attached to bar B, in combination with cords and pulleys P′ P P″, adjustable gearing 1, 2, 3, rollers *r r*, and revolving brushes *n*, as herein described, for the purpose set forth.

93,719.—E. G. KELLEY, New York, N. Y.—*Lamp.*—August 17, 1869.

Claim.—The improved lamp above described as an article of manufacture, formed by the combination of the vessel A, having perforated and gauzed screw-cap *a* fitted therein, with the curved wick-tube B closed by the wire gauze *c* and burner C, all shaped and arranged, with reference to each other, as shown and set forth.

93,720.—ROBERT B. KEPNER, Philadelphia, Pa.—*Combining a Letter-Balance and a Pen-Holder.*—August 17, 1869; antedated August 12, 1869.

Claim.—1. A pen-holder, so constructed as to form a lever-balance, graduated, and provided with an adjustable counterbalance, and with a clip or other device for securing a letter to the holder, all substantially as and for the purpose described.

2. The tube or rod C, with its clevises *b b′*, the whole being adapted to the tube A, substantially as described.

3. The combination of the tube C, its clevises *b b′*, and openings *c c′*, and the sliding tube or rod E, and its fingers *i i*, all substantially as and for the purpose described.

4. The plate L, having knife-edges *n n′*, and bent and otherwise constructed as specified.

5. The projections *e e* on the clevis *b′*, for the purpose set forth.

93,721.—T. B. KIRKWOOD, Dublin, Ind.—*Fanning-Mill.*—August 17, 1869.

Claim.—1. The screens M, when arranged to slide at their forward ends on pins N, set in the casing or wall B, and attached at their opposite ends to the vertical reciprocating bars I, by means of hooks or catches L K, substantially as herein shown and described, for the purpose specified.

2. The combination of the bars H and springs G, with the armed wheels F of the shaft E, when arranged substantially as shown and described, for the purpose of agitating the screens M, as set forth.

3. The combination of the armed wheels F, springs G, bars H, vertical bars I, guide-pins J, hooks and pins K L, screens M, and guides or supports N, with each other, and with the fan-shaft E, casing B, and frame A of the mill, substantially as herein shown and described, and for the purpose set forth.

93,722.—J. M. W. KITCHEN, Brooklyn, N. Y.—*Side-Wall Register.*—August 17, 1869.

Claim.—The combination of a foot-rest with a side-wall register, whether said foot-rest be pivoted or sliding, or whether it be permanently or detachably connected with said register, substantially as

herein shown and described, and for the purpose set forth.

93,723.—John D. Kunkel, Cincinnati, Ohio, assignor to himself, Frederick Stockhone, and C. F. Hornberger.—*Flue-Brush.*—August 17, 1869.

Claim.—The construction and combination of rings A, heads B B′, bolts C, and Manila grass or jute, as shown and described.

93,724.—C. Leffingwell, Clarksburgh, Ohio.—*Head-Block for Saw-Mills.*—August 17, 1869.

Claim.—1. The device for preventing a casual retrograde movement of the knees K, to wit, the bent or right-angular levers N, with sockets *k* and the bars O, which pass through the sockets, all being arranged and applied substantially as shown and described.

2. The pawls L, one or more, in combination with the sliding or reciprocating racks J, the eccentric or crank-shafts *h*, fixed stops *b′*, and the adjustable stops *n*, the whole constructed, arranged, and operating substantially as and for the purpose specified.

93,725.—Alfred John Le Grand, Boonton, N. J.—*Boiler.*—August 17, 1869.

Claim.—The cylinder A, vertical tubes B, return-tubes C D E, and hot-water tubes F G, all combined and arranged substantially as specified.

93,726.—Henry Link, Little Falls, N. Y.—*Button.*—August 17, 1869.

Claim.—The flat notched plate *c*, and the flat curved spring *e*, constructed as described, and arranged to operate in connection with the flat-backed button and the arms *b* of the shank, in the manner herein described, for the purpose specified.

93,727.—Harvey Mann, Bellefonte, Pa.—*Grinding Axes.*—August 17, 1869.

Claim.—In combination with a lever seat whereon the grinder sits, and a stone whereby axes are ground on top, in the usual way, a rest, tongs, and holding-lever, at the end or front of the stone, for grinding axes also, so that the irregular wear of the top-grinding may be corrected by the end grinding, and the stone thus kept true, by which time and economy of stone are both availed of, the construction and operation being substantially as described.

93,728.—James H. McElroy, Warwick, N. Y.—*Self-Closing Telegraph-Key.*—August 17, 1869.

Claim.—The combination, with the key C′, and spring C of the cut-out *a*, arranged substantially as and for the purpose specified.

93,729.—A. W. McKay, Elkhart, Ind.—*Machine for Sowing Plaster, Grass-Seed, and Grain.*—August 17, 1869.

Claim.—1. The arrangement of the buttons or valves *v′* in relation to the openings *v*, for closing or enlarging the latter, as specified.

2. The bars *m*, and pins P, in combination with the cylinder A, openings *v*, and valves *v′*, as specified.

93,730.—Neal McKay, Columbia, Mo.—*Cultivator-Plow.*—August 17, 1869.

Claim.—The combination and arrangement of the rear plows D, fastened to the main frame, the inner and front plows C, adjustably secured upon the rock-shaft B, the hand-lever G, pivot *g*, and chains F F to the inner plows, and the hand-lever H, with its four-armed rock-shaft, and chains *h h h h* for lifting the four plows, secured by the catch *l*, with the adjustable seat K.

93,731.—Daniel Mills, New York, assignor to Charles Goodyear, Jr., New Rochelle, N. Y.—*Sewing-Machine.*—August 17, 1869; antedated February 17, 1869.

Claim.—1. The combination of an awl-stock and a needle-stock, mounted independently of each other, the one in stationary, the other in movable bearings, both being operated independently of each other by one or more cam-disks, mounted on one and the same shaft, substantially as herein shown and described.

2. The needle and awl stocks, having motions imparted to them in the manner and by the means herein described, that is to say, through the intermediary of segmented cog-gears on both said stocks, and upon levers actuated by cam-disks, as herein shown and set forth.

3. In combination with a lever, forming the bearing for the pivot of the needle-stock, and effecting its back-and-forth movement, the lever actuating the rotary movement of the needle-stock, when both needles oscillate upon one and the same axis, substantially as set forth.

4. In combination with the needle-stock, having a compound rotary movement, as described, the locking-lever, and its actuating cam-disk, so arranged, in relation to the lever forming the bearing of the needle-stock, as to hold the said needle-stock stationary while the stitch is being made, substantially as herein shown and set forth.

5. The combination of the thread carrier or looper, with mechanism, substantially as herein described, to impart to it the movement in relation to those of the needle, as herein shown and specified.

6. The thread carrier or looper, mounted upon a transversely sliding rod, which forms its pivot, in combination with cams, or their equivalents, for effecting the compound vibratory movement, substantially as herein shown and described.

7. The combination with the rotary needle and awl, of a guard or barb-coverer, when the same is mounted in and partakes of the movement of the awl-stock, to operate in connection with the needle, substantially as herein shown and described.

8. In combination with the rotary barbed needle, the loop-cheek or retractor, operating substantially as herein described.

9. The combination, with the sewing-mechanism, substantially as herein described, of two gauges, one to guide the work by the channel cut into it, the other to press against or hold the work to the former gauge, substantially as set forth.

10. The arrangement of two gauges, substantially as herein described, in such manner that, while the one is stationary or fixed, the other shall yield to the sinuosities of the work, as set forth.

11. The spring-gauge, mounted upon the axis of the awl, so that it shall yield concentrically with the awl, substantially as set forth.

12. The combination of a stop-mechanism with the driving-shaft and swinging-mechanism, under the arrangement, substantially as herein shown and described, so that the machine can be stopped only when the needle and awl are out of the work, and thus allow of the ready removal and introduction of the work.

13. The feed-dog, mounted upon an up-and-down vibratory lever, in combination with a laterally vibrating lever of the first order, and the means herein described, or the equivalent thereof, for adjusting the length of said lever, whereby an adjustable four-motion top-feed is obtained, substantially as and for the purposes set forth.

14. A last-holder, composed of a tilting-plate, combined with spring-latches and adjustable stops, in such manner that, by releasing said latches at proper intervals, the work is adjusted by the action of the feed-dog, and the last-holder becomes locked at the proper time for the turning of the work.

15. The arrangement of the stationary tube located in and passing through the lower part of the main supporting-frame, and exposed to the action of a flame, within the cavity in the interior of said frame or standard, for the purpose of heating the waxed thread as it passes to the sewing-mechanism, as set forth.

93,732.—H. Mithoff, Columbus, Ohio.—*Curry-Comb.*—August 17, 1869.

Claim.—An improved curry-comb, the body of which is formed by combining a number of single-flanged strips, B, with a single double-flanged strip, A, the several parts being secured together by bending the flanges *b′* of each strip B over the ends of the preceding strip, substantially as herein shown and described.

93,733.—Cyrus T. Moore, Gilmanton, N. H.—*Safety-Guard for Gun-Nipple.*—August 17, 1869.

Claim.—1. In combination with the safety-guard H and the hammer and tumbler of a fire-arm lock, the stud *e*, the slotted connecting-rod *c*, and the spring *f*, or their mechanical equivalents, the whole being substantially as described.

2. The arrangement and combination of the spring *f*, the slotted connecting-rod *c*, and the stud *e*, as applied to the lock-plate A, the guard H, and the tumbler E of the hammer B, such guard being pivoted to the lock-plate, so as to operate with the nipple and hammer, in manner substantially as explained.

93,734.—Bernard Morahan, Brooklyn, N. Y.—*Ice-Pitcher.*—August 17, 1869.

Claim.—An ice-pitcher, having a covering or guard covering a portion of the nose or spout of the same, the inner edge of which extends inwardly beyond the inner walls of the pitcher, when said covering or guard is an integral part of the pitcher, substantially as and for the purpose set forth.

93,735.—James Nardin, Locle, Switzerland, assignor to V. T. Magnin, Guédin & Co., New York, N. Y.—*Stem-Winding Watch.*—August 17, 1869.

Claim.—1. The arrangement of the slide B relatively to the bezel A, cover D, and the part K of the case, substantially as specified.

2. The arrangement of the slide B with the case and the bow E, having the collar F, substantially as specified.

3. The arrangement, with the part K of the case, the slide H, and the cover D, of the spring-pin I, substantially as specified.

93,736.—Andrew Nonnamaker, Circleville, Ohio.—*Scoop.*—August 17, 1869.

Claim.—A scoop, provided with a slide, for clearing it of its contents, substantially as described.

93,737.—George Oerllein, Utica, Minn.—*Horse-Power.*—August 17, 1869.

Claim.—1. The sweeps C, hinged loosely in the irons G, and resting in the open sockets F, substantially as described.

2. Rubbers I, in combination with bows D and draught-iron K, substantially as described.

3. Box H, arranged so as to slip on to the end of shaft N, substantially as described.

4. Shaft N, pinion O, shaft S, and sliding-pinions P and Q, constructed substantially as described.

5. Sliding-pinions Q and P, wheel R, and shaft S, constructed substantially as described.

6. Frame A, ratchet-wheel T, dog U, rope V, and shaft W, constructed and arranged substantially as described.

93,738.—George Oerllein, Utica, Minn.—*Horse-Power.*—August 17, 1869.

Claim.—1. A two-wheeled horse-power, with a square frame, constructed substantially as described.

2. Master-wheel B, with jointed sweeps C, and braces D, constructed and arranged substantially as described.

3. Master-wheel B, with trucks E and P, to keep it securely in position, substantially as described.

4. A horse-power, arranged with the large wheel in rear of the axle, so that the axle can run through the whole width of the power without obstruction, constructed substantially as described.

93,739.—C. Chauncey Parsons, New York, N. Y.—*Process for Purifying Paraffine.*—August 17, 1869.

Claim.—1. Melting the paraffine with naphtha, and cooling the same while continually agitating it, substantially as and for the purposes described.

2. Washing the paraffine by passing cold naphtha up through it, stirring or agitating the mixture at the same time, so as to expose, as nearly as possible, all the paraffine to the naphtha, substantially as herein set forth.

3. Separating paraffine of a lower melting-point from that of a higher melting-point, by varying the temperature of the naphtha with which the paraffine is treated, substantially as set forth.

4. The process for purifying paraffine, substantially as herein described.

93,740.—C. Chauncey Parsons, New York, N. Y.—*Treadle.*—August 17, 1869.

Claim.—1. The arrangement, in a sewing or other machine, of a pendulous or swinging treadle, whether to hold one foot or both feet, substantially in the manner described, so that its axis or center of motion shall coincide as nearly as may be desirable with the knee-joint of the person operating said treadle.

2. The combination, with a swinging treadle, whose center of motion is located as specified, of a foot-rest, capable of being adjusted to conform with the length of limb of the operator, substantially as described.

3. The combination, with the foot-rest, of the means for supporting the same at or near the instep, and for upholding the front end of the same, substantially in the manner and for the purposes described.

4. The employment, with the foot-rest, of one or more springs, substantially in the manner and for the purpose described.

5. The combination, with the swinging treadle-arms and crank-shaft, of the links for connecting said parts, the same being constructed substantially in the manner shown and set forth.

93,741.—S. W. Perkins, Geneseo, Ill.—*Thill-Coupling.*—August 17, 1869.

Claim.—The improved hinge-coupling above described, its several parts being constructed and fitted together in the manner shown and described.

93,742.—Jacob S. Platt, Philadelphia, Pa.—*Coal-Stove.*—August 17, 1869.

Claim.—1. The fire-clay cylinder B, having a bulge or projection, for partially supporting the burning fuel, substantially as and for the purposes described.

2. The clearing-door D, above the fire-grate, having its bottom on a line, or nearly on a line, with the top of said grate, substantially as described.

3. The receiving-draw F, with two sections, for receiving the cinders and ashes, respectively, substantially as described.

4. The combination of a stove or furnace cylinder, a throttled or contracted passage, a grate below said throttled passage, and an opening on a level or above the grate.

93,743.—William Preiss, New York, N. Y.—*Tuck-Creasing Attachment for Sewing-Machines.*—August 17, 1869.

Claim.—1. The combination and arrangement of the clamp-block *a*, rod *b*, rocking-lever *c*, with its jointed arm and screw, provided with a groove, and the projection on the bar *j*, constructed and operating substantially as described and specified.

2. The combination, with the parts above described, of the gauge *k*, for adjusting the apparatus upon the sewing-machine, substantially as described and specified.

93,744.—Perry Prettyman, Paradise Spring Farm, Oreg.—*Lamp-Burner.*—August 17, 1869.

Claim.—The arrangement, with relation to the wick-tube, of the conical imperforate tube B, perforated funnel C, and air-deflector D, provided with the wings E F, as herein set forth and shown, for the purpose specified.

93,745.—Jonathan Quipp and Robert Law, Buffalo, N. Y.—*Steam-Generator.*—August 17, 1869.

Claim.—1. The improved mode herein described, of generating steam by a system of primary and secondary boilers, arranged to concentrate the heat of the fire upon the primary boilers, and to discharge the steam generated therein into the heating-space of the secondary boilers, for generating steam therein for use, substantially as specified.

2. The arrangement of the pipes E and F, with relation to the primary and secondary boilers, as herein shown and described.

93,746.—Ellery P. Ralph and James Hannan, Gallipolis, Ohio.—*Tinsmiths' Shears.*—August 17, 1869.

Claim.—In combination with the shear B, the

stationary die *a*, having adjustable gauges *b* and *c*, and movable die *d*, constructed to operate substantially as and for the purposes set forth.

93,747.—NICHOLAS REED, Otisville, N. Y.—*Combination-Lock.*—August 17, 1869.

Claim.—The combination, with the dovetail projection Q and the grooved disks, of the slide N, substantially as specified.

93,748.—JOHN L. REMLINGER, Providence, R. I.—*Button.*—August 17, 1869; antedated August 12, 1869.

Claim.—The automatic button-fastening, consisting of the L-shaped plates B C, one being rigidly fastened to the button, and the other hinged to the side of the first, below the under surface of the button, and either provided with a slot, as herein shown and described, for the purpose specified.

93,749.—JOHN J. ROSE, Elmwood, Ill.—*Cultivator.*—August 17, 1869.

Claim.—1. The right-angle hinges L L, in combination with the beams E E, plows N N, shovels M M, and chains I I′, of a riding cultivator, all substantially as and for the purpose shown and described.

2. The spring U, chains I′, when combined with the cross-beam or axle-beam G of a cultivator, and the plow-beams E, all substantially as shown and described, and for the purpose set forth.

93,750.—JOHN W. ROE, Lewisburgh, Pa.—*Horse Hay-Fork.*—August 17, 1869.

Claim.—The arrangement of the double-tripod arms D E with their respective stems, in combination with the lever C, and fingers F, and ring-catch B, all operated and combined substantially in the manner and for the purpose specified.

93,751.—S. H. SAWHILL, Cambridge, Ohio.—*Velocipede.*—August 17, 1869.

Claim.—1. The steering-post C, constructed, as described, of the two parallel bars *a a*, hung upon the crank-axle B, and connected by the plates *b d*, between which the end of the reach D is pivoted, said post being provided at its upper end with the crank-shaft J, and near its lower end with the foot-rests I, as herein described, for the purpose specified.

2. The arrangement of the extension-plates G, carrying the handles *g*, and adjustable upon the wrist-pins of the crank-axle J, the connecting-rods *f*, steering-post C, and crank-axle B, as herein described, for the purpose specified.

3. The extension-plates G, carrying the handles *g*, when slotted and adjustable on the wrist-pins of the crank-shaft J, as herein described, for the purpose specified.

93,752.—TALIAFERRO P. SHAFFNER, Louisville, Ky.—*Explosive Compound for Use in Fire-Arms, Blasting, &c.*—August 17, 1869.

Claim.—The mixing of nitroleum or nitro-glycerine with plaster of Paris, or equivalent substances, in such manner as will make or produce an explosive compound or mixture, in the manner and substantially as herein described.

93,753.—TALIAFERRO P. SHAFFNER, Louisville, Ky.—*Explosive Compound.*—August 17, 1869.

Claim.—1. A compound, composed of a mixture of nitro-glycerine with sponge or other vegetable fiber, in the manner and substantially as hereinbefore described.

2. The mixture of plaster of Paris or any alkaline substance with the above named and described compound, substantially in the manner and for the purposes hereinbefore described.

93,754.—TALIAFERRO P. SHAFFNER, Louisville, Ky.—*Explosive Compound.*—August 17, 1869.

Claim.—1. A compound, composed of a mixture of nitro-glycerine, with metallic powder or atoms, however formed or produced, substantially in the manner and for the purposes hereinbefore described.

2. The mixture of plaster of Paris, or any alkaline substance, with the above-described compound, substantially in the manner and for the purposes herein before described.

93,755.—TALIAFERRO P. SHAFFNER, Louisville Ky.—*Blasting Fuse.*—August 17, 1869.

Claim.—The placing, upon a blasting or other fuse, gun-cotton, or other substance of more rapid combustion than gunpowder, for the purpose of spreading the fire throughout the charge of a blast, cannon, torpedo, bomb, or shell, substantially as hereinbefore described.

93,756.—TALIAFERRO P. SHAFFNER, Louisville, Ky.—*Manufacture of Nitro-Glycerine.*—August 17, 1869.

Claim.—1. The use of an outer tank, E, to cool the inner tank A, by means of ice or cold water contained therein, in combination as mentioned, substantially as and for the purposes described.

2. The agitator, being composed of a rod, having fixed upon its flanges, so bent and curved as, when revolved, will force the liquid from and to all points of the tank A, substantially as and for the purposes described.

93,757.—TALIAFERRO P. SHAFFNER, Louisville, Ky.—*Method of Blasting with Gunpowder and other Explosive Substances.*—August 17, 1869.

Claim.—The interposition of non or partial explosive materials between the fibers of gun-cotton, the grains of gunpowder, or other kinds of powder or nitrated or explosive materials, calculated to spread the action of the gases evolved by the explosion of gun-cotton, gunpowder, or other explosive substances, over a greater cubic space than would be realized by the said gun-cotton, gunpowder, or other explosive substances, when not mixed, in the manner and for the purposes substantially as hereinbefore described.

93,758.—CHARLES WILLIAM SIEMENS, Westminster, England.—*Making Cast Steel.*—August 17, 1869.

Claim.—1. The method, substantially as hereinbefore described, of producing cast steel from the ore, such consisting in causing iron ore, in small pieces or in powder, to pass through and be treated by one or more horizontal or slightly inclined revolving cylinders, (acting as hereinbefore explained,) and next causing such ore to fall or pass into a bath of pig-metal or carbon (previously prepared) on the open hearth of a furnace, and thereby be melted or otherwise treated, and changed more or less into malleable cast steel by the addition of one or more refining agents, substantially as hereinbefore described.

2. For the reduction of iron ore in manner as set forth, an apparatus, consisting of a revolving cylinder and drum, as described, provided with outer channels, arranged substantially as specified, through which, when in use, the gases resulting from the reduction of the ore within the drum may be caused to pass, and be consumed in connection with air introduced into and heated within certain of such channels, as described.

3. The combination and arrangement, as set forth, of one or more rotative cylinders or drums, as explained, with a furnace, as described, (or its equivalent,) for the production of cast steel direct from the ore, as set forth; the whole being substantially as described.

93,759.—W. B. SLUTTER, Warsaw, Ind.—*Device for Shifting Buggy-Tops.*—August 17, 1869.

Claim.—The combination of the rails G B, lug or rest *e*, spring-lever F, and claw-hooks D, arranged to operate in relation to each other, for the purpose of attaching the calash to the seat A, substantially in the manner as herein described.

93,760.—THOMAS E. SPARKS, Norwich, Conn.—*Toy-Top.*—August 17, 1869.

Claim.—1. The tubular top-stem B, or its equivalent, for holding the spindle, substantially as and for the purposes set forth.

2. The independent spindle C, having its lower end forked, and the upper end pointed, for the top-

stem to turn upon, or its equivalent, substantially as and for the purposes set forth.

3. The combination of the tubular stem B, or its equivalent, with the forked spindle C, or its equivalent, substantially as and for the purposes set forth.

93,761.—William A. Spring, Titusville, Pa.—*Adjustable Clutch for Lifting Well-Tubing.*—August 17, 1869.

Claim.—An adjustable tubing-clutch, with hinged jaws *a a*, hinge *b*, links *d d*, and central bolt *c*, all combined and arranged substantially as and for the purposes set forth.

93,762.—John Stark, Thomasville, Ga.—*Seeding-Machine.*—August 17, 1869.

Claim.—1. The adjustable seed-slides *l l*, constructed as described, operating upon the graduated scales *m*, in combination with the perforated plate *k*, as herein described, for the purpose specified.

2. The oscillating plate *n*, for closing the seed-apertures, when operated by means of the lever *o*, substantially as herein shown and described.

3. The application to a seed-planter of the rotating upright shaft F, on which the separating disk *i*, having the arms *j*, is mounted, for separating cotton-seed and for breaking up the lumps of fertilizing material, substantially as described.

4. The apparatus for operating the reciprocating slide *r*, consisting of the oscillating arbor *s*, having the cam *t* of the spring *u*, toothed disk *x*, and gear-wheels *w*, all made and operating substantially as described.

5. The combination, with the seed-slide *r* and supporting-wheel C, of the spring *u*, cam *t*, rock-shaft *s*, gear-wheels *w v*, and the cam *x*, operating substantially as described, for the purpose specified.

6. The combination, in a seed-planter, of the hopper G, plates *l l* and *n*, shaft F, disk *i*, having the arms *j*, with the hopper H and box I, all made and operating substantially as herein shown and described.

93,763.—Isaac H. Stoddard, Amenia, assignor to E. and H. T. Anthony & Co., New York, N. Y.—*Camera-Stand.*—August 17, 1869; antedated August 12, 1869.

Claim.—The double inclines *b b*, fitted so as to be moved endwise upon the bed *a*, in combination with the table or camera-rest *k*, attached to the bearings *e e*, so as to be tipped or inclined in either direction, substantially as set forth.

93,764.—Friedrick Sulter, St. Paul, Minn.—*Furnace for Steam-Generators.*—August 17, 1869.

Claim.—The crank-shafts G G, chains H H, and regulator J, when constructed, arranged, and operating in the smoke-chamber F, as herein described, and for the purpose set forth.

93,765.—Lorens Swenson, North Cape, Wis.—*Harvester.*—August 17, 1869.

Claim.—1. Axle C, wheel H, pinion I, jointed shaft K, pinions L and M, shaft O, pulley N, pulley *f*, band *g*, and reel T, arranged substantially as described.

2. Axle C, wheel H, pinion I, jointed shaft K, pinions L and M, shaft O, hollow shaft P, cam Q, crane *l*, plate *z*, lug *x*, rake S, clutch R, shoe *a*, and rod *b*, constructed and arranged substantially as described.

3. Lever *c*, pulley *d*, rope *e*, post *o*, rod *q*, swing-bar *p*, and rod *r*, in combination with platform U, arranged as shown and described.

93,766.—O. W. Swift, New Haven, Conn.—*Fastener for Whip-Sockets.*—August 17, 1869.

Claim.—The socket D, attached to the fastenings F *d*, constructed as described, to the piece C, in combination with the metal support B, all arranged, constructed, and operated as described.

93,767.—S. D. Taylor, Hazleton, Pa.—*Water-Wheel.*—August 17, 1869.

Claim.—The arrangement of the chutes A, with relation to each other and to the buckets B, said chutes forming funnels, leading to the buckets, whereby the water is directed to the outer ends only of the latter, in the manner described, for the purpose specified.

93,768.—C. W. Terpening, Geneseo, Ill.—*Curd-Grinder.*—August 17, 1869.

Claim.—The combination of the longitudinally adjustable disk C, oscillating disk E, hopper F, flange *h*, and spring *g*, with the frame A, all constructed, arranged, and operating substantially as herein shown and described.

93,769.—W. R. Thomas, Catasauqua, Pa.—*Car-Wheel.*—August 17, 1869.

Claim.—An improved car-wheel, with a hollow center, formed by the combination of the rim A, plate B, plate C, and arms E, and brackets D, either or both, and whether the brackets D are made hollow or solid, substantially as herein shown and described, and for the purposes set forth.

93,770.—James E. Tibbetts, Trenton, N. J.—*Truss for Connecting Booms to Masts.*—August 17, 1869.

Claim.—The improved device for connecting the mast-truss and boom-straps of a ship, formed by the combination of the shank of the bolt D, with an L-shaped head d^2, circular flange d^3, nut d^1, and spring-key, all constructed and co-operating together, as and for the purpose specified.

93,771.—Joel Tiffany, Albany, N. Y.—*Combined Water-Tank and Warming-Closet.*—August 17, 1869.

Claim.—1. A water-tank and warming-closet, with a jacket surrounding the former, in combination with the chamber between the tank and closet, constructed so as to be attached to or detached from the outside of a stove or furnace, substantially as described.

2. The water-tank A, the warming-closet B, space C, the flues *f a f*, when constructed as and for the purpose described.

93,772.—Christopher C. Tracy, New York, N. Y., assignor to himself and James E. Grannis, same place.—*Oiler for the Slides of Steam-Engines.*—August 17, 1869.

Claim.—The elastic absorbent "oil-holding" rollers, supported in yielding bearings, and applied in substantially the manner specified, to spread the lubricating-materials on the slides or journals of engines and other machines, for the purposes specified.

93,773.—Abigail W. Viles, Elkhorn, Wis.—*Chair, Table, and Stand Combined.*—August 17, 1869.

Claim.—The combination of the chair A, with the table D and stand C, substantially as specified.

93,774.—P. H. Wait, Sandy Hill, N. Y.—*Water-Wheel.*—August 17, 1869.

Claim.—1. A water-wheel bucket, provided with a lever upper and inclined lower edge, substantially as herein shown and described.

2. A water-wheel bucket, having the upper four-tenths of its face, or thereabout, made nearly straight, while the other parts are curved, substantially as herein shown and described.

3. A water-wheel bucket, whose upper and lower edges, when continued toward the shaft of the wheel, are in a vertical line on the axis of said shaft, while the outer end of the lower edge is forward of that of the upper edge, substantially as herein shown and described.

93,775.—J. Wesley Webber, New York, N. Y.—*Kindling-Wood.*—August 17, 1869.

Claim.—The accompanying or fastening one or more fire-lighters, A, to or with the bundle of the common article of manufacture known as bundle or kindling wood, the fire-lighter to be suitably molded or pressed, and to be made of a combustible material, such as rosin or tar, the ingredients of which I do not claim, my invention consisting wholly of accompanying or fastening a fire-lighter, A, to or with the bundle, or at the string B of the bundle, of the

common article of manufacture known as bundle or kindling wood.

93,776.—JOHN WEEMS and WILLIAM WEEMS, Johnstone, Great Britain.—*Manufacture of Floor Oil-Cloth.*—August 17, 1869.

Claim.—The manufacture and treatment of floor and other oil-cloths and coverings, with printed or plain surfaces, in the improved modes of treatment by currents of steam, or other heated air, and arrangement and apparatus for moving the cloths, and in apparatus for the production of the currents of steam-heated air, either separately or combined together, substantially as described.

93,777.—THOMAS J. WEST, Alfred Centre, N.Y.—*Horse-Rake.*—August 17, 1869.

Claim.—The draw-bars B, connected to the sulky, and the handles of the rake connected to the lever F, hinged to the axle, and arranged for manipulating the rake, and for engaging with the hook I, for supporting the rake for transportation, all substantially as specified.

93,778.—CHARLES P. WILLIAMSON, Louisville, Ky.—*Horseshoe-Machine.*—August 17, 1869.

Claim.—1. The curved detachable dies A, die-carriers B, die-block Q, and reciprocating former N, combined, constructed, and arranged substantially as specified.

2. The combination, with the dies A, of the former N and die-block Q, when arranged and operated substantially as specified.

3. The arrangement of the reciprocating former N and discharger X, substantially as specified.

4. The arrangement of the stock of the pressing-die S, cam T, and cam U, for operation in the order specified.

93,779.—JOHN A. WILSON, Altoona, Pa.—*Railway Stop-Chair.*—August 17, 1869.

Claim.—A railroad stop-chair, consisting of parts *c d e*, as herein set forth.

93,780.—CHARLES G. WILSON, Brooklyn, N. Y.—*Pen-Holder.*—August 17, 1869.

Claim.—1. An improved pen-holder, in which the pen-socket is connected with the ferrule or handle by a ball and socket joint, or equivalent connection, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the handle A and slitted ferrule B, whether made in one piece or separately, the pen-socket C *c'*, and screw-band or nut D, with each other, substantially as herein shown and described, and for the purpose set forth.

93,781.—GEORGE A. WING, Albany, N. Y.—*Stove and Furnace Grate.*—August 17, 1869.

Claim.—The construction of a stove or furnace grate, consisting of a series of rotating grates, in combination with toothed wheels F and G, or their equivalents, whereby the series of grates C may be rotated simultaneously, substantially as herein set forth.

93,782.—GEORGE A. WING, Albany, N. Y.—*Base-Burning Stove.*—August 17, 1869.

Claim.—1. The construction of illuminating-chamber C, with covers P and Q, or their equivalents, whereby all light from the combustion-chamber, within fire-pot A, may be excluded at pleasure.

2. The combination of direct draught-flue L and reservoir B, with illuminating-chamber C, substantially as herein set forth.

3. The combination of reservoir B and fire-pot A, with illuminating-chamber C, substantially as and for the purpose herein set forth.

4. The combination of elevated oven M, with flues K K and L, reservoir B, and fire-pot A, as herein shown and described.

5. The combination of register *l*, with ascending-flue 2, in the manner herein shown.

93,783.—SAMUEL WING, Munson, Mass.—*Hat-Shaping Machine.*—August 17, 1869.

Claim.—An elastic and flexible hat-pressing bag, A, provided with metallic angle-rings, E, substantially as specified.

93,784.—GEORGE C. WINTERS, Winfield, Mich., assignor to himself and EDWIN MILLER, same place.—*Quilting-Frame.*—August 17, 1869.

Claim.—The adjustable end-pieces A B, provided with the set-screws *e*, in combination with the rollers C C', hooks or pins *d*, ratchet *c h*, and hinged legs D, substantially as and for the purposes specified.

93,785.—FERDINAND WOLF, South Boston, Mass., assignor to himself and HENRY HANF, same place.—*Pepper-Caster.*—August 17, 1869.

Claim.—The arrangement and construction of the perforated plate D, with its rod E, spring G, and knob H, in combination with perforated plate B and the caster, of such form as may be suitable for the purpose herein described.

93,786.—JOSEPH E. WOLL, Allegheny City, Pa.—*Carriage-Jack.*—August 17, 1899.

Claim.—The bent lever *d*, operating against the lower end of an upright, *b*, and having bearings which operate in toothed racks *c c*, in combination with a ratchet-rack, *i*, and catch *h*, arranged substantially as hereinbefore set forth.

93,787.—HOLLIS WOODWARD, Milwaukee, Wis.—*Sawing-Machine.*—August 17, 1869; antedated August 5, 1869.

Claim.—A sawing-machine, consisting of the wheel D, slide-grooves E, cross-head F, saw H, saw-frame I, hung by its inner end, and provided with the movable weight S, constructed and arranged to operate as described.

93,788.—LYNDON WORSTER, Syracuse, N. Y.—*Cock-Eye for Harness.*—August 17, 1869.

Claim.—A cock-eye, composed of frame B *b' c*, and spring-hook or eye D *d*, substantially as herein described.

93,789.—JOHN F. WORTH, Brooklyn, N. Y.—*Flexible Wainscot.*—August 17, 1869.

Claim.—The flexible wainscot, constructed, as described, of the boards A, hung upon the wires B, passed through them from edge to edge, whereby said boards are adapted to be moved together to compensate for shrinkage, as herein shown and described.

93,790.—PETER C. WORTMAN, Meadville, Pa.—*Feed-Water Heater.*—August 17, 1869.

Claim.—The combination of the pipes D and E with the dome B and the tank C, constructed as described and set forth.

93,791.—BENJAMIN F. ADAMS, Bangor, Me.—*Carriage.*—August 17, 1869.

Claim.—The frame C, as made with the reversed arch *c*, arranged as set forth, and with the bearing-plate *d*, combined therewith, in combination with the two springs B B, applied to such frame and the carriage-body A, and arranged therewith, in manner substantially as described.

93,792.—THEODORE BAILEY, Fairfax County, Va., and HOWARD H. YOUNG, Washington, D. C.—*Buckle.*—August 17, 1869.

Claim.—1. The dovetail recess D, in combination with the curved rear end of a snap-hook spring, F, substantially as and for the purpose herein set forth.

2. The dovetail recess D, in combination with the projection *b* and transverse slot *c*, when constructed and arranged substantially as set forth.

3. The dovetail recess D, in combination with the lugs *a a*, substantially in the manner and for the purpose herein set forth.

93,793.—WILLIAM D. BAKER, East Abington, Mass.—*Chain-Stopper.*—August 17, 1869.

Claim.—1. The shaft A, as made with the helix-groove *d* extending around it, and with the passage *c* leading from such groove through one end of the shaft, as specified.

2. The combination and arrangement of the guide-

block B, and its supporting-bar *t*, with the chain-stopper shaft A, made with the helix-groove, and the passage leading therefrom, as explained.

3. In combination with the movable chain-guide B, and chain-stopper shaft A, made with a helix-groove, *d*, and a passage, *c*, leading therefrom, in manner as set forth, a mechanism substantially as described, or its equivalent, for revolving the shaft, and maintaining it in position as explained, such mechanism being the ratchet, the lever, and pawls, applied as described.

93,794.—A. Balding, Memphis, Tenn.—*Pump.*—August 17, 1869.

Claim.—The pipe A, chamber B, piston C, and valve D, all combined and arranged substantially in the manner shown, to form a double-acting plunger, for the purposes set forth.

93,795.—J. F. Barker, Springfield, Mass., and C. N. Gilbert, New York, N. Y.—*Apparatus for Carbureting Air.*—August 17, 1869.

Claim.—1. The combination of the helical spring *a* with the ring *c* and shaft *h* or ring *n*, the whole constructed and operating substantially as and for the purpose herein described and specified.

2. A meter-wheel, having a shaft, *h*, in combination with the toothed drum B, wheel s^1, with its pawls s^3 and s^5, the rings *c c'* and *m' n*, and spring *a*, all constructed and operating substantially as and for the purposes herein specified and described.

93,796.—H. H. Beard, deceased, Friar's Point, Miss., (W. J. St. John, administrator.)—*Excavator.*—August 17, 1869.

Claim.—The frame-work E', made in sections articulated together, and provided with the apron E, in combination with the frame-work C', provided with the apron C, and with the plows D D placed with respect to each other, as described, all arranged and operating substantially as set forth.

93,797.—Moses Bernheim, New York, N. Y.—*Metallic Remedy for Rheumatism.*—August 17, 1869.

Claim.—The combination of copper, zinc, and woolen cloth, and applied in the manner, form, and place, as herein set forth, to attain the cure of rheumatism, nervous, and other kindred diseases.

93,798.—Erastus B. Bigelow, Boston, Mass.—*Friction-Clutch.*—August 17, 1869.

Claim.—The arrangement of the wedge-formed bar *g*, operating in a central hole in the driving-shaft, the friction-arms *d*, springs *i*, and arms *e*, substantially as and for the purpose described.

93,799.—Erastus B. Bigelow, Boston, Mass.—*Harness-Operating Mechanism for Looms.*—August 17, 1869.

Claim.—1. The combination of mechanism herein described, for governing the order in which the leaves of heddles are raised and depressed, to form the shed, consisting of a pattern-surface, having a continuous rotary movement, latch-levers, which engage interchangeably with lifting-bars, to form the shed, and balance-levers, which transmit the governing-action of the pattern-surface to the latch-levers by contact therewith, when their changes are effected, and are separated therefrom while the shed is formed, substantially as specified.

2. In combination with the latch-levers, latch-hooks, or their equivalents, for preventing an untimely escape of the latch-levers from the lifting-bars, substantially as specified.

3. The combination of mechanism herein described, for operating the lifting-bars, consisting of a double-faced cam, producing two reciprocating motions in opposite directions, oscillating lever-arms, and two connecting-rods, by which the two reciprocating motions of the cam are communicated to their respective lifting-bars, substantially as specified.

93,800.—Erastus B. Bigelow, Boston, Mass.—*Power-Loom for Weaving Piled Fabrics.*—August 17, 1869.

Claim.—1. The combination, with the withdrawing-hook, which draws the pile-wires from the cloth, of a supporting-bed or its equivalent, and a latch-guard, by which the pile-wire heads are prevented from escaping from the withdrawing-hook while the pile-wires are being drawn out, substantially as specified.

2. In combination with the withdrawing-mechanism herein described, an inserting-carrier, which receives the pile-wire heads from the withdrawing mechanism, and inserts the pile-wire in the shed, when said inserting carrier is operated by a vibrating-staff, having imparted to it a parallel motion, and maintained in a proper position while moving toward and from the cloth, substantially as specified.

93,801.—James Brodie, San Francisco, Cal.—*Steady-Rest for Lathes.*—August 17, 1869.

Claim.—The dogs C C and C' C', arranged and operated as described, in combination with the revolving-plate B, substantially as described.

93,802.—J. R. Brown, New Haven, Conn.—*Soda-Water Apparatus.*—August 17, 1869.

Claim.—1. The combination of the water-vessel A, gas-generating chamber B, tubes D and E, constructed, arranged, and operating substantially as set forth.

2. In combination with the above, the arrangement of the supply L, in the manner substantially as set forth.

93,803.—Christopher C. Burnham, East Hartford, Conn., assignor to himself and Lewis H. Rogers, same place.—*Machine for Cutting Leather into Round Bands.*—August 17, 1869.

Claim.—1. The combination of the springs *n n n n*, and the cutter *h*.

2. The combination of the springs *n n n n*, the cutter *h*, and the knife *i*, the whole being constructed and arranged as described, for the purpose set forth.

93,804.—Eben S. Burns, Portland, Me.—*Paint.*—August 17, 1869.

Claim.—The described composition of ingredients, when compounded in the manner, proportions, and for the purposes hereinbefore set forth.

93,805.—A. H. Caryl, Groton, Mass.—*Hay-Tedder.*—August 17, 1869.

Claim.—1. A tedder-machine, so organized that the tedder-teeth are positively held back under tension between their tips and the stocks to which they are affixed, while their stocks move forward, and are then released, thereby imparting a jerking movement to flirt the hay, substantially as described.

2. The combination of the slotted sliding-stocks *d*, spring-teeth *e*, springs *g*, and rods *h*, and rocker-shafts *i*, arranged and operating together, substantially as described.

3. In combination with the spring-teeth *e* and the mechanism for imparting their positive movements, the hooks *u* or equivalent devices, operating to first hold back and then release the tedder-springs, substantially as described.

4. The combination with the carriage-wheel of the incline and its spring, for actuating the hook-plate, and the arms *l* l^2, and pinions, for actuating the rocker-shafts, substantially as described.

93,806.—Jacob F. Chandler, Concord, N. H., assignor to himself and Abner F. Durgin, same place.—*Hay Raker and Loader.*—August 17, 1869.

Claim.—The combination and arrangement of the endless apron A, springs E, and inclines F F, to operate as and for the purpose set forth.

93,807.—William A. Clark, Woodbridge, Conn.—*Countersink and Bit.*—August 17, 1869.

Claim.—In combination with the counterbore, made adjustable in a bit, the plug-cutter L, formed in one and the same piece with the counterbore, and so as to be applied to the bit, substantially as set forth.

93,808.—William A. Clark, Woodbridge, Conn.—*Hollow Auger.*—August 17, 1869.

Claim.—In combination with the cutters D, the

clamp E, constructed so as to grasp the head of the auger and edge of the cutter, substantially in the manner and for the purpose herein set forth.

93,809.—H. H. DORBIN, New Britain, Conn.—*Paper Box.*—August 17, 1869.

Claim.—As a new article of manufacture, the paper box, with its sides *a a'* and ends *a a* made from one piece, and the bottom *c* and top *b* of another, and held by the upright or extra side *c'*, arranged and connected as shown and described.

93,810.—R. W. CROUSE, Westminster, Md.—*Pump.*—August 17, 1869.

Claim.—A pump-plunger, constructed of the guide T, valve I, ring R, disk M, yoke *n*, and standard *o o'*, combined and arranged as herein described, and for the purposes set forth.

93,811.—HORACE DANIELS, Pawtucket, R. I.—*Mechanism for Operating the Nippers of Combing Machines.*—August 17, 1869.

Claim.—In combination with a pair of nippers that move in the arc of a circle, for taking and carrying the material to be combed from the feeding-point to the carrying or working cylinder, the tappet, cam, and spring, all constructed and operating to open and close the hinged jaw of the pair, substantially in the manner herein described and represented.

93,812.—DAVID C. DELINGER, Decatur, Ohio.—*Washing-Machine.*—August 17, 1869.

Claim.—The arrangement and combination of the two vessels A V, frame I, standard H, lever C, rod F, piston R, rod B, movable washer T, and fixed washer I', each constructed as described and shown, with the bent pipe M extending under said vessels A V, from the bottom of one to that of the other, and provided at its lower angle with a stopper K, the several parts being constructed to operate in connection with each other, and combined with the wringer herein described, as and for the purposes specified.

93,813.—JOHN B. FASSETT, Irasburgh, Vt.—*Horse-Power.*—August 17, 1869.

Claim.—The combination of platform B, friction-wheel D, constructed and placed as set forth, gears K and K', driving or crank wheel E, with crank and arm, as shown, and friction-rollers *p p*, the whole arranged and operating as an improved horse-power, substantially as described.

93,814.—FRANK T. FERGUSON, Boston, Mass.—*Shoe.*—August 17, 1869.

Claim.—As a new article of manufacture, the described imitation of an English over-gaiter and shoe, made in the manner set forth.

93,815.—CHESTER D. FLYNT, Philadelphia, Pa.—*Spring-Cushion.*—August 17, 1869.

Claim.—A spring seat or support, of cushion form, composed of interwoven steel strips *d*, which are passed over the rounded rim, and fastened to the lower edge of the frame *a*, so as to leave a space between them and the upper rounded edge, with or without the auxiliary springs *f*, the whole being constructed and arranged as described.

93,816.—EUGENE FONTAINE, Fort Wayne, Ind.—*Electric Fire and Burglar Alarm.*—August 17, 1869.

Claim.—1. So weighting and arranging the bell-hammer G H, that it may drop away from the bell C after each stroke, by its own weight, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the keys N, having cross-heads *n'*, formed upon the inner ends of their stems, metal bar O, non-conducting bar Q, and springs P, with the wires of the circuit, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the thermometer-bulb and stem R S, platinum wires U and V, sliding-bar X, having a screw-thread and scale formed upon its lower end, and swiveled nut Y, with each other, and with the circuit of an electric alarm, substantially as herein shown and described, and for the purpose set forth.

93,817.—LEONARD D. GALE, Washington, D. C., and ISAAC M. GATTMAN, New York, N. Y.—*Manufacture of Sugar of Lead and Acetic Acid.*—August 17, 1869.

Claim.—1. The manufacture of sugar of lead, by the process of corroding the metal by vapors of vinegar mixed with atmospheric air, substantially as described.

2. Applying the surplus heat from the steam of vinegar, and the chemical action of the acid on the lead, for concentrating the solution of sugar of lead, and for other purposes.

3. Concentrating the vapors of malt or whisky-vinegar by means of common salt, substantially as described.

4. Bleaching the solutions of sugar of lead by means of sulphureted hydrogen, substantially in the manner herein set forth.

5. Acidifying the basic solution of sugar of lead, substantially in the manner herein described.

6. Draining and drying sugar of lead, by centrifugal action, substantially as described, as an improvement on the mode now used of drying on shelves.

7. The use of the double trumpet-blowing pipes or their equivalent, for mixing the vinegar-vapors with air, substantially as described.

8. Washing down the corroded lead by means of the rotary sprinklers, or their equivalents, as herein set forth.

9. Generating acetic acid, free from pyroligneous odor and color, by simple distillation of acetate of lime with sulphuric acid, substantially as herein described.

93,818.—W. L. GORDON, Dalton, Ga.—*Churn.*—August 17, 1869.

Claim.—The shaft B, provided with the balance-wheel *b*, and combined with the cross-head *c* and treadle *e*, substantially in the manner described.

93,819.—J. DURELL GREENE, Cambridge, Mass.—*Life-Preserving Mattress.*—August 17, 1869.

Claim.—A life-preserving mattress, having a construction substantially as described.

93,820.—CHARLES A. GREGORY, Stratford, Conn., assignor to himself and ALLEN GREGORY, same place.—*Fruit-Jar.*—August 17, 1869

Claim.—The combination of the auxiliary head E with the principal head or cover B, united together so as to be held in position, substantially in the manner herein set forth.

93,821.—LUTHER W. HARWOOD, Troy, N. Y.—*Base-Burning Stove.*—August 17, 1869.

Claim.—1. The construction of the hollow-base B of fuel-reservoir A with an upper side, G, connected to and projecting from the body or cylinder of the reservoir near its base, and with one or more air-pipe pockets and openings, D, substantially as before set forth, for the purpose described.

2. The employment of one or more distinct air-pipes, D, when attached to the aforesaid-constructed hollow base B of reservoir A of base-burning stoves, and conducting hot air therefrom, in a distinct current or currents, without contact with or surrounding the body of the fuel-reservoir A above its hollow base B, substantially as described.

3. The combination and arrangement of one or more distinct air-conducting pipes, D, with the aforesaid constructed hollow base B of fuel-reservoir A, combustion-chamber E, and fire-pot C, of base-burning stoves, arranged and operating separately from that part of the fuel-reservoir above its base B, substantially as and for the purpose described.

4. The enlargement of the top part of the air-conducting pipe or pipes D, or equivalent part K, in the top plate F, where connecting therewith, in combination with the perforated guard-plate J thereon, substantially as and for the purpose described.

93,822.—B. B HOTCHKISS, New York, N. Y.—*Breech-Loading Fire-Arm.*—August 17, 1869.

Claim.—1. The means herein described for cocking the piece C, in combination with the single compound movement of the piece B, as and for the purposes herein described.

2. The within-described arrangement of the recesses n n^1 n^2, and of the half-cock notch n^3, relatively to each other and to the bolt B, rear part C, and the internal projection c^2, as and for the purposes herein set forth.

93,823.—Samuel D. Hovey, Brooklyn, N. Y.—*Rubber-Eraser.*—August 17, 1869.

Claim.—A pocket-eraser, consisting of the case A, with the rubber R, arranged to slide therein, substantially as described, as a new article of manufacture.

93,824.—William Humphreys, Waterford, N. Y.—*Compound Tool for Water and Gas Pipes.*—August 17, 1869.

Claim.—A combined drill, reamer, and tap, of the form and construction herein set forth.

93,825.—Israel Kinney, Woodstock, Canada.—*Carriage-Seat.*—August 17. 1869.

Claim.—In the first place, making the sides and back of the seat of one piece of cast metal; second, making the curtain in the same manner and of the same materials as the sides and back, this curtain being in one piece with the seat, as desired.

93,826.—Thomas Lovelidge and John Grindrod, Philadelphia, Pa.—*Automatic Boiler-Feeding Apparatus.*—August 17, 1869.

Claim.—1. The float G, arranged in the vessel A, interposed between a steam-boiler and water-reservoir, and communicating with the steam and water spaces of the boiler, substantially as described.

2. The combination, substantially as herein described, of the float-rod i, lever h, connecting-rod k, and valve H.

3. The valve-casings D and D′, each having seats adapted for the reception of two valves, l and l', arranged substantially in the manner described.

4. The valves D D′, arranged within the reservoir A, and operated from a single rod, H, substantially as specified.

5. The arrangement, in respect to the reservoir A, and its valves D and D′, of the pipes B, C, and F, and the branch F′, substantially as set forth.

93,827.—Addison Moe, Plainfield, N. J.—*Churn.*—August 17, 1869.

Claim.—The splash-catcher n, and arms o, formed with slanting ends, and revolved with and by the spindle d, in combination with the cap l, and wings m, as and for the purposes set forth.

93,828.—Cyrus T. Moore, Gilmanton, N. H.—*Dumping-Wagon.*—August 17, 1869.

Claim.—1. The arrangement and combination of the chains h h, the grooved wheels g g, the arms M M, the shaft K, and the hand-lever L, applied to the wagon-body A, and its doors C D.

2. The arrangement and combination of the middle bar B with the wagon-body A, its doors C D, and the mechanism, as described, for raising the said doors.

3. The combination of the latching and locking mechanism, as specified, with the wagon-body, its doors, and the mechanism, as explained, for raising the said doors.

93,829.—Daniel B. Neal, Mount Gilead, Ohio.—*Horse Hay-Rake.*—August 17, 1869.

Claim.—1. The slides S S looped to the rake-head R, as described, and serving to raise and lower it, in the manner specified.

2. The combination and arrangement of the foot-board B, levers L, hung in stirrups A, with the slotted slides S, in the manner and for the purpose set forth.

3. The combination of the thills T, posts P, and mortised cap C, with the slides S, in the manner and for the purpose described.

4. The latching-lever l, with its bolts m n, in combination with caps C and slides S, all constructed, arranged, and operating as specified.

93,830.—Solomon Nill and Daniel Nill, Covington, Ohio.—*Tile-Machine.*—August 17, 1869.

Claim.—1. The rake q, operated by shaft r, and provided with cross-bar o, in combination with springs b b, all arranged for the purpose of cleaning the meshes of the screen h, substantially as described.

2. The arrangement described of cams e k, on shaft a, for operating follower P and plunger W, substantially in the manner herein set forth.

93,831.—Charles E. Palmer, Boston, Mass.—*Scissors-Sharpener.*—August 17, 1869.

Claim.—In combination with the rotary grinder-wheel, the inclined guide h, and its lip i, substantially as described.

93,832.—Alfred S. Patterson, Westfield, N. Y.—*Burial-Case.*—August 17, 1869; antedated August 7, 1869.

Claim.—1. A metallic burial-case, composed of a series of sections, a, connected together by lock-joints, formed of two tongues, b b, and a sleeve, c, the latter being either separate or detached, or formed by a proper curvature of one of the tongues, and used in connection with a suitable solder or cement, substantially as described.

2. The securing of the lining-fabric h g within the burial-case by means of the plates f f', fastened, by screws or otherwise, to the upper parts of the inner surfaces of the sections a, substantially as set forth.

3. The rebate k, in the upper parts of the inner surfaces of the sections a, in combination with the plates f f' and the pendent cleat l, to admit of the cover or top being fitted air-tight on the case.

93,833.—Adam Purvis, Louisville, Ky.—*Ice-Velocipede.*—August 17, 1869.

Claim.—I. The crank-shaft N, with its arm S, gum spring T, screw U, cranks O O, and hollow axles P P.

2. The levers V V, pitmen W W, handles z z, cranks Q, cranks O, with hollow axles P, crank-shaft N, with arm S, spring T, screw U, and nut, all arranged substantially as herein described, and operated by hand, in combination with each other, with the body of the sleigh, and with the drive-wheels, as set forth.

3. In combination with the parts named in the last claim, the clutches J and fastening-nuts, as set forth.

93,834.—William S. Reyburn and F. J. Martin, Philadelphia, Pa.—*Machine for Covering Lightning-Rods with Sheet-Metal.*—August 17, 1869.

Claim.—1. The die a, provided with the orifice a', and the slot a'', in combination with the tapering-channel a''', constructed and operating substantially as described.

2. The die c, provided with the bent horns c', c^5, and the subsidiary prong c''', arranged and operating substantially as described.

3. The die d, in combination with the subsidiary prong d'' and the spring d^4, as and for the purpose set forth.

4. The combination of the dies a, b, c, and d, arranged and operating as explained.

93,835.—Jean Elie Richard, Columbia, S. C.—*Apparatus for Printing Photographic Vignettes.*—August 17, 1869.

Claim.—1. The box C, for inclosing and protecting the within-described apparatus, provided with tubes B and D, for the transmission of light, and with slides B′ D′, as and for the purpose set forth.

2. The combination of an apparatus for printing photographs, with a clock, when the same mechanism operates both the clock and the printing-apparatus, substantially as described.

3. The combination of the slotted plate c'''' with the tongue c'', provided with the pivot c and wheel c''', all arranged and operating in the manner set forth.

4. The combination of the lever e, furnished with the slot e'', with the serrated lever e', provided with the sliding-stud e''', and spring-plate x, arranged and operating substantially as described.

5. The combination of the levers *e e'*, connecting-rods *h h'*, annular frame *a'*, all arranged and operating as explained.

6. The annular frame *a'*, provided with the soekets *a''* and button *a'''*, snbstantially as described.

7. The combination of the curtain A with the wings *b*, as and for the purpose speeified.

8. The combination of the seale-beam *k*, eounter-weight *i*, annular frame *a*, and connecting-rods *h h'*, all arranged and operating snbstantially as deseribed.

9. The spring-plate *m*, provided with the prongs *m m'*, in combination with the grooved standard *l'* and box C, as and for the purpose specified.

93,836.—John C. Richardson, Newark, N. J., assignor to himself and James H. Prentice, Brooklyn, N. Y.—*Machine for Pouncing Hats.*—August 17, 1869; antedated Angnst 5, 1869.

Claim.—The wheels M and N, revolved in opposite directions, and acting in positions opposite each other, as shown, in eombination with the feed-rolls C D, all arranged for joint operation as and for the pnrpose herein set forth.

93,837.—William O. Robbins, New York, N. Y., assignor to himself and Charles W. Stafford, same place.—*Wood-Pavement.*—August 17, 1869.

Claim.—The dovetailed flanged base, receiving the paving-bloeks, and forming a section that is snpported by the sills or sleepers *a*, and kept apart, the one section from the other, by the flanged base, as and for the purposes set forth.

93,838.—A. P. Routt, Liberty Mills, Va.—*Combined Seeder and Hay-Rake.*—August 17, 1869.

Claim.—A combined seeding-machine and horse hay-rake, substantially as described—that is to say, a machine having rake-teeth *b b*, attached by means of the strips *a a* and the metallic band *h*, a seeder, B, and the distributing-apparatus, consisting of the corrugated rim *c*, spring *d*, roller c^2, rod c^1, lever *e*, and catch *e''*, when said parts are so constructed and arranged that the teeth *b b* may be used to scratch in the grain sown by the seeder, or may be used independently of the seeder-apparatus, for the purpose of raking hay.

93,839.—Thomas Scanlan, Birmingham, Pa.—*Glass-House Pot.*—August 17, 1869.

Claim.—In a pot or crucible for making glass, having the body A made of fire-clay and provided with a eoncave roof, I, and mouth *e*, of usual form and construetion, the additional mouth *e'*, formed immediately under the mouth *e*, and above the middle line of the side-wall, substantially as described.

93,840.—John J. Schillinger, New York, N. Y.—*Cooling and Ventilating Apparatus.*—August 17, 1869.

Claim.—The apparatns for the purpose described, consisting of tnbes C C, projecting into chamber B, and eommnnicating with chamber D, in conneetion with a coil, J, for running-water, discharge-pipe E, and inelosing-chamber F, whereby the blast enters chamber B, passes through tnbes C C, in contact with water trickling through them, thenee throngh the water in chamber D, into the exit E, a large cooling-snrface being thereby gained, substantially as and for the purpose deseribed.

93,841.—Francis H. Smith, Baltimore, Md., assignor to Francis H. Smith, Jr., New York City.—*Process of Preserving Vegetables.*—August 17, 1869.

Claim.—1. The process of preparing vegetables, substantially as herein described, and for the purposes specified.

2. The artiele of prepared potato, when prepared by my improved proeess, as described herein.

3. The article of prepared sweet potato, when prepared by my improved process, as described herein.

4. The artiele of prepared onion, when prepared by my improved process, as described herein.

93,842.—Carlos Stebbins, Pike, N. Y.—*Treadle.*—August 17, 1869.

Claim.—A hanging and swinging treadle, arranged and operating snbstantially in the manner herein specified and set forth.

93,843.—Jacob Straus, St. Louis, Mo.—*Side-Saddle Tree.*—August 17, 1869.

Claim.—As an artiele of manufaetnre, a side-saddle tree, formed with a complete seat, the eontinuous rail B, C C', D, and the extension spring D', the whole covered with hide or other eqnivalent material, and shaped, arranged, and operating substantially as deseribed.

93,844.—Chester W. Sykes, Suffield, Conn.—*Carving-Dish.*—August 17, 1869; antedated August 13, 1869.

Claim.—The points or other projeeting snrfaees upon the inner surface of a carving-dish, to retain, in the desired position, meats and other artieles while being earved.

93,845.—James C. Wade, Boston, Mass.—*Shuttle for Sewing-Machine.*—Augnst 17, 1869.

Claim.—1. In a sewing-machine shuttle, adapted for having the tension of its thread adjusted through an opening in its upper side, the serew-threaded spindle A, having no endwise movement, the thread of whieh actnates and controls the pressnre of a spring thread-brake, substantially as described.

2. The combination, with a shuttle, of the grooved and threaded spindle A, and its detaining-screw F and spring B, arranged and applied snbstantially as shown and described, and so that the serew-stock shall neither advanee nor reeede dnring its revoln-tion.

3. The eombination, substantially as deseribed, of a swinging tension-spring, B, with a fulerum which is a screw-thread, so that the fulerumed end shall be positively eonfined between the threads of the serew, and be free to turn thereon, while the adjustment of the screw shall vary the pressure of the free end of the spring against the wall of the shuttle.

93,846.—George W. Walker, Lowell, Mass.—*Boot and Shoe.*—August 17, 1869.

Claim.—The employment of one or more thicknesses of textile fabric on the inner surface of a leather-board, or other similar inner sole of a sewed boot or shoe, in the manner and for the pnrpose set forth.

93,847.—Alonzo Whitcomb, Worcester, Mass.—*Machine for Planing Metal.*—August 17, 1869.

Claim.—The friction-clutch, consisting of the parts E E and the lever *l*, with the spring *h*, constructed and arranged to operate substantially as deseribed.

93,848.—Frederick Wittram, San Franeiseo, Cal.—*Screw-Propeller.*—August 17, 1869.

Claim.—The propeller A, when constructed in two or more sections, and so arranged, in connection with the bolt *e* or its equivalent, that the seetions can be secured toge:her npon the shaft *d*, forming a complete whole, or in a line with each other, substantially as described, for the purpose of decreasing the area of resistance to the water, as set forth.

93,849.—Elizur Wright, Medford, Mass.—*Computing-Apparatus.*—August 17, 1869.

Claim.—1. In combination with suitable pointing-meehanism, two cylinders or disks, on the same shaft, and operated by the same driver, one being driven by frictional contact with the other, and both having logarithmic divisions, marked upon coiled or helical lines drawn npon their surfaces, substantially as shown and deseribed.

2. In combination with cylinders, so arranged, lined, and divided, the stationary bar *g*, and the pointer-slides *n o*, substantially as shown and described.

3. In eombination with the cylinders, both operated from the same common driver, devices for effecting the rotation of both together, or of only one, at option, substantially as shown and described.

93,850.—Robert K. Andrews, South Valley, N. Y.—*Railway-Car Coupling.*—August 17, 1869.

Claim.—1. The draught-bolt B, constructed as deseribed, with a cut-out and beveled center, and pro

vided with guides *a a*, substantially as and for the purposes herein set forth.

2. The combination of the draught-bolt B, guides *a a*, bumper A, bale D, lever E, and spring C, all constructed as described, and arranged to operate substantially as and for the purposes herein set forth.

93,851.—Francis Armstrong, Pittsburgh, Pa.—*Device for Relieving Steam-Generators of Foreign Substances.*—August 17, 1869.

Claim.—1. The construction and arrangement of the tubes P and *c*, whereby to produce a vortex, substantially as herein set forth.

2. The arrangement of the said tubes with the stop-cock A, the mud-drum, and the boiler-flues, as described.

93,852.—G. W. Baird, Engineer Corps, United States Navy.—*Apparatus for Aerating and Cooling Distilled Water.*—August 17, 1869.

Claim.—1. The apparatus herein described, for mixing air with condensible vapors, consisting of the pipe A, in combination with the nozzle B, and the device to adjust the same, as substantially set forth, and for the purpose specified.

2. The fluted plug P or disk, in combination with the nozzle D and bell-mouthed pipe B, as described.

93,853.—Ephraim Ball, Jr., Canton, Ohio.—*Plow.*—August 17, 1869.

Claim.—1. So constructing a metal plow-beam as that it is made the basis of attachment for all the other parts of the plow, and that these parts, when so attached, are independent of each other, substantially as herein set forth.

2. The plow-beam A, constructed as described, and provided with flanges *a* and *b*, shoulder or offset *c*, raised surface or shoulder *f*, curved slot *m*, and projections *n n*, all substantially as and for the purposes herein set forth.

93,854.—John S. Brooks, Rochester, N. Y.—*Hot-Water Boiler for Stove.*—August 17, 1869.

Claim.—A boiler, provided with a perforated ear, lug, or hook-hinge, in such a manner that it can be attached to the back part of the top of a stove, for heating water, or can be easily detached and used on the front of the stove for a ham-boiler, or other culinary use, as shown, and for the purposes specified.

93,855.—William Brown, St. Louis, Mo.—*Machine for Making Barrels.*—August 17, 1869.

Claim.—1. The shaft C^4, arranged with a sliding gear-wheel, C^3, to rotate the ring C^1, when the latter is in yokes C, and arranged for a simultaneous movement upon tables B B, substantially as set forth.

2. The arrangement of the shaft H, operating the bar G, bearings F, and arbors E, the latter adapted to carry a cutter-disk, substantially as set forth.

93,856.—Arthur W. Browne, Brooklyn, E. D., N. Y., assignor to himself and Andrew Breasted, New York City.—*Safety-Attachment for Pockets.*—August 17, 1869.

Claim.—The plate *a* and spring *b*, united by the hinge *c*, in combination with the slide *d* and latch *e*, substantially as and for the purposes set forth; and, in combination with the foregoing, the dog *o*, applied in the manner and for the purposes set forth.

93,857.—James Abercrombie Burden, Troy, N. Y.—*Apparatus for the Manufacture of Pig-Blooms from Cast Iron.*—August 17, 1869.

Claim.—1. The combination of the spout for the molten metal, the traversing series of molds, and the apparatus for delivering the mixing material in regulated quantities, substantially as before set forth.

2. The combination of the spout for delivering the molten metal, the traversing series of molds, the apparatus for delivering the mixing material in regulated quantities, and a device for varying the relative speed of the said delivery apparatus, substantially as before set forth.

93,858.—William Campbell, Clinton, Iowa.—*Railway-Car Axle-Box.*—August 17, 1869.

Claim.—The cover, having the teat cast on it, in combination with the lug cast on the box, when all these parts are constructed, arranged, and operate as shown and described.

93,859.—Judd M. Cobb, Beloit, Wis.—*Manufacture of Ready-Prepared Roofing.*—August 17, 1869.

Claim.—1. The construction and arrangement of the machine, as herein described, by which cement and sand or gravel may be applied to a roofing-paper or material.

2. The combination and arrangement of the vat G, cylinders A B, pressure-rollers C D, and drum or roller F, with the sand or gravel box H, in the manner and for the purpose herein described.

3. The combination of the sand or gravel box H with the cam *a*, in the manner and for the purpose herein described.

4. As a new article of manufacture, "ready-made prepared roofing," when constructed in the manner and for the purpose herein described.

5. The combination of the machine for coating with cement and graveling or sanding dry or tarred paper or board, with a machine for tarring paper-board or roofing-material, so that the tarring, coating, and graveling or sanding process can be done and effected by one continuous operation, as herein described.

93,860.—James M. Crull, Noblesville, Ind.—*Fence.*—August 17, 1869.

Claim.—1. The metal cap B, constructed as described, for the purpose of securing the fence-panels A A, whether said cap is perforated or not, substantially as herein set forth.

2. The combination of the fence-panels A A and caps B B, constructed as described, and for the purposes specified.

93,861.—Theodore F. Deniston, George C. Prosser, and Johnson J. Deniston, Torrey, N. Y, —*Cider and Wine Mill.*—August 17, 1869.

Claim.—The cider and wine mill herein described, consisting of the frame *a b c d e*, hopper *x*, with its feeder *m*, and grinding-cylinder *k*, endless apron *q*, crushing-rollers 2 2, the upper one having a bearing adjustable by set-screw *i*, and pulley 1, adjusted by nut and screw *v w*, all constructed, arranged, and operated as and for the purposes herein set forth.

93,862.—Jacob J. Diehl, York, Pa.—*Kitchen-Utensil.*—August 17, 1869.

Claim.—1. The detachable cutter D, having a shank, *a*, which passes through the handle A, and is secured by a nut, said cutter being prevented from lateral movement by fitting into a space between the teeth of plate C, as herein described.

2. The kitchen-implement herein described, consisting of the vegetable-masher B, with handle A, the toothed metallic plate or pounder C, and the detachable cutter D, all constructed and arranged as set forth.

93,863.—Henry Disston and Jonathan Marsden, Philadelphia, Pa., assignors to Henry Disston.—*Casting Steel Ingots.*—August 17, 1869.

Claim.—1. The method of contracting steel ingots by means of a wedge or wedges, applied during the cooling of the ingot, between the latter and the mold, all substantially as set forth.

2. The within-described wedges, made flat on one side, and rounding to comparatively sharp edges on the opposite side, and tapering in width and thickness, when the said wedges are applied to a mold for casting steel ingots, all substantially as specified.

93,864.—J. J. Doepken, Lima, Ohio.—*Meat-Safe for Butchers and Others.*—August 17, 1869.

Claim.—The case A, with compartments C D, separated by double sheet-metal walls B B, and provided with ice-drawers G H, having double bottoms *a b*, and rollers I J, constructed and arranged as herein described.

93,865.—John Otto Donner, Jersey City, N. J.—*Mode of Treating Bone-Black for Filtering Sirups, &c.*—August 17, 1869.

Claim.—The treatment of bone-black for augmenting its decolorizing power or property by subjecting it to the action of, or saturating it with, chlorine-gas, or exposing it to water charged with said gas, substantially as specified.

93,866.—James Dugan, New York, N. Y.—*Bottle-Lock.*—August 17, 1869; antedated August 12, 1869.

Claim.—The cap B, opening vertically, and provided with lugs *b* and flange *c*, whereby it may be secured to the neck of a bottle by an independent lock, to inclose the stopper, and prevent access thereto, as shown and described.

93,867.—John East, Romeo, Mich.—*Machine for Dressing Millstones.*—August 17, 1869.

Claim.—1. The tilting-arms H, moving back and forth on the bar G, and provided with the curved arms E, in combination with the shifting-lever F, substantially as specified.

2. The rubber spring M, by means of which the strokes of the picks are lightened, or the picks raised clear of the stones, substantially as set forth.

3. The shaft C, provided with the disk V, cams D, and moving endwise in its bearings, substantially as described.

4. The movable bearings *e*, coiled spring *d*, and regulating thumb-screw *b*, when used substantially as specified.

5. The movable bearings R, placed in the sides B, when used to regulate the tilting-arms H, for either long or short picks, substantially as described.

6. The slide P, when used to regulate the cutting-edges of the picks, substantially as set forth.

7. The levers T and X, arm U, and spring W, when used to operate the toothed bar S, substantially as specified.

8. The stirrup Z, regulated by the thumb-screw *r*, when used to control the speed of the frame, substantially as described.

9. The toothed bar S, when used to operate the wheel Y, substantially as described.

10. The double-acting dog *k*, spring *l*, and wheel Y, when all are used to propel the frame forward or back, substantially as set forth.

11. The screw shaft *w*, provided with the ratchet *t* and support *y*, when used substantially as described.

93,868.—Primus Emerson, Carondelet, Mo.—*Marine Railway.*—Augnst 17, 1869.

Claim.—1. The chains D, disks E, shaft *e*, screw-wheel H, and worm I, operating substantially as and for the purposes set forth.

2. The bevel-wheel K and pinions L L′, operated, in combination with the power-shaft M, by a clutch-device, *m m′*, substantially as and for the purposes set forth.

3. The attachment of the draught-chains F to the main chains D, and their connection with the cradle, in such manner as to equalize the draught on the cradle, substantially as set forth.

4. The slides C, arranged on the cradles, substantially as and for the purpose set forth.

5. The cradles B, supported upon rollers *b*, and guided by rollers b^1, in combination with the draught-chains F and equalizing-sheaves G, substantially as and for the purpose set forth.

93,869.—John H. Foster, Charlottesville, Va.—*Cultivator-Hoe.*—August 17, 1869.

Claim.—A convertible hoe and fork, constructed with the independent tine-pieces T T^1, &c., the slotted head H′, the block B, and the wedges *w*, all combined to operate substantially in the manner and for the purposes set forth.

93,870.—George Frauenberger, Rochester, N. Y.—*Manufacture of Oyster-Kegs.*—August 17, 1869.

Claim.—A keg made from slabs, shaped, grooved, steamed, bent, and fitted with heads and hoops, substantially as herein shown and described, as a new article of manufacture.

93,871.—Joseph Funk, Tompkinsville, N. Y.—*Lamp.*—August 17, 1869.

Claim.—1. The arrangement within the separated oil-chamber B, of the tubular float C, suspended from rod *d*, which carries a valve, *f*, playing in a chamber, *g*, and operating relatively to chambers *h i*, the parts being combined substantially and for the purpose as described.

2. The arrangement of notches or grooves in the valve and its stem, in combination with the bridges *e*, float C, and channel *h*, substantially as set forth.

93,872.—Charles Gates, Burlington, Ind., assignor to George Burkhardt, Joseph Shiffer, and James W. Geeen.—*Dumping-Car.*—August 17, 1869.

Claim.—The dumping-car herein described, when the same is constructed, in its said several parts, as aforesaid, with the jointed platform B B, the levers G G′ and G″ G‴, the rack M M′, and the pinion N, and the bevel-wheels N′ and P, and used for the purpose and in the way substantially as herein set forth.

93,873.—Adolphe Gaudron, Detroit, Mich.—*Sawing-Machine.*—August 17, 1869.

Claim.—1. The apparatus by which the saws are raised when the cutting is done, constructed and operating as herein set forth.

2. The connecting-rod G, in combination with the saws H H′, their frames J J′, the different pieces on the plates P and L, connecting-rod T, the bell-crank U, the bars V, with their springs X, all constructed substantially as herein set forth.

3. The dog *a*, in combination with the pieces *c d* and *e f g h*, constructed in the manner herein shown and described.

93,874.—Edward Green, Wakefield, England. *Boiler-Tube Scraping Device.*—August 17, 1869; patented in England August 25, 1866.

Claim.—1. The clutch-box *c*, bevel pinions *d e*, bevel-wheel *f*, constructed and arranged to operate as described.

2. The worm-wheel *i*, mounted loosely on shaft of pulley *k*, in combination with said pulley, set-screws *m*, and slots *n*, substantially as described.

3. The arms *u*, in combination with the knock-over lever *w*, and clutch-box *c*, substantially as described.

4. The slot *v* and set-screw, in combination with the arms *u u*, substantially as described.

5. The combination of a reversing or reciprocating motion, of two or more pulleys, set-screws, and slots, and disconnecting-wheels, substantially as hereinbefore described, and represented in the accompanying drawings.

93,875.—John Gregory, Lisbon, Portugal.—*Railway Chair and Sleeper.*—August 17, 1869; patented in England October 28, 1868.

Claim.—1. The method of fastening or securing the rails to the sleepers or chairs, by driving wooden wedges of any suitable form beneath the rails, in such manner that they form an elastic support for the rail, and bind and hold together the rails, sleepers, and other parts, or rails, chairs, and other parts, forming the permanent way, as and for the purpose described.

2. The railway-sleeper, or sleeper and chair combined, constructed substantially as herein shown and described.

3. In combination with the sleeper or sleepers and chairs, as constructed, the double-hooked dogs *d*, operating substantially as set forth.

93,876.—Stephen G. Gregory, Albany, N. Y.—*Artificial Leg.*—August 17, 1869.

Claim.—1. The knee-joint *s*, in combination with the instep-bearing *m e*, toe-joint *g*, toe *k*, strap P, and pulley *a*, constructed and arranged substantially as and for the purpose set forth.

2. Also, the elastic strap P, in combination with the joint *s*, and instep-bearing *m e*, as and for the purpose herein described.

3. Also, the said elastic strap P, in combination with the joint *s*, cushions *e f*, and joint *m c*, as and for the purpose herein described.

4. Also, the elastic strap P, in combination with

the pulley *a* and the holding-points *b d*, substantially as described, for united action.

93,877.—D. F. Haàsz, Philadelphia, Pa.—*Fire-Ladder.*—August 17, 1869.

Claim.—1. A fire-ladder, consisting of sets of bars B C D, &c., crossed and connected together, substantially as described, arranged to be quickly elevated or depressed, and to be securely braced when elevated, and having a series of short ladders arranged in a line with each other, constructed substantially as specified, and reaching entirely to the top of the structure, with intermediate laudings or platforms *p*.

2. The braces R, in combination with the ratchets and pawls, substantially as and for the purpose described.

3. The platforms *p*, attached to the cross-rods *f*, and supported in a horizontal position by the ladders upon one side, and by bracing-straps *r r* upon the opposite side, all substantially as herein set forth.

93,878.—William Horatio Harfield, London, England.—*Windlass.*—August 17, 1869; patented in England, February 18, 1867.

Claim.—The combination and arrangement of the compressor, purchase-wheel B, nut *g*, and screw *h*, to form a windlass and brake, and by means of which the chain-wheel can be employed independently of the other, substantially as described.

93,879.—Samuel Harper, Lawrence, Kan.—*Churn.*—August 17, 1869.

Claim.—1. The vessels T and 6, or equivalent means described, in combination with the hollow shafts C and H, and connecting-pipe U, constructed and arranged as specified.

2. In combination with the above, the pipes E E, and beaters F F, arranged and operating as described.

93,880.—Orrin L. Hart, Millville, Wis.—*Washing-Machine.*—August 17, 1869.

Claim.—A washing-machine, having tub A, beaters B, wedges *a*, and bars *c*, adapted to the slotted sectional cover, arms *e*, shaft G, staples *n*, levers R, and treadles *s*, constructed, arranged, and operating substantially as specified.

93,881.—H. C. Heckendorn, Reading, Pa.—*Sewing-Machine.*—August 17, 1869.

Claim.—1. The shuttle driving arm C, constructed as described, having a serpentine slot, *c' c'*, and a feed-operating eccentric, E, in combination with the shuttle-driver G, pitman *b'*, needle-carrying arm D, having a serpentine slot, *d' d'*, face-cam B, on shaft *a'*, feeder L, and spring *g'*, all constructed, arranged, and operating substantially as specified.

2. The combination, with the needle-carrying-arm, of the adjustable centers V V, secured to the shaft S, substantially as specified.

93,882.—Horace L. Hervey, Philadelphia, Pa.—*Reflecting Lamp-Chimney.*—August 17, 1869.

Claim.—A reflecting lamp-chimney, composed of metal and glass, one whole side or less made of metal, which serves as the reflector, and secured to the glass by means of beading *d* and grooved catches *e*, or lugs *b*, or hooks *c*, substantially in the manner and for the purposes described.

93,883.—Coleman Hicks, Lancaster, Ky.—*Weather-Strip.*—August 17, 1869.

Claim.—1. The described weather-strip, operated by the spring I, and adjusted by means of the catch-spring *b*, with its pin *c*, all constructed, arranged, and in combination, substantially as and for the purpose described.

2. The described weather-strip, spring I, catch-spring *b*, pin *c*, in combination with carpet-sill composed of sections C and C', when all are constructed and arranged substantially as and for the purpose described.

93,884.—William Hodgson, Cincinnati, Ohio.—*Steam-Water-Gauge Indicator for Boilers.*—August 17, 1869.

Claim.—1. The combination of the air-chamber D and pipe J, substantially as described.

2. The combination of the cylinder B and air-chamber D, when connected by the pipe H, substantially as described.

3 The combination of the cylinder C and air-chamber D, when connected by the pipe E, substantially as described.

4. The combination of the cylinders A and B, when connected by the pipe F, substantially as described.

93,885.—Israel Hogeland, Indianapolis, Ind.—*Fruit-Drier.*—August 17, 1869.

Claim.—The combination and arrangement of the rings A and B, arms *c*, buttons *h*, cane strips *v*, and ears *y*, constructed to operate substantially as and for the purposes specified.

93,886.—John W. Hoit, Lebanon, Ill.—*Wash-Boiler.*—August 17, 1869.

Claim.—1. The arrangement of the vessel A, having a rounded diaphragm, B, with perforations *b* therein, and raised guards *b'* thereon, and combined with the tubes C, substantially as set forth.

2. The side-plates E, arranged to form the heating-chambers E' and combined with the tubes C, substantially as and for the purpose set forth.

93,887.—Charles D. House, Lake Village, N. H.—*Fork for Peach-Parers.*—August 17, 1869.

Claim.—The two forks A A, hinged to the spindle B, and pressed toward each other by a spring or springs, *e*, substantially as and for the purpose herein specified.

93,888.—David W. Hughes, Palmyra, Mo.—*Attaching Plow-Colters.*—August 17, 1869.

Claim.—1. Providing the hubs of the colter or wheel B with conical journals *c*, and bearings *b*, as and for the purpose described.

2. In combination with the conical journals *c*, the lock-plate *d*, constructed and operating substantially as described.

3. The hexagonal sleeve *e*, as and for the purpose set forth.

93,889.—William Johnson, Lambertville, N. J.—*Steam-Cylinder-Piston Packing.*—August 17, 1869.

Claim.—The packing-rings O O, having one edge beveled, in combination with the circular spring-plates R R, having corresponding beveled edges, when combined and arranged in the manner substantially as described and set forth.

93,890.—Norris Jones, Centreville, Ind.—*Brick Drain-Tile.*—August 17, 1869.

Claim.—A brick, having a semicircular groove in one side, and formed with concave and convex ends, substantially as described, and for the purposes set forth.

93,891.—Balthasar Kreischer, New York, N. Y.—*Burning-Kiln.*—August 17, 1869.

Claim.—1. The bottom flue B, with its branches *m m*, in combination with a burning-chamber A', of a kiln, and with the upright flue C, top flue E, and dampers *g d*, substantially in the manner shown and described.

2. The openings F F at the top of each burning-chamber, in combination with the top flue E and dampers *o g*, substantially as set forth.

3. The return-flue H, with opening G and dampers *p* in combination with flue M and damper *s*, and with a series of burning-chambers A' A'' A''', substantially as described.

4. The apertures *e* and *r*, in combination with flues C and B, and channels *m*, leading into the burning-chamber of a kiln, to provide for a circulation of cold air through the material in the kiln, substantially as set forth.

5. The arrangements of pipes or channels *h l*, extending through under the bottom of the burning-chamber, and into the ash-pit, to prevent radiation of heat into the ground, and to supply the fire with a current of heated air, substantially as described.

6. The supplementary arch *n* and air-channel *f*, in

combination with the main arch *q* of the fire-place of a kiln, substantially in the manner set forth.

93,892.—JACQUES LAURENT, New York, N. Y. —*Machine for Turning Watch-Cases.*—August 17, 1869.

Claim.—1. The combination of the swinging head-stock B, the mandrel-spring H, roll *f*, and revolving eccentric or cam I, essentially as herein set forth.

2. The combination of the adjustable wedge-shaped or tapering bearing N, the screw L, the worm K, the eccentric I, the screw J, and the roller *f*, with the swinging head-stock B, substantially as specified.

3. The cutters E E, arranged in sockets *i i*, hung or supported on vertical pivots, and made capable of adjustment by screws *r r*, to spread them more or less apart, essentially as described.

93,893.—JOHN LEMMAN, Cincinnati, Ohio.—*Machine for Molding Chair-Backs.*—August 17, 1869.

Claim.—1. The sliding and swiveling cutter-frame A′ B′, and cutter-spindle M N, constructed and operating substantially in the manner described, in combination with the "form" P, for the purpose specified.

2. The coiled spring U, in combination with the projection T of the cutter-frame, when constructed and arranged substantially in the manner and for the purpose explained.

3. The arrangement of the sliding frame R, form P, made adjustable by screws *m m* and slots *m′ m′*, cutter-frame A′ B′, spindle M N, spring U, and projection T, all being constructed and arranged to operate as described.

93,894.—ALEXANDER ÉMILE LETOREY, Rouen, France.—*Machine for Cutting and Reducing Loaf-Sugar.*—August 17, 1869.

Claim.—1. The combination of the horizontally-reciprocating saws J, the circular saw Q, and the reciprocating knife S, for successively reducing the loaf into slabs, sticks, and lumps, substantially as specified.

2. The combination, with the saws J, of the incline guides C and C′ C′, the latter of said guides C C having a sliding or feeding motion given them, to allow of the descent of the loaf to and through between the saws, essentially as described.

3. The combination, with the reciprocating knife S, of the vertical box R, partitioned off into chambers *t*, as specified, and arranged, in relation to the knife, substantially as herein set forth.

4. The combination of the screen M with the reciprocating saws J, the circular saw Q, and the reciprocating knife S, essentially as and for the purposes described.

93,895.—JAMES H. LOGAN, Allegheny, Pa.—*Single Microscope.*—August 17, 1869.

Claim.—A simple microscope, having the base A, standard B, mirror C, attached to the standard by the arm *d*, and capable of being turned by the head D, arm E, having the aperture *e*, nut N, screw-rod M, arm I, lens-holder G, bars *a a*, springs *s s*, and globule-lens *v*, when all said parts, except mirror C, springs *s s*, and lens *v*, are made of wood, and all are constructed, arranged, and combined in the manner substantially as described.

93,896.—SIDNEY S. MARQUES, Mason, Ill.—*Knife for Seeding Stone-Fruit.*—August 17, 1869.

Claim.—The blade C, curved in the middle, and sharpened on each edge, and attached to a handle, substantially as and for the purposes herein set forth.

93,897.—DAVID MATTESON, Pittsfield, Mich.—*Hay-Rack.*—August 17, 1869.

Claim.—The combination of the several parts A, S S, C, *b b*, and *d*, when each is constructed as described, and the whole are united and arranged as specified.

93,898.—RICHARD MORGAN, St. Louis, Mo., assignor to himself and HENRY TIRREL, same place.—*Stone-Sawing Machine.*—August 17, 1869.

Claim.—1. The screw-rods B B1, when they are supported by and work between stationary bearings *b b*^{1}, screw-blocks B^2 B^2, sliding bars C C, shafts E F, and their connecting pinions, when the same are combined and arranged so as to operate substantially as described.

2. The shaft F, when the same is provided with a toothed wheel G, and stationary pulley *f*^{1}, said wheel and pulley being so arranged that by a pawl, *g*, and endless belt M′, the shaft can be made to operate in either direction, the power that is transmitted through intermediate mechanism, from the driving-shaft, when applied to the wheel, lowering the saw-frame, and, when applied to the pulley, elevating the same, substantially as described.

3. The toothed wheel G, pawl *g*, and wheel G^1, when the latter has a slot, *x*, whereby the bearing of the pawl may be adjusted, substantially as described.

4. The saw-frame D, block L, socket-bearing L^1, screw *l*, and pitman K, when the same are so combined and arranged as to operate substantially as described, and for the purpose specified.

93,899.—ANDREW L. NOLF and FRANÇOIS L. A. PIOCHE, San Francisco, Cal.—*Process of Treating Ores with Copper Amalgam by means of Electric Currents.*—August 17, 1869.

Claim.—The simultaneous application of electricity and copper-amalgam, for the decomposition of silver-ores, substantially as and in the manner as herein specified.

93,900.—ALFRED PARAF, New York, N. Y.—*Material for Dyeing and Printing, obtained from Madder.*—August 17, 1869.

Claim.—The new article of manufacture hereinbefore described, and denominated tinctorine.

93,901.—JOHN W. PERRY, Perrysburgh, N. Y.—*Feather-Renovator.*—August 17, 1869.

Claim.—1. The combination, with the fire-place E, of the boilers G and H, arranged substantially as described, and for the purpose set forth.

2. The knees, or partitions *c*, when applied to a feather-renovator, constructed and arranged to operate substantially as described.

3. The feather-renovator herein set forth, having cylinder A, shaft D, blades *h*, fire-place E, boilers G and H, and funnel *v*, constructed and arranged substantially as specified.

93,902.—FREDERICK R. PIKE, New York, N. Y. —*Propelling-Apparatus.*—August 17, 1869.

Claim.—The vessel-propelling apparatus herein described, having connecting-rod A, lever W, cylinders D, plungers E, pistons H, rods F, and gudgeons C, when constructed and arranged to operate substantially as specified.

93,903.—FRANCIS A. PRATT, Hartford, Conn.—*Machine for Planing Metal.*—August 17, 1869.

Claim.—The arrangement of the swinging dog *d* upon the sliding block *g*, in combination with the bed *k′*, stops *e*, pin *f*, cam *a′*, upon the shaft *b*, gear-connection *b′*, and guide-arms *c*, to connect and disconnect the shipper from the bed *k′*, substantially as set forth.

93,904.—THOMAS L. RANKIN, Peru, Ill.—*Refrigerator.*—August 17, 1869.

Claim.—1. Attaching an ice-box to the door of a refrigerator, so as to have it over the top of the chamber, substantially as set forth.

2. In combination with the ice-box G, the trip-plate N, tube H, trough K, and tube L, when used to carry off the waste ice-water, substantially as shown.

3. The frame A, doors B and D, ice-box G, trip-sheet N, tubes H and L, trough K, and chamber C, when all are combined to form a refrigerator, substantially as set forth and described.

93,905.—V. REIFSNIDER, Chicago, Ill.—*Clothes-Pin Holder.*—August 17, 1869.

Claim.—The within-described holder for clothes-pins, consisting of the body A, provided with the slats *b b*, standard or handle C, provided with the slot *c*, lever D, and spring *x*, or its equivalent, all constructed and arranged substantially as and for the purpose specified.

93,906.—Ezra Ripley, Troy, N. Y., assignor to himself and George S. Prindle, Aurora, Ill.—*Tool-Holder.*—August 17, 1869.

Claim.—A tool-stock, to which the handle C is secured by means of the thimbles *a* and *b*, attached to the upper ends of the sections A and B, and fitting over the tapered ends of said handle, when all of the parts are constructed and arranged to operate substantially as herein shown and described.

93,907.—A. E. Roberts, Des Moines, Iowa.—*School-Desk.*—August 17, 1869.

Claim.—1. In combination with a school-desk frame, constructed as described, a pivoted book-case, which forms a desk on its upper surface, and folds inwardly from the pivots to the seat-back, substantially as and for the purposes herein set forth.

2. In combination with an extended frame, A, and a pivoted inwardly-folding book-case and desk, as described, the spring-catches *b b*, or their equivalents, substantially as set forth.

93,908.—Charles Robinson, Boston, Mass.—*Arrow-Gun.*—August 17, 1869.

Claim.—The combination and arrangement of the open-grooved stock A, arrow B, elastic cord C, and elastic band D, substantially as and for the purpose herein specified.

93,909.—John C. Rupp, Newark, Del.—*Railway-Rail Splice.*—August 17, 1869.

Claim.—The tapering side-supports C C, provided with the elongated slots *c c*, by means of which said supports can be driven up or tightened without removing the bolts D, in combination with the base-plate B, having angular flanges *a b* at the sides, all arranged, constructed, and operated in the manner and for the purpose set forth.

93,910.—Nathan C. Russell, Gloversville, N. Y.—*Process of Treating Leather so as to Render it Suitable for the Manufacture of Gloves, &c.*—August 17, 1869.

Claim.—The process, substantially as herein described, of treating bark-tanned lamb or sheep-skin, by means of a compound composed and applied essentially as specified.

93,911.—Charles Searle, Brooklyn, N. Y.—*Apparatus for Removing Axle-Boxes from Carriage-Hubs.*—August 17, 1869.

Claim.—1. The rod or shaft A, provided with the collar *b*, for the purposes herein set forth, and substantially as described.

2. The cross-bar G, provided with the mortise *a*, which serves the purpose of a wrench, to prevent the rod from turning, also as a guide while the screw is being operated, substantially as herein described, and for the purposes set forth.

3. The frame E, in combination with the rod or shaft A and screw-nut, substantially as herein described.

93,912.—D. P. Shaw and J. S. Clark, Elkhart, Ind.—*Washing-Machine.*—August 17, 1869.

Claim.—The buckets E, placed facing each other, in combination with the break-waters F placed between them, the cylinder C, and washing-box A, as set forth.

93,913.—Henry Shaw, Cincinnati, Ohio.—*Grinding-Mill.*—August 17, 1869.

Claim.—An iron grinding-mill, having the projections C and C′ between the grinding and back-plates, for the purpose described.

93,914.—William E. Sheffield, St. Joseph, Mo.—*Hay and Cotton Press.*—August 17, 1869.

Claim.—1. The combination and arrangement of the intermediate nuts M, the screw-shaft I, and the connecting-chains L, with the follower C, and auxiliary nuts P, substantially as before described.

2. The combination and arrangement of the gauging-slides Q, with the follower of a press, for the purpose of ascertaining and regulating the ascent and descent of the follower alike at both ends, substantially as before described.

3. The gauging-slides Q, arranged so as to form the sides of the opening N, in which the follower moves, while, at the same time, they are free to rise and fall with the follower, as before described.

4. The means herein described and represented for determining, automatically, in a press, the weight of the bale, according to its degree of compression, substantially as before described.

5. The gauging-boards Q, provided with scales, for determining both the degree of compression and the weight of the bale, according to any degree of compression, as herein described.

93,915.—Louis Th. Simon, New York, N. Y.—*Velocipede.*—August 17, 1869.

Claim.—1. The shoulder-rest G, arranged in combination with the adjustable foot-pieces *e*, upon rod *c*, so as to form a point of support to enable the rider to apply his full power in propelling the velocipede, as set forth.

2. The hand-lever *h* and cog-wheels *i j k f m n*, and clutch *g*, in combination with the driving-wheel B and crank-axle A, all constructed and operating substantially in the manner shown and described.

93,916.—Louis Th. Simon, New York, N. Y.—*Rocking-Chair Fan.*—August 17, 1869.

Claim.—The single clamp I, supporting the arms H, in combination with the suspended fan D, as applied to the back of the rocking-chair, substantially as and for the purpose described.

93,917.—C. Shaler Smith, Baltimore, Md., assignor to Smith, Latrobe & Co., same place.—*Chord for Bridges.*—August 17, 1869.

Claim.—A chord, for deck and other bridges, composed of a sectional tubular column divided longitudinally by an I-beam, or a beam composed of two or more I-beams united, with which the sections of said tubular column are combined, substantially as and for the purposes set forth.

93,918.—Henry F. Snyder and George S. Snyder, Williamsport, and Antes Snyder, Blairsville, Pa.—*Oil-Tank.*—August 17, 1869.

Claim.—1. The locking-means *m*, in combination with the cap L, attachments *l l′*, casting B, and valve G, and arranged to operate therewith, substantially as and for the purposes herein specified.

2. The tank A, valve G G*, rod E, screw-thread *e*, and stirrup or yoke D, combined and arranged substantially as and for the purposes herein set forth.

3. The hollow interior of the valve G, extended downward, and with it the bearing-point *g*, for the operating-rod E, below the bearing-surface or seat *g*, substantially in the manner and for the purposes herein set forth.

4. The within-described construction and arrangement of the yoke or stirrup D, and casting B, with their attachments, so that those parts may be inserted and removed together, as and for the purposes herein specified.

5. The enlarged head E′ on the rod E, inclosed in the casting H H¹, combined and arranged with the tank A, and valve G G*, to secure the contents still further against improper meddling, substantially in the manner and for the purposes herein set forth.

6. The top cap I, spring J, and loose connection K, constructed and arranged as represented, relatively to the casting H H¹, head E′, rod E, valve G G*, and tank A, for the purposes herein set forth.

93,919.—W. Horace Soper, Baltimore, Md.—*School Desk and Seat.*—August 17, 1869.

Claim.—1. The curved levers *m m*, of the seat D, with grooves divided into sections by the transverse bars *n n n*, to receive the ends of the slats *s s s s*, substantially as described, and for the purpose herein set forth.

2. The combination of the curved seat D with the standards A A, rod *x*, the back B, the top T, and the book-shelf E, as described.

93,920.—John B. Stoddard, Baltimore, Md.—*Ship-Building.*—August 17, 1869.

Claim.—1. The combination of the transverse and longitudinal metal bars C I, extending entirely around the vessel at about right angles to each other, with inner and outer ceiling D E, arranged

respeetively inside and outside thereof, and bolted togcther, substantially as set forth.

2. The combination of the inner and outer eeiling D E, breaking joints, and bolted together as described, with the planking G, secured to the outer ceiling E, without throngh-bolts, and with tarred eanvas or other suitable material impervions to water, F, interposed between the planking and eeiling, all substantially as and for the objects stated.

93,921.—Nesbitt B. Stoops, Philadelphia, Pa., and John J. Sibley, New York, N. Y.—*Sewing-Machine.*—August 17, 1869.

Claim.—1. The combination, with the needle, operated by the heart-shaped cam, of the shuttle, operated by the trammel-mechanism, all constructed substantially as and for the purpose described.

2. The combination, with the plate K, eonnected with the presser-rod, as described, of the needle-bar and thread-eontrolling disks, to relcase the thrcad as the eye of the needle reaches the cloth, as described.

3. The eombination of the shuttle and its trammel-device, the needle, operated by the heart-shaped earrier, and the thread-eontrolling disks, governed as to their time of operation by the presser-rod, when all act together, substantially as described.

93,922.—John A. Straight, Albion, N. Y.—*Boiler-Furnace.*—August 17, 1869.

Claim.—The opening E in the bridge-wall D, in conneetion with the passage G F, constructed and arranged, in relation to the furnace B, substantially as set forth.

93,923.—Victor Amédée Tagant, Mulhouse, France, and Peter Schüler, Bienne, Switzerland.—*"Salt-Stone" for Salting Cattle and other Animals.*—August 17, 1869.

Claim.—The herein-described alolith, composed of the ingredients, in the manner and for the purpose as above set forth.

93,924.—A. M. Todd and J. P. Todd, Des Moines, Iowa.—*Composition-Letter for Signs, &c.*—August 17, 1869.

Claim.—1. The within-deseribed mode of manufacturing letters from earthenware, concrete, or plastie material, substantially as speeified.

2. As a new article of manufacture, letters made of earthenware, conerete, or plastie material, substantially as set forth.

93,925.—Thomas Tompkinson, Philadelphia, Pa.—*Grate.*—August 17, 1869.

Claim.—The hook N, front section of the fixed grate A, and the front of the drop-grate B, made, arranged, and operating substantially in the manner described, and for the purpose speeified.

93,926.—James P. Tostevin, Racine, Wis., assignor to himself and John H. Tenspolde, same place.—*Grain-Separator.*—August 17, 1869.

Claim.—1. Constructing one of the boxes of the crank-shaft with a circular recess *b*, or its equivalent, when provided with a groove *b'*, to introduce a pin *p*, substantially as herein set forth, and for the purposes specified.

2. Also, constructing the eccentric on the fan-shaft of the two plates E and F, one having a shoulder, to receive the strap G, and the other being removable, as desired, in the manner and for the purposes specified.

3. Also, securing the pitman I to the flange H, upon the strap G, by means of a screw, *s*, substantially as shown and for the purposes set forth.

4. Also, constructing the shaking-elbow J L, with a vertical connecting-arm K, as and for the purposes described and specified.

5. Also, the combination of the rod M, the socket *n*, and spring *d*, with the sides of the shoe, in the manner and for the purposes described.

6. Also, the combination of the imperforated plate P with the screen Q, as and for the purposes specified and set forth.

93,927.—Hiram Tucker, Newton, Mass.—*Extension-Chandelier.*—August 17, 1869.

Claim.—In combination with an extension-chandelier, the supporting-springs *d d*, and the gripe or cheek-lever *k*, arranged to operate substantially as described.

93,928.—William Tuttle, Boston, Mass.—*Turn-Out for Street-Railways.*—August 17, 1869.

Claim.—The combination and arrangement of the wheel-tread-lifter G, made as described, with the turn-out and main rail-junction piece D, as explained.

93,929.—Nicholas S. Vedder, Troy, N. Y.—*Cooking-Stove.*—August 17, 1869; antedated July 13, 1869.

Claim.—The arrangement of the partition-plates J and j^2, within the rearward extension H, forming horizontal flues, and in relation to the water-reservoir I, directing the heated air over and under the said plates into the return-flue, substantially as and for the purpose set forth.

93,930.—Amos Westcott, Syracuse, N. Y.—*Shutter-Fastening.*—August 17, 1869.

Claim.—The combination of the lever E, having the projections F G H, when pivoted upon the projection G cast upon the plate A, and spring K, all constructed and arranged to operate substantially as and for the purpose specified.

93,931.—Amos Westcott, Syracuse, N. Y.—*Copy-Holder.*—August 17, 1869.

Claim.—The combination of the base A and the horseshoe-magnet B, arranged as and for the purposes above specified.

93,932.—William Wharton, Jr., Philadelphia, Pa.—*Mechanism for Operating Switches.*—August 17, 1869.

Claim.—1. The slotted lever D, arranged for operating switch-rails, and for being operated by the same, substantially in the manner and for the purpose described.

2. In combination with the said slotted operating-lever, the weighted arms C and C'.

3. The lever D and weighted arms C C', all hung to the pin *b*, and operating together and with the stop *x*, substantially as specified.

4. The fingers *m m*, arranged on the plate B, for the reception of the weighted arms C and C', as set forth.

93,933.—William Wharton, Jr., Philadelphia, Pa.—*Railroad-Switch.*—August 17, 1869.

Claim.—The combination of the switch-rails B and B', with the overlapping guard-rails D and D', when arranged in respect to each other, and to the permanent rails, substantially as and for the purpose set forth.

93,934.—Jacob W. Wheeler, North Urbana, N. Y.—*Shutter-Worker.*—August 17, 1869.

Claim.—The bar D, with an arm, *e*, when so held to the sill as to be capable of longitudinal, lateral, and rolling motion, for forcing open the shutters, and operating the blind-slats by means of the projections *f*, without raising the sash, in the manner substantially as described.

93,935.—George C. White, Jr., Brooklyn, N. Y.—*Metallic Base for Glass and other Vessels.*—August 17, 1869.

Claim.—1. A metallic base to glass and other fragile vessels, made in sections, the one of which is fitted on to or around the vessel, at or near its bottom, while the other section, that forms the base proper, is connected with the first or inner section with a screw-thread or threads, substantially as specified.

2. The combination of the soft packing D with the outer section C of the metallic base, and the inner section B, fitted to surround the lower portion of the vessel, and having a screw-thread, *a*, upon its exterior, to receive on or over it the outer section, all for operation in connection with the bottom of the vessel, and to more effectually protect the same, and to prevent jamming or injury of the screw-thread *a*, essentially as herein set forth.

93,936.—James A. Whitney, New York, N. Y. —*Dairy-Apparatus.*—August 17, 1869.

Claim.—The combination, with a milk-cooler, of an elevated reservoir for cooling-liquid, and an elevated milk-holder, suitably arranged and organized for the milk and the cooling-liquid to flow simultaneously through the cooler, substantially as herein described.

93,937.—Daniel A. Wilcox, Woodstock, Vt. —*Centering-Awl.*—August 17, 1869; antedated February 17, 1869.

Claim.—1. The beveled head of the tube B C, which incloses the puncturing-point of the shank D E, and is so arranged therewith as to serve the purpose of guidiug the said point through the centers of countersink-but apertures in the hanging of doors, &c., and thereby insuriug the starting of each screw in the center of each of said apertures, substantially as herein set forth.

2. The combination of the tubular and pointed metallic portions of the said improved carpenters' tool with a suitable wooden handle, substantially as herein set forth.

93,938.—William F. Williams, East Birmingham, Pa.—*Cooking-Stove.*—August 17, 1869.

Claim.—1. Constructing extension-plates in sueh a manner as they may be attached to and detached from the top plates of cookiug-stoves or rauges, substantially as described.

2. The extension-plates B, socket B^1, lug B^2, and flange B^3, in combination with the stove A, slots A^1, and flange A^2, when constructed and arranged substantially as herein described, and for the purpose set forth.

93,939.—Walter Samuel Withers, Atlanta, Ga.—*Fire-Place Grate.*—August 17, 1869.

Claim.—1. The combination of the standards A A, bottom B, and front C, constructed and arranged as described, and connected together, substantially in the manner and for the purposes herein set forth.

2. The combination of the standards A A, having grooved lugs *a a'*, and *b b'*, bottom B, front C, and adjustable back E, all constructed and arranged substantially as and for the purposes herein set forth.

93,940.—George W. Wright, Washington, D. C., assignor to Francis Wright, same place.—*Steam-Engine* —August 17, 1869.

Claim.—1. The combination and arrangement of the movable disks C and C', at each end of the cylinders, cylinders B, and boiler A, substantially as herein set forth.

2. The combination of the steam-cylinders, disks C and C', gear-wheels D and D', whereby to actuate the disks for the ingress, cutting off, and egress of steam, substantially upon the principle and in the manner as herein set forth.

93,941.—David Young, Kokomo, Ind.—*Composition for Plastering Walls.*—August 17, 1869.

Claim.—A plaster for plastering walls, &c., composed of the iugredients herein stated, and substantially in the proportions set forth.

93,942.—Friedrich Brinck, Chester, Ill. —*Washing-Machine.*—August 17, 1869.

Claim.—The combination and arrangement of drum A, provided with buckets *a*, having notches *b*, cog-wheels D E, crank F, and frame B, as described and shown.

93,943.—Frederick Oakley, Toronto, Canada.—*Lock-Nut.*—August 17, 1869.

Claim.—The combination of the bolt A, flattened on one side, with the washer B, with opening of correspondiug, shape, constructed substantially as described.

93,944.—Smith D. Arnold, Pittsfield, Mass.— *Manufacture of Bricks.*—August 24, 1869.

Claim.—Smoothing the faces of molded bricks by grinding, after the same have been burned, to produce smooth-molded, in imitation of pressed bricks, as new articles of manufacture, substantially as set forth.

93,945.—Josiah Ashenfelder, Philadelphia, Pa.—*Truck for Street-Cars.*—August 24, 1869.

Claim.—1. The peculiar combination of truss-band or piece C C F with draught pieces E E, and bolts I I, when constructed in the manner and for the purpose above set forth and described.

2. The combination of pieces E E, truss-band C C F, bolts I I, with bearing-piece H, and its permanent car-boxes D D, and springs B B, when the whole is combined, constructed, and operated in the manner and for the purpose above set forth and described.

3. The combination of bottom A of car with springs B B, truss-piece C, and bearing H, draught-pieces E E, and their bolts I I, car-boxes D D, &c., when the whole is constructed and arranged in the manner and for the purpose above set forth and described.

93,946.—Harris W. Axford, Richmond, Ind. —*Picker for Wool, &c.*—August 24, 1869.

Claim.—The improved upholsterers' picker, consisting of the frame A *a a*, toothed cylinder C, guard-plates J, feed-rollers D D, spring-attachment *e*, inclined bottom E, hood F, fly-wheel G, shafts H and B, and the driving-pulleys, all arranged and operating together, as herein shown and described.

93,947.—William F. Banks, Brookfield, Conn. —*Rock-Drilling Apparatus.*—August 24, 1869.

Claim.—1. The arrangement of the inclined arm O, inclined shaft S, block R, gearing T U, shaft N, disk Y, hammers A', sliding bar D, drill I, and hinged frame B, as herein described, for the purpose specified.

2. The combination of the lever M, lever-pawl L, trip-lever N, ratchet-wheel J, crank or hand-wheel K, shaft G, gear-wheels H, rack-bars I, sliding bar or cap D, eye-bolts F, and lever-clamps E with each other and with the slotted hinged frame B, substantially as herein shown and described, and for the purpose set forth.

3. The lever-cams E, in combination with the sliding frame D and hinged frame B, to hold the drill and its operating-mechanism at any desired height upon the frame B, as herein shown and described.

4. Rotating the drill P, by means of the collar Q, attached to said drill, and the angular block R, operated from the driving-shaft V by the gear-wheels U T and shaft S, to which said angular block is attached, substantially as herein shown and described.

5. The combination of the hammers A', arms *Z z'*, spring-stops B', and disk or wheel Y with the shaft V, supported from the sliding bar or cap D, substantially as herein shown and described, and for the purpose set forth.

93,948.—M. R. Barr and William T. Black, Erie, Pa.—*Base-Burning Stove.*—August 24, 1869.

Claim.—The combination, with a base-burning stove, of an oven-attachment arranged therewith, so that the counecting side of the oven forms a part of the shell of the stove, and having a flue, C, leading directly from the top of the fire, or one side thereof, to the bottom of the said oven; also having a hole, H, in the inner wall of the bottom, and a double-acting damper, G, all substantially as specified.

93,949.—John F. Bartlett, Winchester, Conn —*Scythe.*—August 24, 1869.

Claim.—1. The parts described, consisting substantially of the heel B, wedge D, and blade A, when combined and arranged substantially as described.

2. The scythe-blade A, constructed as described.

93,950.—Myron H. Beckworth, Camden, N. Y.—*Bustle.*—August 24, 1869.

Claim.—The ladies' bustle, formed of a fabric, into which the springs *c* are introduced, in combination with the tightener or cord *f*, passing through eyes at the ends of the springs, and through eyelets near the other ends of the springs, as set forth, and for the purposes specified.

93,951. — HENRY M. BEECHER, Plantsville, Conn., assignor to H. D. SMITH AND COMPANY.—*Die for Forming Carriage-Shaft Shackles.*—August 24, 1869.

Claim.—1. The combination and arrangement of the bending-guides *l l*, and the arm-dies *g g*, with the bed-plate A and the drop-die B.

2. The combination and arrangement of the upsetting-dies *i i*, with the drop-die B, and with the arm-dies *g g*, bending-guides *l l*, and die-plate A of the bed-block.

3. The combination of the head-dies *d d'*, with the die-plate A, the drop-die B, the arm-dies *g g*, the bending-guides *l l*, and the upsetting-dies *i i*.

4. The combination and arrangement of the shank-dies *n p*, the head-dies *d d'*, the arm-dies *g g*, the upsetting-dies *i i*, and the bending-guides *l l*, the whole being applied to the bed-block and the drop-die substantially in manner and so as to operate as and for the purpose or purposes hereinbefore specified.

93,952.—H. J. BERG, Butler, Pa.—*Apparatus for Removing Benzine from Hydrocarbons.*—August 24, 1869.

Claim.—1. The method herein described for removing the benzine and other volatile matters from crude petroleum, that is to say, by causing the crude oil to flow gradually in a thin stream over a heated plate, whereby the volatile principles will all be evaporated with great certainty and rapidity.

2. The improved machine above described for carrying out my process, consisting of vessel A, provided with inlet for the crude oil, and steam-chamber C, having steam-induction and eduction pipes, in combination with intermediate plate B, which subjects the crude oil to a temperature to evaporate the volatile parts, and conducts the refined oil into its proper receptacle, all as shown and described.

93,953.—NORBORNE BERKELEY, Aldie, Va.—*Device for Supporting Wagon-Beds.*—August 24, 1869.

Claim.—1. In combination with the sills *a*, standards *b*, and bed *c*, of a wagon, and springs *d*, applied around said standards *b*, the brackets *e*, attached to the bed *c*, and adapted to be held in sockets *f f*, at different points in the height of the bed, so as to rest on or be supported off of said springs, substantially as represented and described, for the purpose set forth.

2. In the described combination, the adjustable brackets *e e*, adapted to longitudinally and laterally support or secure the bed, substantially as described.

93,954.—GEORGE M. BOHLENDER, Peoria, Ill.—*Washing-Machine.*—August 24, 1869.

Claim.—The combination of the inclined half disks or lunettes *k k*, upright partitions *h*, and ledges *b b*, with the conical-shaped cylinder A, constructed as described.

93,955.—JOHN B. BOLINGER, Detroit, Mich.—*Treadle.*—August 24, 1869.

Claim.—1. The combination, with a treadle and belt, of a spring H, arranged on a different side of the loose pulley, and diametrically opposite to the treadle, so that the action and reaction of the foot-power and spring will be entirely utilized, in the manner set forth.

2. The combination of a fast pulley, recessed on one of its side-faces, and driven by a friction-lever, with the loose pulley D, having one concentric and one eccentric wall, whereby the said friction-lever is operated, as and for the purpose specified.

93,956.—SAMUEL BRADBURY, Dresden, Mo.—*Combined Harrow, Roller, and Drill.*—August 24, 1869.

Claim.—1. The harrow-teeth H and draught-bars I, in combination with the roller E F and frame A, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the chains K, rollers L, levers M, and catches N, with the harrow H I and frame A, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the harrow H I, rollers E F, and drilling-device O P V, with each other, and with the frame A, substantially as herein shown and described, and for the purposes set forth.

4. The adjustable roller D E F, constructed and operating substantially as herein shown and described, and for the purpose set forth.

5. The combination of the chains W, rollers X, crank Y, connecting-rod Z, lever A', and catch B', with the drilling-standards P, draught-bars V, and frame A, substantially in the manner herein shown and described, and for the purpose set forth.

93,957.—PETER H. BRADLEY, Portland, Me.—*Adze.*—August 24, 1869; antedated August 7, 1869.

Claim.—An adze, composed of the head or socket A, flange D, slot C, and key F, constructed to operate substantially as and for the purpose specified.

93,958.—EDMUND A. BRIMSON, New York, N Y.—*Cork-Cutting Machine.*—August 24, 1869.

Claim.—1. The improved arrangement of the sharpening-stones *a* and straightening-collar *c*, with reference to the "circular cutter" C, as and for the purpose specified.

2. The parts mentioned in first clause, in combination with the adjustable frame I and feed-frame V, having set-screws X X, the same being all arranged and operating together as set forth.

93,959.—THOMAS SANDS BROWN and THOMAS ARCHER BROWN, Brooklyn, Cal.—*Harrow.*—August 24, 1869.

Claim.—1. The bars C, having the arms D, said arms being provided with a head, *a*, substantially as and for the purpose above described.

2. In combination with the bars C above claimed, the bars C', provided with the loops E, substantially as and for the purposes set forth.

3. Connecting the two harrows A and B together by means of loops and arms, substantially as herein described.

93,960. — GEORGE F. BROWN, Winchendon, Mass.—*Window-Bead Fastening.*—August 24, 1869.

Claim.—The tube or socket A, provided with a spring-catch B, in combination with the pin C, having a series of notches, *e e e*, and a thumb-screw head, D, all constructed to be applied and operate substantially in the manner herein described, for the purposes set forth.

93,961.—WILLIS L. BROWN, Shelburne Falls, Mass., assignor to himself and SAMUEL W. BOWEN, same place.—*Heater for Kerosene-Lamps.*—August 24, 1869.

Claim.—As a new article of manufacture, the water-heater herein described, consisting of the holder A, with its conical depression, the tapering passage for the flame and products of combustion, with its water-jacket *d d*, and openings *c c*, adapted for use in connection with a kerosene-lamp, as set forth.

93,962.—JOSHUA H. BUTTERWORTH, Dover, N. J.—*Sewing-Machine.*—August 24, 1869.

Claim.—1. The described combination of devices for imparting reciprocating motion to the shuttle-carrier, the same consisting of the wrist-pin on the main shaft, pitman J, ball or knuckle-joint *i*, arm *f*, vertical rock-shaft I, and arm *j*, substantially as shown and described.

2. The described arrangement of the lever M, fulcrumed at *l*, and operated by the cam N on the main shaft, against the force of the spring *p*, sustained upon its supporting-rod.

3. The combination, with the take-up lever M, of the disk or arm *s*, on the main shaft of the cam N, slotted, as shown, and the pin *r*, all substantially as set forth.

4. The combination, within the shuttle, of the spring-guide rod *c*, free at one end, and tension-spring plate *w*, the latter being adjustable by means of a fastening-screw, substantially as shown and described.

93,963.—C. A. CALAWAY, Madison, Ohio.—*Washing-Machine.*—August 24, 1869.

Claim.—The combination of the case A, concave

bed B, rollers D, suspending-arms F, bearings E, oscillating shaft G, supports H, guides O and P, treadle K, and spring I, when all constructed and arranged substantially as specified.

93,964.—Horace Call, Concord, N. H., assignor to himself and J. B. Rand, same place.—*Apparatus for Transmitting Power by the Medium of Air.*—August 24, 1869.

Claim.—The combination and arrangement of a wheel, A, having curved or inclined buckets on its periphery, with an inclosing case, B, and an air-supplying tube E, descending to or entering near its lower part when in position, said wheel having suitable attachments for connecting it with other machinery it is to operate, all substantially as shown and described.

93,965.—William L. Carter, Marietta, Pa.—*Apparatus for Washing Ores.*—August 24, 1869.

Claim.—1. The arrangement and combination of the ring G with its radiating arms I, fixed in a central socket-collar, H, and provided with the discharge-shovels V, rake-teeth X, and central shovels W, together with the adjustable crushing-rollers M L, shovels U, supporting-rods R, and pivot-rods *r*, the whole mounted on rollers *a*, over a concave basin, B, with its flange *b*, substantially in the manner shown and for the purpose specified.

2. In combination with my revolving ring G and its appendages, the concave or conic basin B, with its central discharging-cylinder C surrounding the shaft E, the straining-chamber *b b*, discharge-pipe F, from the cylinder and spout Y, from upper portion of the concave, supported on frame-work A, in the manner and for the purpose set forth.

3. The cross-grooved plate Q, for the purpose of adjusting the shovels *o* by reversing their position, in the manner and for the purpose described.

93,966.—Andrew M. Cheeseman, Trenton, N. J.—*Machine for Making Pottery.*—August 24, 1869.

Claim.—1. The mold-carrying spindle K, its wheel J, and the disk-wheel I, of what is known as a Scotch jigger, in combination with the forming-tool *m*, and the bar M, cam N, rod P, or equivalent devices, whereby the said forming-tool is caused to co-operate with the wheel J, in producing the effect described.

2. Also, the combination of the internal cam, sliding bar M, which carries the forming-plate, and which has a rod, P, adapted to the wheel J of the mold-carrying spindle K, the whole being arranged and operating substantially as and for the purpose herein set forth.

93,967.—A. Combs, Helena, Montana Territory.—*Velocipede.*—August 24, 1869.

Claim.—1. The catch-treadle F, provided with a finger, *e*, and pivoted to the working-crank E, substantially as herein shown and described, to operate as set forth.

2. The crank E, carrying the catch-treadle F, when combined with the toothed wheel *b* and spring *d*, all combined and operating substantially as herein shown and described.

3. The combination of the rear axle G with the pin I, slotted tubular post J, frame A, and spring *g*, all arranged and operating substantially as herein shown and described.

93,968.—Howard Connick, Albert Lea, Minn.—*Horse-Collar and Hames.*—August 24, 1869.

Claim.—1. The combination of the parts A, B, and D, when arranged substantially as specified.

2. The mode of adjustably attaching the tug-links H by the under-cut brackets K and bolts L, arranged substantially as specified.

3. Securing the lower hames-strap buckles by means of the detachable clamps M, constructed and applied substantially in the manner described.

93,969.—Thomas M. Corbett, Milwaukee' Wis., assignor to himself and John I. Herrick, same place.—*Seeding-Machine.*—August 24, 1869.

Claim.—1. A feeding-apparatus, consisting of the shaft A, fixed part of clutch B, loose part of clutch C, and feeder or conveyor F, constructed substantially as described.

2. A, B, C, D, and F, arranged substantially as described.

93,970.—Darwin E. Crosby and Sarah E. Strickland, South Vineland, N. J.; said Sarah E. Strickland assigns her right to said Darwin E. Crosby.—*Clothes-Drier.*—August 24, 1869.

Claim.—1. The extension-arms E, whether sliding or hinged, in combination with the top cross-bar and side-bars of a clothes-frame, substantially as herein shown and described, and for the purpose set forth.

2. The pivoted or folding side-arms G, in combination with the extension-arms E, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the extension-arms E, straps or keepers F, folding side-arms G, plates H, and pins or knobs J, with each other, and with the folding clothes-frame A B C D, substantially as herein shown and described, and for the purpose set forth.

93,971.—G. K. Dearborn, Smithfield, assignor to himself and O. A. Tanner, North Providence, R. I.—*Stopping-Mechanism for Looms.*—August 24, 1869.

Claim.—1. The bent lever B D, when provided with the hook B′, and working in combination with the protecting-finger A, substantially as described, and for the purpose set forth.

2. The hook B′ of the bent lever B D, in combination with the bunter E, substantially as described, and for the purpose set forth.

3. The compound spring S, acting in combination with the bunter E and bent lever B D, substantially as described, and for the purpose set forth.

93,972.—Silas R. Divine, New York, N. Y.—*Cooling Soap, and Forming the same into Bars.*—August 24, 1869; antedated August 7, 1869.

Claim.—1. Cooling soap, in the form of bars, in tubes of metal.

2. Cooling the soap by means of water surrounding the tubes.

3. Forcing the soap from the tubes by pneumatic, hydrostatic, or piston pressure, or by displacement with hot soap, introduced by pump or otherwise.

4. Switching from one tube to another, substantially as described.

93,973.—Jacob Dodder, Washington, Iowa.—*Wagon-Tire.*—August 24, 1869.

Claim.—A tire-band for wheels of carriages and other vehicles, having both the outer and inner surfaces concave, as and for the purposes set forth.

93,974.—Joseph W. Douglas, Middletown, Conn., assignor to W. B. Douglas, same place.—*Knapsack-Engine.*—August 24, 1869.

Claim.—The reservoir A, armed with foot-pieces D D and belts E E, in combination with the force-pump B and pipe C, arranged and operated substantially in the manner and for the purpose herein set forth.

93,975.—J. S. Du Bois, St. Louis, Mo.—*Railroad-Car Spittoon.*—August 24, 1869.

Claim.—1. A railroad-car spittoon, consisting of the shell B, perforated bottom E, and screen F, all arranged so that liquid matter can always escape, while solid articles are detained by the screen, substantially as herein shown and described.

2. The springs C, D, and *h*, and pins *d*, in combination with the hinged bottom E, pivoted screen F, and flanged shell B, all arranged and operating substantially as herein shown and described.

93,976.—Douglas W. Eaton, North Ridge, N. Y.—*Device for Tightening Wire Fence.*—August 24, 1869.

Claim.—The device for straining wire fences, herein described, consisting of the shank *a*, with conical point *d*, and cross-arm *c*, the whole arranged as described, and operating in the manner and for the purpose specified.

93,977.—Stephen Elliott, Richmond, Ind.—*Gate.*—August 24, 1869.

Claim.—1. The jointed rod E, in combination with the gate C, guide-arm F, and spring E′, substantially as shown and described.

2. The combination and arrangement of the gate C, the ropes or chains I^2, roller H, and lever G, substantially as and for the purpose specified.

3. The arrangement of the levers G G′, ropes I I^1, and latch D, substantially as and for the purpose specified.

93,978.—William Evans, Eureka, Wis.—*Spring.*—August 24, 1869.

Claim.—1. The combination, with the spring F, of the set-screw I, sliding bolt H, and lever E, when arranged substantially as specified.

2. The combination of the spring F, case A, set-screw I, sliding bolt H, brackets C, bolt D, and lever E, all arranged as specified.

93,979.—Alfred Everiss, New York, N. Y.—*Gathering-Attachment for Sewing-Machine.*—August 24, 1869.

Claim.—A gathering-attachment for sewing-machines, constructed, arranged, and operated automatically from the presser-foot, in the manner substantially as herein shown and described.

93,980.—Bernhardt Fincke, Brooklyn, N. Y., assignor to F. Gustavus Fincke, same place.—*Process of Preparing Homeopathic Medicines.*—August 24, 1869.

Claim.—1. Effecting potentation by the peculiar mode of dilution called fluxion, substantially as hereinbefore set forth.

2. The process of potentiating by carrying the vehicle to the bottom of the vial, by means of a tube or jet, substantially as herein described.

3. Producing infinitesimal gradual dilution in one vial, by continuous motion of the vehicle.

4. Measuring the potentiating-vehicle before it enters the vial, or other receptacle of the material to be potentiated, for the purpose of ascertaining the degree of potentiation, as set forth.

5. Measuring the potentiating-vehicle by measuring the liquid which flows away from the vial, or other receptacle of the material to be potentiated, to ascertain the degree of potentiation, as specified.

93,981.—O. P. Frantz and E. Broad, St. Anthony, Minn.—*Cant-Hook.*—August 24, 1869.

Claim.—The tapering socket A, provided with the projection B, with its ears *b*, the slot *b′*, and ring C, arranged and operating as described, for the purpose set forth.

93,982.—Francis Frisiani, New York, N. Y.—*Medical Compound for Treating the Organs of Voice.*—August 24, 1869.

Claim.—The medical preparation hereinbefore described, and which I call vocalina, the same consisting of an alcoholic solution of the resin called jatoba, with or without the addition of the other tinctures named, or either of them, said medicine being intended for use in affections of the throat and vocal organs, as set forth.

93,983.—Perry G. Gardiner, New York, N.Y.—*Railway-Car Spring.*—August 24, 1869.

Claim.—1. A frame or case, in which the parts are constructed, arranged, and combined together in the manner and for the purposes substantially as described, for carrying and securing the steel spirally-coiled springs, singly or in groups, so that the lower portions of the springs will be uninclosed, and accessible for cleaning and inspection without removing the case, and at the same time the coils are protected and secured against bending or being thrown out of line by the irregular pressure or surging of the car.

2. The form and construction of the central standard *e*, whether used in combination with the cap or base singly, or with both in the same frame, and in part surrounding and sliding upon the central tube *d*, operating substantially in the manner and for the purposes described.

93,984.—Perry G. Gardiner, New York, N.Y.—*Railway-Car Spring.*—August 24, 1869.

Claim.—The device of the central hollow stud or tube F, combined with the rubber cylinder-spring B, and the spirally-coiled steel springs C and A, arranged and operating in the manner and for the purpose described.

93,985.—N. F. Gilman, Rochester, Minn.—*Grain-Binder.*—August 24, 1869.

Claim.—1. The pitman L, connecting the crank K with the bar or lever P, carrying the rake-head, when arranged to play up and down within the vertical slot of the upright bar M, as herein described, for the purpose specified.

2. The combination of the rod S and cord T with the hinged rake-head R, lever P, and bar or lever Q, substantially as herein shown and described, and for the purpose set forth.

3. The adjustable hook C^1, bar or lever E′, and hook F′, constructed and operating in combination with the vertical pivoted bar M, m^1 m^2, and lever O, substantially as herein shown and described, and for the purpose set forth.

4. The arms U, shaft V, arm W, connecting-rod X, and springs Y and Z, in combination with the pitman L and rake R, substantially as herein shown and described, and for the purpose set forth.

5. Binding grain in a series of connected bundles, by a continuous looped cord, substantially as herein shown and described.

93,986.—William Grayson and C. D. Hyndman, Odell, Ill.—*Lamp-Extinguisher.*—August 24, 1869.

Claim.—1. In combination with a lamp-burner, the springs E E, with the tees J J, arranged and operating substantially as and for the purposes herein shown and described.

2. Extinguishing a lamp-wick, by pinching it between two movable metallic plates, substantially as described.

93,987.—William H. Gregg and William Bowe, Wilmington, Del.—*Adjustable Carriage-Seat.*—August 24, 1869.

Claim.—The arrangement, in a double-seated carriage, of four stops on the back and two on the front seat, with hooks G G in the forward part thereof, all as shown and described.

93,988.—John F. Griffen, New York, N. Y.—*Manufacture of Rosin and Spirits of Turpentine.*—August 24, 1869.

Claim.—1. As a new process for the manufacture of turpentine and rosin, subjecting a given charge of crude material to the action of heat from steam-heated surfaces, within a still, while constantly agitated within said still, substantially as hereinbefore set forth.

2. In an apparatus for carrying on the described process, first, the combination of a steam-heated still with a steam-heated agitator, as and for the purposes set forth; secondly, the combination, with the still, of perforated steam pipes *o*, or their equivalents, substantially as and for the purposes set forth; thirdly, the screw feeder *i*, in combination with the agitator; fourthly, the use of a series of lifters or buckets, *m*, in combination with the heating-agitator, substantially as and for the purpose set forth.

93,989.—John D. Harrison, Middletown, Ohio.—*Seeding-Machine.*—August 24, 1869.

Claim.—The combination of the gearing-sockets *o* with the bars F G and drag-bars E, constructed, arranged, and operated substantially as and for the purpose described.

93,990.—M. C. Hawkins, Edinborough, Pa.—*Pump.*—August 24, 1869.

Claim.—The portable pumping-apparatus herein described, consisting of the platform A, pump-stand B, valve-section C, and tubing D, with valve *h h*, the stone barrel E, pistou F, rod G, and brake-lever H, all constructed and arranged as herein shown and described.

93,991.—James H. Haynes, Union County, Ark.—*Velocipede.*—August 24, 1869.

Claim.—The pinion E, shaft F, and driving-wheel K, in combination with a disk, C′, when the several parts are constructed, arranged, and operated substantially as herein described, for the purpose set forth.

93,992.—Henry Hempstead, Greenport, N. Y.—*Oar-Lock.*—August 24, 1869.

Claim.—The yoke or oar-socket B, when provided with friction-rollers C C, and arranged so as to oscillate in the manner described, in combination with the stern A of a boat, substantially in the manner as and for the purpose herein set forth.

93,993.—George B. Hicks, Cleveland, Ohio.—*Electro-Magnetic Signal-Apparatus.*—August 24, 1869.

Claim.—1. The arrangement of the magnet E and spool, in combination with the bell F, and operated substantially as and for the purpose set forth.

2. The application of the magnet E and single spool, in connection with a battery, for giving signals upon a bell, as set forth.

93,994.—Leavitt Hunt, Weathersfield, Vt.—*Plow.*—August 24, 1869.

Claim.—1. The combination, substantially as herein described, with the hinged plow-beam and sulky-frame, of a stiff or rigid gauge-bar to regulate the depth of furrow, and to cause the plow-point to bite or enter the ground at the instant the machine is moved forward.

2. The combination, with the plow-beam, of arms hinged to the sulky-frame, and connected with the beam, and with the lever for elevating the same, as herein described, so that said arms shall serve both to stiffen or brace, and, in connection with the lever, to raise or depress the plow.

3. The combination, with the slotted plow-beam and whiffletree, held in a slot in the sulky-frame or pole, and connected with the beam by a draught-chain, or equivalent device, of the hinged bracing-arms, the lever for actuating the same, and the rigid or stiff gauge-bar, substantially as and for the purposes set forth.

4. The combination and arrangement, substantially as herein specified, of the plow-beam with the hand-lever for raising or lowering the same, and an auxiliary foot-lever, independent of, and having no connection with, the hand-lever, but connected with the beam, and adapted to act in conjunction with the hand-lever when required.

5. The combination, with the hand-lever and segmental rack, of the sliding catch-bar, and device for operating the same, said bar being held to the lever and forked so as to straddle the rack, as and for the purposes shown and set forth.

6. The combination, with the forward part of the beam of a plow of otherwise ordinary or suitable construction, of a pendent arm, carrying the roller, and pivoted or hinged to the plow-beam, and a curved and slotted branch-arm connected with both the plow-beam and the roller-arm, in the manner and for the purposes substantially as described.

93,995.—Samuel W. Huntington, Augusta, Me.—*Sash-Balance.*—August 24, 1869.

Claim.—The construction and arrangement of the grooved sash-jamb, the weighted balance-racks received in such jamb, and the metallic strips, for holding said racks in place, and forming ways, in which the projecting portions of the racks move and are guided, in combination with the window-sash, its racks, and intermediate pinion, as herein set forth.

93,996.—B. A. Jenkins, La Crosse, Wis.—*Metallic Window-Shutter.*—August 24, 1869.

Claim.—1. Constructing the uprights of a hollow metallic shutter-frame of plates A A, fastened at their edges to a stiffening and spacing-bar, G, substantially as and for the purposes described.

2. The construction of a hollow slat B, of a plate of metal, bent substantially as described, and having end-pieces b^1 b^1, for receiving rod b^2, formed on it, substantially as set forth.

3. The ears *b b*, formed on the hollow metallic slat B, substantially as described, and for the purpose set forth.

93,997.—Gregory Jennings, West Cairo, Ohio.—*Shovel-Plow.*—August 24, 1869.

Claim.—1. The bent or curved arm E, having guard-fingers G attached to its lower part and adjustably connected with the beam A, substantially as herein shown and described, whether used with or without the draught-rod H, as and for the purpose set forth.

2. The combination of the recessed shovel D with the curved arm E, both constructed and operating together as set forth.

93,998.—William Johnson, Lambertville, N. J.—*Bolt-Threading Machine.*—August 24, 1869.

Claim.—1. The main die-casting E, toothed rims G G, pinion-wheels W W W, screws S S S, die-blocks O O O, cutting-dies D D D, stops P T X, pressure-band F, and plate N, combined and arranged as described, and for the purpose specified.

2. The arrangement of the friction-bands L L, rock-shaft I, and lever H, or their equivalents, arranged and combined in the manner and for the purpose substantially as described and set forth.

93,999.—Luther N. Johnson and Benton Silloway, Montpelier, Vt.—*Clothes-Drier.*—August 24, 1869.

Claim.—1. The bolt *e*, in connection with the arms C and D D, for the purposes as explained.

2. The arm C, in combination with the arms D D and hinges *d d*, the slide B and hinge *d*, the pulley E and cord *g* and lines *f f*, as described.

3. The combination and arrangement of the rack or frame, consisting of the arms, hinges, lines, and bolt, as described, with the slide B, pulley E, cord *g*, case A, and slide-holder *e*, and grooves *b b*, substantially as and for the purpose herein described and set forth.

94,000.—Nathaniel Jones, Lockport, Ind.—*Quadrant-Hinge.*—August 24, 1869.

Claim.—The wing G, provided with curved arms C and lug E, in combination with the wing K, provided with lug D and recess *e*, as and for the purpose set forth.

94,001.—John W. Jones, Thomson, Ill., assignor to himself and S. H. Beckwith, same place.—*Reversible Plow.*—August 24, 1869.

Claim.—1. The mold-board, formed in two triangular parts, B C, and combined together, and with the posts E D, and turning and supporting-frame I, when all arranged substantially as specified.

2. The combination of the two parts B C of the mold-board and the locking-slides O, when arranged and operating substantially as specified.

94,002.—Louis A. Kettle, Philadelphia, Pa.—*Button-Hole and Buckle.*—August 24, 1869.

Claim.—1. Forming a spring-wire button-hole and prongs of one and the same continuous piece, having a frame, A, as in figs. 1, 2, and 3, or without said frame, as in fig. 4, substantially as described.

2. Forming a spring-wire button-hole, B, strap-loop D, and prongs of one and the same continuous piece, having a frame, A, (fig. 3,) substantially as described.

94,003.—Charles A. King, Springfield, Mass.—*Revolving Fire-Arm.*—August 24, 1869.

Claim.—1. The arrangement of the movable gear or pinion G, in the joint H, and the rack D, on the front end of the extractor, in such a manner that they engage with each other, and operate the extractor, by the throwing forward of the barrel, substantially as herein shown and set forth.

2. I do not claim connecting the ejector and plunger by a swivel-joint; but what I do claim is the combination of the rack D, pinion G, and extractor A, the parts being all arranged and connected, substantially as herein described.

3. The construction and arrangement of the pawl O in such a manner that when the hammer is at

half-cock the point of the pawl is thrown back out of a line with the face of the ratchet, substantially as and for the purpose set forth.

94,004.—JEROME B. KING, New York, N. Y.—*Washing-Machine.*—August 24, 1869.

Claim.—The washing-machine, constructed as described, of the segmental sections C, one of which forms a cover, held to the rotating cylinder B by means of the elastic bands E, and resting at their outer ends upon the end disks D, bearing the guards H, each segment C being provided with end segments F, which are adapted to fit between the ends of the cylinder B and the disks D, all arranged as described, for the purpose specified.

94,005.—ALEXANDER KING and GEORGE H. KING, Painesville, Ohio.—*Washing-Machine.*—August 24, 1869.

Claim.—1. The circular plate D E, attached to the end of a vertical shaft, C, passing out through the stuffing-box S T, and operated by the bevel-gearing G H, and shaft I, attached to the brackets F and J, in combination with the ribbed body or tub A, all constructed and arranged to operate as herein described and shown.

2. In combination with the devices of above clause, the crank O, cranks or crank-wheels M K, connecting-bar L, pin P, and slotted bar Q, when arranged substantially as herein shown and described, and for the purpose specified.

94,006.—JOHN W. KING, New York, N. Y.—*Curtain-Fixture.*—August 24, 1869.

Claim.—1. The combination, with a cord-pulley and disk, of the journal E and ears B, all fitted together, as and for the purpose specified.

2. The subject-matter of above clause, in combination with the roller A, the ears B, disk C, and pivot D, arranged on the other end of the roller, as shown and described.

94,007.—D. R. KNIGHT, Akron, Ohio.—*Driving Well-Tubes.*—August 24, 1869.

Claim.—1. The recesses or chambers C, oblique grooves D, and inclined tapering grooves *e*, combined and arranged, in relation to the tubes A and B, substantially as and for the purpose specified.

2. The spiral slot G, as arranged in relation to and in combination with the tubes A and B, in the manner as and for the purpose set forth.

94,008.—ADONIS LABAUVE, Convent, La.—*Apparatus for Clarifying Cane-Juice by Means of Sulphurous-Acid Gas.*—August 24, 1869.

Claim.—The arrangement, with relation to the pump A, containing the piston and valves, of the juice-passage a^1, gas-passage F a^2, and the compartment H, containing the perforated shelves I, as herein described, for the purpose specified.

94,009.—JACOB LAGOWITZ, Newark, N. J.—*Wooden Trunk.*—August 24, 1869.

Claim.—1. The herein-described method of making wooden trunks, by covering the boards separately with leather, or its equivalent, and ornamenting or creasing the same preparatory to putting the same together, substantially as specified.

2. Covering and ornamenting the boards for a curved trunk-cover, previous to the bending of the same, substantially as herein shown and described.

94,010.—GEORGE W. LAMB, Cobalt, Conn.—*Sleigh-Bell.*—August 24, 1869.

Claim.—The collar B, long and narrow shank D, screw E, and nut F, in combination with the body A of the bell, substantially as herein shown and described, for the purpose of securely connecting the said bell with the strap upon which it is strung.

94,011.—JOHN M. LEMON, Polk City, Iowa.—*Floor-Catch for Table-Legs.*—August 24, 1869.

Claim.—Securing the legs of tables, and other furniture, to the floor by means of catch-plates E, when fitted in recesses, so as to be flush with the upper surface of said floor, and adapted to engage with the headed rivets D, or the notches K of the housings of casters, substantially as and for the purpose specified.

94,012.—GEORGE W. ROSS, Lewin, Rochester, N. Y.—*Device for Folding Letters, &c.*—August 24, 1869; antedated August 7, 1869.

Claim.—The above-described instrument for folding, more rapidly, letters, bills, &c., to a uniform width, consisting of a single metallic plate or other substance folded upon itself, forming two leaves of unequal widths.

94,013.—T. S. LEWIS, Portland, Me.—*Machine for Removing Green Corn from the Cob.*—August 24, 1869.

Claim.—1. The sliding carriage B, composed of the parts *e f*, and carrying the follower *h* and plunger *g*, in connection with the cutters *n p*, as herein described.

2. The cutting-frame *x*, with its adjustable cutter *p*, in combination with the adjustable scraping-devices *t u*, constructed and arranged to operate as herein described, for the purpose specified.

3. The sliding carriage B *f e*, with the follower and plunger, in connection with the adjustable scrapers *t u*, as herein described.

4. The hopper *k*, in combination with the sliding carriage B *f e*, follower *h*, plunger *g*, knives *n p*, constructed and arranged as herein described, for the purpose specified.

94,014.—DIEUDONNÉ FRANÇOIS JOSEPH LONTIN and EARDLEY LOUIS CHARLES D'IVERNOIS, Paris, France.—*Magneto-Electric Machine.*—August 24, 1869; patented in France, December 14, 1868.

Claim.—A magneto-electric engine, consisting of the bibranched electro-magnetic armatures, radially disposed upon the rotating shaft, in combination with the stationary magnets, which are initially magnetized, when arranged in such a manner that the current generated in one series of rotating armatures is conveyed to the fixed magnets, and then, on the rotation of the shaft, excites a current in another series of rotating magnets, which can be utilized at will, in the manner and for the purpose as described.

94,015.—JAMES R. MAXWELL and EZRA COPE, Cincinnati, Ohio.—*Steam-Engine.*—August 24, 1869.

Claim.—1. The rock-shaft E, parallel to the cylinder, actuated by contact of oblique surfaces of the arms M M′ thereon, and the piston within the cylinder, constructed, combined, and arranged as herein set forth.

2. The rock-shaft E and the valve C, having a diagonal groove, O, in combination with their intervening gear, substantially as described.

3. The rock-shaft G and the finger N, in combination with the diagonal groove O, substantially as described.

4. The valve C, with the steam-supply openings I I′, exhaust-openings *h′ h″*, constructed and arranged, with reference to the chamber C′ C″ and the induction and eduction ports thereof, substantially as described.

5. The steam-cylinder A, in combination with the two separate throttle or regulating valves *b b*, arranged to control the flow and quantity of steam admitted through separate passages, respectively, to each end of the steam-cylinder, substantially as described.

94,016.—NOAH MAYO and EBEN S. MORSE, Bath, Me.—*Show-Case for Counters.*—August 24, 1869.

Claim.—A counter show-case, constructed substantially in the manner as herein described.

94,017.—THOMAS MCCREARY, Matteawan, N. Y., assignor to himself, GEORGE M. SULLIVAN, and JOHN MCCREARY, same place.—*Umbrella.*—August 24, 1869.

Claim.—The combination of the holding-rings *b*, provided with radially-projecting pins, the braces and ribs provided with eyes for connection to the said pins, and the guard-rings *c*, either permanently or detachably connected to the holding-rings, substantially as specified.

94,018. — William McKay, Newburyport, Mass.—*Sail-Hank.*—August 24, 1869.

Claim.—The arrangement, as described, of the metallic guard D and rivets *b b*, with the roller-spindle C and the wooden bow A, the same being productive of an improved manufacture of sail-hank, provided with a friction-roller, as set forth.

94,019.—Antoine R. McNair, New York, N. Y.—*Wood Pavement.*—August 24, 1869.

Claim.—The construction and arrangement of the stretchers C C, chamfer-shouldered bridge-pieces or supports E E, and recessed or chamfer-shouldered paving-blocks G G, secured to the said stretchers by vertical, and to the supports by horizontal tree-nails, substantially as herein specified.

94,020. — Joseph Moore, Tarentum, Pa.—*Spring-Bed-Bottom.*—August 24, 1869.

Claim. — The combination of the longitudinal spring-bars A, transverse bars B, spring-followers C, straps E, and friction-rollers F, substantially as specified.

94,021.—David G. Morris, Catasauqua, Pa.—*Machine for Heading Bolts.*—August 24, 1869.

Claim.—1. The construction and arrangement, with relation to each other, and the cam I on the shaft K, of the adjustable die-holders A and B, and the carrier E, sliding on tongues or ways formed on the bracket H, and provided with set-screws *a*, for adjusting the cutter S relative to the cutter N, as herein shown and described.

2. The arrangement of the eccentric T, arms U, and set-screws V, with relation to the squared portion X of the shaft L, as set forth and shown.

94,022.—Jonah Newton, New York, N. Y.—*Saw-Teeth.*—August 24, 1869.

Claim.—1. The combination of the segmental tooth A and holding-spring B or S with a circular recess of a saw-plate or disk, either with or without the bolsters I, all constructed and arranged substantially as herein shown and described.

2. The improved spring-retracting instrument, constructed and operating substantially as above described.

94,023.—George Oldham, Westfield, N. Y.—*Clothes-Drier.*—August 24, 1869.

Claim.—The clothes-frame, composed of the post A, supported on pivoted legs G, having cam-ends and shoulders *g'*, the pivoted arms B C, crossing each other and pivoted together, and connected by cords E, and the sliding hub D, supported on spring F, when said parts are all constructed and arranged as herein described and shown.

94,024.—S. H. Partridge, Peterborough, N. H.—*Sled.*—August 24, 1869.

Claim.—The seat *a*, runner *b*, platform *c*, and runners *d*, combined and arranged in the manner above described, and for the purposes herein set forth.

94,025.—Edward Perry, Hopkinton, Mass.—*Spring-Bed Bottom.*—August 24, 1869.

Claim.—The arrangement and combination of the two series of "V-shaped springs" with the slats D, the frame A, and the two series of serpentine springs C, arranged together as set forth.

94,026.—John S. Perry, Albany, N. Y.—*Portable Heating-Attachment for Stoves.*—August 24, 1869.

Claim. — 1. A portable warming-attachment for stoves, consisting of a chest, A, a reservoir, D, and inlet and outlet-passages, adapted to operate substantially as described.

2. A portable warming-attachment for stoves, combining the following elements, to wit, a chest, A, an outlet-flue, C^2, a warming-closet, G, and an inlet-orifice, C, substantially as described.

3. The direct flue C^3, provided with a damper, *g*, and arranged, in the relation described, to the inlet-orifice C, for the purpose described.

4. The descending flue $C^1 C^2$, passing through the reservoir D, and extending down nearly to the bottom of the portable chest A, within which such reservoir is arranged, substantially as and for the purpose described.

94,027.—Charles Powell, Birmingham, England.—*Pump.*—August 24, 1869.

Claim.—1. The combination of the tube J, rod K, having stopper *j* and lid *k* thereon, tube *l*, and hollow stock A, all being connected and constructed as set forth, to cause the escape of water within the pump before it can freeze, in the manner described.

2. The combination of the chair-shaped wooden stock A, with air-chamber B and piston F, as and for the purpose specified.

3. The improved pump, the same consisting of the devices named and described.

94,028.—George Price, Peoria County, Ill.—*Saw-Sharpener.*—August 24, 1869.

Claim.—1. The vertical shaft F, having an arm, *d*, provided with a blade, in combination with the slots of the semicircular guide *y y*, and the movable saw-bed D, substantially as and for the purpose set forth.

2. The combination of the adjustable block *k k* and set-screw with the vertical shaft F, substantially as and for the purpose described.

3. The treadle G, lever *a*, and vertical shaft F, with spring *h*, in combination with the movable saw-bed D, substantially as described.

4. Providing the movable saw-bed D with a feed-device, *m*, for feeding the teeth of the saw to the file *q*, substantially as described.

5. The levers *i*, *k*, *l*, *m*, *n*, and *o*, spring *f f*, vertical bar *b*, and vertical arm *b b*, so constructed and operating as to give the required feeding-movement to the feed-device or bar *m*, substantially as described.

6. The arm *e* and vertical bar *b*, in combination with the shaft F, semicircular guide *y y*, and lever *i*, substantially as described.

7. The movable saw-bed D, with slide D', and block *g g*, having the feed-device or bar *m* pivoted to a post thereon, in combination with the circular bed-plate H and shaft F, when constructed, and operating substantially as described.

8. The bed-plate K, trough C, with arms *x*, spur-wheel V, and pinion, balance-wheel, crank W, and arm *u*, connecting with file-frame, all constructed and arranged as herein described,

9. The combination of the set-screws *t t t* with the guide *h h*, so that the required pitch or inclination may be given to the forward end of file, substantially as described.

10. The adjustable file-clamps *m m* and bar S, working in pendent slots from the arms *x* of the trough C, in combination with the arm *u* constructed and operating substantially in the manner and for the purpose as set forth.

11. The combination of the gauges *e e e e*, as arranged on the rod, with the saw-clamps E E, substantially as described.

94,029.—Alvin D. Puffer, Somerville, Mass.—*Application of Carbonated Waters in Medicine and Surgery.*—August 24, 1869.

Claim.—The attachment of the flexible hose C to the faucet B, in combination with the nozzle or sprinkler D and the vessel A, substantially and in manner as before described and explained.

94,030.—James Restein, Philadelphia, Pa.—*Fabric for the Manufacture of Collars, Cuffs, &c.*—August 24, 1869; antedated August 9, 1869.

Claim.—The within-described fabric, composed of the parts A and B, with the part A coated with a white enamel, C, or not, as desired.

94,031. — John Rigby, Fort Howard, Wis.—*Lamp-Lighter.*—August 24, 1869.

Claim.—1. The combination with a clock-dial and hour-hand, of the spring-arm S, perforated disk R, arm Q, slide P, when all arranged substantially as specified.

2. The combination of lever-slide P, having trigger-catch O upon one end, with the rod N, weight M, flexible connection K, lever A, and retainer H,

all together constituting the device for holding and releasing the spring-disk B, as described.

3. The combination of the two devices mentioned in above clauses of claim, with the spring-disk B, match-holder C, and wick-holder D, all connected and operating together as and for the purpose specified.

94,032.—JOHN ROBERTS, Greenfield, Ind.—*Corn-Row Marker.*—August 24, 1869.

Claim.—The combined arrangement of the frame B C K N, axle-tree A, wheels E E, driver's seat F, shovels or markers H, rods or links I, bar J, treadle or lever L, and pivoted handles M, substantially as herein set forth, for the purpose specified.

94,033.—DAVENPORT ROGERS, Mount Gilead, Ohio.—*Butter-Machine.*—August 24, 1869.

Claim.—1. The combination, with a hollow cylinder, having teeth *g*, and a revolving shaft, D, having the beveled teeth *b* spirally arranged thereon, of the hopper and power-plunger, all arranged, with respect to each other, substantially as shown and described.

2. The improved hollow cylinder B, having removable top *a*, inlet-hopper *d*, and outlet-aperture *e*, all constructed and formed in one piece, as and for the purposes specified.

94,034.—W. R. SANTLEY, New London, Ohio.—*Wagon-Reach and Hound.*—August 24, 1869.

Claim.—Forming the reach and the hounds of a wagon or carriage from a single piece of wood, substantially as shown and described.

94,035.—F. SCHENCK, San Antonio, Texas.—*Hair-Trigger.*—August 24, 1869.

Claim.—The hair-trigger attachment to the guard E, consisting of the hair-trigger B, the hair-trigger catch C, the handle-catch D, and the spring F, all constructed and operating substantially as and for the purpose described.

94,036.—F. SCHENCK, San Antonio, Texas.—*Hair-Trigger.*—August 24, 1869.

Claim.—1. The application, to the main trigger A, of the spring *a*, for the purpose of obtaining a yielding point of contact for the action of the hair-trigger mechanism.

2. The joint, consisting of the hair-trigger B, and of the hair-trigger catch C, when arranged on the guard of a gun or pistol, as set forth.

3. The spring-case F, with the arc *g* and the handle *h*, constructed and operating substantially as and for the purpose described.

4. The combination, with the main trigger A, of the spring *a*, lever F, hair-trigger B, and catch C, all arranged and operating substantially as herein shown and described.

5. The spring *c*, when arranged on the hair-trigger and guard, substantially as and for the purpose herein shown and described.

94,037.—FRANKLIN SCOTT, Brooklyn, N. Y.—*Insulator.*—August 24, 1869.

Claim.—The combination of the insulator, provided with the slot F, jaws C C, and ribs I I, with the slotted collar B, in the manner and for the purpose as set forth.

94,038.—PETER SHULTS, Rockwood, N. Y.—*Cant-Hook.*—August 24, 1869.

Claim.—The cant-hook, consisting of the stock or lever A, having the plated point B beveled on its upper side, the hook C, attached thereto by the bolt D and screw-nut E, and provided with the arm F and upwardly-projecting point *a*, the angular spring G, secured to the stock by screw-bolts H and D, all constructed, arranged, and operated as herein shown and described, and for the purpose specified.

94,039.—XAVIER SIMON, Akron, Ohio.—*Velocipede.*—August 24, 1869.

Claim.—1. The combination and arrangement of the crank-axle-tree A′, jointed links E, jointed axle-tree C′, levers J, and actuating-rods F, in the manner substantially as described and for the purpose specified.

2. The stud N, stay O, movable blocks L, axle-tree A′, and box A, all combined and arranged to operate in the manner as and for the purpose set forth.

94,040.—SIMON F. STANTON Manchester, N. H., and ORVILLE RIPLEY, Charlestown, Mass.—*Steam-Cylinder Oiler.*—August 24, 1869.

Claim.—1. The arrangement of the reservoir A, the cylinder B, outlet-chamber P, and conducting-pipes R R, when constructed in the manner herein described.

2. The arrangement of the cylinders B, valve H, and cylinder-head W, when constructed as shown and described.

3. The tubular piston-rod when constructed as described, with a partition, D, to regulate the movements of the valve H and connecting-rod E.

94,041.—DAVID A. STUBBLEFIELD and WILLIAM H. LUSE, Yazoo County, Miss.—*Plow.*—August 24, 1869.

Claim.—The coupling-bars A, B, and C, standards D, beams E, and double-tree L, cuff-irons F, and bolts *g*, when the whole is combined, arranged, and operated substantially as and for the purposes set forth.

94,042.—STEPHEN G. STURGES AND WILLIAM E. STURGES, Newark, N. J.—*Clip for Attaching Buckles.*—August 24, 1869.

Claim.—The clip described, when constructed and combined with a strap, in the manner and for the purpose specified.

94,043.—CORNELIUS SWARTWOUT, Troy, N. Y., assignor to himself, JOSEPH FOXELL, THOMAS JONES, and EDWARD W. MILLARD, same place.—*Waffle-Iron.*—August 24, 1869.

Claim.—The handle M, with the connecting-rod N, or its equivalent, and the device P, or its equivalent, arranged so as to loop or hook over the lug S, or any equivalent thereto, and forming rivets through the ears K and L, substantially in the manner and for the purposes as described and set forth.

94,044.—FENTON Y. TAVENNER, JOHN W. GALBRAITH, and ALFRED SMITH, Sedalia, Mo.—*Harrow.*—August 24, 1869.

Claim.—The combination, with the teeth, the framing, and the metallic bars A, of the levers C, D, and E, substantially as specified.

94,045.—N. O. J. TISDALE, New Orleans, La.—*Machine for Charging Gas-Retorts.*—August 24, 1869.

Claim.—1. The guide-way B, when constructed substantially as herein described, for the purpose set forth.

2. The charger C, when provided with the reversible bottom or apron D, and constructed and operating substantially as and for the purpose set forth.

3. The combination of the guide-way B and the charger C, when these parts are constructed, arranged, and conjointly operate substantially as described, for the purpose set forth.

94,046.—SIDNEY S. TURNER, Westborough, Mass., assignor to himself and WILLARD CORNEY, same place.—*Sewing-Machine.*—August 24, 1869.

Claim.—1. The combination and arrangement of the needle E^3, and hook C^3, operating substantially as described, and for the purpose set forth.

2. The tension-spring F^2, in combination with the fixed cams F^3 F^4, working substantially as described, and for the purpose set forth.

94,047.—S. F. VAN CHOATE, Boston, Mass.—*Breech-Loading Fire-Arm.*—August 24, 1869.

Claim.—1. The combination of a firing-pin and a trigger of a fire-arm, whereby the latter actuates the former directly without the aid of other lock-mechanism, for the purpose of exploding the cartridge by direct pressure rather than by the ordinary system of percussion.

2. As a positive mechanical movement, the employment of the cam-grade of the rod *l*, in combina-

tion with the studs c' f', on the firing-pin e, for the purpose before explained.

3. The combination and arrangement of the cam-block k and the rod l, the latter being prevented from revolving within the former, and provided with means of varying the friction or hold between it and the breech-bolt, for the purpose substantially as herein explained.

4. An improved fire-arm, composed of a breech-bolt, provided with a fixed or unyielding cartridge-retractor, a receiver, furnished with the permanent or immovable stop a', and a recoil-cam-block, provided with a variable friction-device to regulate the degree of friction between the two, the whole being combined substantially in manner set forth.

94,048.—Henry C. Varnum, Hartford, Vt.—*Horse-Rake and Hay-Spreader Combined.*—August 24, 1869.

Claim.—1. The revolving spreader D, in combination with the jointed side-bars of the frame C, and with the drive-wheel A, whether used with or without the rake J K L, substantially as herein shown and described, and for the purpose set forth.

2. An improved hay-rake, formed by the combination of the rake J K L, rotating spreader D, jointed side-bars of the frame C, axle B, and drive-wheels A, with each other, substantially as herein shown and described, and for the purpose set forth.

3. Jointing the side-bars of the frame C, when used in connection with the small wheels N, to adapt the machine for use upon inclined or uneven ground, substantially as herein shown and described.

4. The combination of the detachable cross-bar S with the gear-wheel F of the spreader D, and with the drive-wheel A, substantially as herein shown and described, and for the purpose set forth.

5. The combination of the lever I, shaft H, lever or crank-arm G, connecting-rod T, and sliding bearings E, with the frame C and shaft d' of the spreader D, substantially as herein shown and described, and for the purpose set forth.

94,049.—Jacob Stilenger Wayne, Quincy, Ill.—*Buggy-Top.*—August 24, 1869.

Claim.—1. The combination of the rear bows A and braces B with the remaining parts of a buggy-top, as and for the purpose specified.

2. The construction and arrangement together, in the manner specified, of the rear bows A E and braces F, as set forth.

94,050.—Theophilus Weaver, Harrisburgh, Pa.—*Corn-Sheller.*—August 24, 1869.

Claim 1.—In a sheller-jaw of two blades, N^2 N^3, the shuttle V L and the crooked rear guide g, arranged substantially as and for the purpose herein set forth.

2. The combination and arrangement of the shuttle-wings V L with benches W^1 and rests T, substantially as and for the purpose herein set forth.

3. Constructing the base of cone a with spring-rests T, benches W^1 C, and cuts D, all arranged as herein set forth.

4. The sliding clamp A^2 P^2 V^2 S^1 n^2 n^3 and standard B^2 m^2 l', constructed and arranged to operate substantially as and for the purpose herein shown and described.

5. Constructing frame O^2 B^4 M g S^4, as and for the purpose specified.

6. Constructing ease-body R^2 F' K^1 K^2 H, as and for the purpose specified.

7. The eduction-cob-rack X^4 Y^4 X Y A^1 and trip-slide T' F h l, arranged to operate substantially as herein described.

8. The locking-swivel-connection of miter-gearing m, with ease-body, as and for the purpose specified.

9. The combination and arrangement of miter-gear m with feed-cone c, and with hand-miter-wheel n, substantially in the manner as and for the purpose herein set forth.

94,051.—M. V. B. White, Ballston, N. Y.—*Sash-Stop.*—August 24, 1869.

Claim.—1. The rack-bars D D', when provided with flange d, as and for the purpose described.

2. The rack-bars D D', constructed as described, when used in connection with the catches c c, and operated by any suitable lever-device, to work both sashes, as and for the purpose described.

3. The device described, consisting of the rack-bars D D', stops c, and key B, the whole being constructed and arranged as and for the purpose described.

94,052.—Darius Wilcox, Chariton, Iowa.—*Fanning-Mill and Grain-Separator.*—August 24, 1869.

Claim.—1. The fans, Nos. 1, 2, and 3, when arranged substantially as described, for the purpose set forth.

2. The mill described, consisting essentially of the hopper a, riddles b c, grain-boards k d, and fans 1, 2, 3, when combined and arranged as and for the purpose described.

94,053.—James Wilson, Jr., New York, assignor to himself and William Quail, Williamsburgh, N. Y.—*Printers' Galley.*—August 24, 1869.

Claim.—1. The combination of an adjustable arm with an ordinary printers' galley, for the purpose set forth.

2. The arm B b^1, constructed substantially as described, and provided with a thumb-screw, b^2, in combination with the flange a', of an ordinary printers' galley, as and for the purposes set forth.

3. The gauge C, constructed substantially as herein shown and described, and provided with a thumb-screw, c', in combination with the galley A and adjustable arm B, as and for the purpose set forth.

94,054.—J. F. Wilson, Athens, Ga.—*Hoe.*—August 24, 1869.

Claim.—1. Attaching the blade of a hoe to the bar C, or its equivalent, by means of a dovetail groove in the bar, and a dovetail on the back edge of the blade, substantially in the manner described.

2. Attaching the blade to the bar or eye of a hoe by means of a groove, in such a manner that no other fastening than the friction produced by the blade (or by any device-attached thereto) shall be sufficient to hold it in place, substantially as described, whether such groove be dovetailing or not.

3. In combination with a blade thus attached, the opening D, substantially as described.

94,055.—Arthur M. Allen, New York, N. Y.—*Velocipede.*—August 24, 1869.

Claim.—1. The "foot-ratchets" and ratchet-arms, in combination with the driving-wheel of a velocipede, substantially as described.

2. The cranks d and connecting-rods c, in combination with the "foot-ratchets," and with the driving-wheel of a velocipede, substantially as set forth.

3. The bell-crank-levers g h, rods i, and springs f, in combination with the ratchet-arms E and foot-lever F, substantially as described.

4. The notched blocks a, in combination with the ratchet-arms E and ratchet-cones D, substantially as set forth.

5. The bracket k and shaft l, in combination with the pivot j, standard H, and wheel I, thereby giving to the standard H a double motion, viz, a swivel motion and a laterally-swinging motion, substantially as and for the purpose set forth.

6. Steering or balancing a velocipede by the rest n, connected to the standard of the steering-wheel, substantially in the manner described.

7. The combination of the hand-lever s with the swinging-saddle K and reach E, substantially as described.

8. The brake-shoes v, arranged to bear on the sides of the driving-wheel, instead of on its circumference, as set forth.

9. A wheel, having its tire constructed of end-grain sections w, fastened to the felly of the wheel by square-shouldered screws x, as described.

94,056.—Arthur M. Allen, New York, N. Y.—*Velocipede.*—August 24, 1869.

Claim.—1. A velocipede, having its front and hind wheels connected together by means of cross-cords or chains, through the medium of pulleys d f, of different diameters, so that the wheels will turn in the same direction, but at different angles, so as to de-

scribe different circles, for the purpose of steering, as set forth.

2. The sleeve *b*, in combination with the pivot *a* of the front-wheel-standard C, and with the pulleys *d f* and hind-wheel-standard E, substantially as shown and described.

3. The sockets *k* and *l*, in combination with the sleeve *b*, pivot *a*, pulley *d*, and standards C E of a velocipede, substantially as set forth.

4. The guide-rollers *g*, in combination with the ropes or chains *e*, reach D, and pulleys *d f*, on the front and hind-wheel-standards of a velocipede, substantially as described.

5. The angular bow H, attached to the standard of the front wheel of a velocipede, so as to turn with the latter in its various directions, as and for the purpose described.

94,057.—ARTHUR M. ALLEN, New York, N. Y.—*Velocipede.*—August 24, 1869.

Claim.—The rigid reach C, pulleys or levers G H, cross-rods or cords *b*, the removable yoke I, the adjustable braces K, standard D, and wheels E A, arranged together to form an improved velocipede, substantially as described.

94,058.—A. M. ALLEN, New York, N. Y.—*Mechanical Velocipede.*—August 24, 1869.

Claim.—In a toy-velocipede, operated as described, the two-part reach *a b*, pivot *c*, nut *d*, and spring-washer, combined and adapted for the purpose described.

94,059.—MATTHEW ANDREW, Melbourne, Australia.—*Pipe-Coupling.*—August 24, 1869.

Claim.—1. A capsule-tap, consisting of the cap or cover *b*, the adjustable tube *c*, and outer tube or socket *d*, the said tubes being provided with cork or other suitable lining or packing, and with holes or apertures arranged to be opened and closed by the adjustment of the tube *c*, which is formed and arranged to leave no part projecting beyond the cover *b*, and is secured by a thin plate or sheet of metal, *e*, all substantially as and for the purposes set forth.

2. A can or vessel for containing oil or other liquid, provided with one of the capsule-taps, substantially as set forth.

94,060.—DINSMORE AUSTIN, Sheldon, Vt.—*Foot-Warmer.*—August 24, 1869; antedated August 17, 1869.

Claim.—The box A, with glass sides and end, and door B, lantern C, plates E and D, with hot-air chamber between them, perforated roof F, with V-shaped plates *b b*, all constructed and arranged substantially as and for the purposes set forth.

94,061.—WILLIAM W. BALLARD, Elmira, N. Y.—*Machine for Sawing Paving-Blocks.*—August 24, 1869.

Claim.—The feed-table M, when made adjustable, as herein described, for the purpose of cutting blocks for street-pavements at any desired angle.

94,062.—WILLIAM W. BALLARD, Elmira, N. Y., and BUREN B. WADDELL, Memphis, Tenn.; BUREN B. WADDELL assigns his right to WILLIAM W. BALLARD.—*Wood Pavement.*—August 24, 1869.

Claim.—1. As an article of manufacture, wedge-shaped blocks, having the grain running parallel to one and oblique to the other of their beveled sides, and produced substantially in the manner referred to.

2. A wooden street-pavement, constructed, substantially as hereinbefore described, of wedge-shaped blocks, with the grain running, and produced in the manner and for the purpose set forth.

94,063.—WILLIAM W. BALLARD, Elmira, N. Y., and BUREN B. WADDELL, Memphis, Tenn.; BUREN B. WADDELL assigns all his right to WILLIAM W. BALLARD.—*Mode of Cutting Blocks for Wood Pavement.*—August 24, 1869.

Claim.—The herein-described method of cutting blocks for wooden pavement, so as to form, by two cuts, or one cut and one splitting, two finished blocks, with the top and bottom level, or in parallel planes, and the sides beveled, one side being inclined with the fiber, and without waste of material, substantially as set forth.

94,064.—JOHN BARCLAY, Attleborough, Mass.—*Manufacture of Plated-Metal Bracelets.*—August 24, 1869.

Claim.—The improved manufacture of plated-metal bracelets, as made with the turned parts or beads E E, arranged, with respect to the plates C D and their platings *p p'*, in manner substantially as represented and described.

94,065.—LORENZO BARTLETT, Cardington, Ohio.—*Combined Seeding-Machine and Cultivator.*—August 24, 1869.

Claim.—The plows B', shaft *m*, chains E', supplementary bottom G', shield M, and valve *e*, all constructed, and arranged, and combined to operate as and for the purpose substantially as described.

94,066.—ALBERT BETTELEY, Boston, Mass.—*Wood Pavement.*—August 24, 1869.

Claim.—A pavement composed of blocks, the face of each one of which is rhombic, or rhomboidal, and the four sides of which incline to the bed of the road, each being held down at two adjacent sides by its adjoining blocks, substantially as shown and described.

94,067.—A. C. BRINSER, Middletown, Pa.—*Cultivator.*—August 24, 1869.

Claim.—1. The combination of the platform F and G and seat H, substantially as shown and described.

2. The axle A A' in combination with the curved arms C and E, when constructed substantially as shown and described.

94,068.—A. W. BROWNE, Brooklyn, N. Y., assignor to himself and the New York Toy-Manufacturing Company.—*Mechanical Movement.*—August 24, 1869.

Claim.—1. The mechanical movement, constructed substantially as herein described.

2. The combination of the tubular shaft G and the axle or shaft F, when arranged to clutch together for the purpose of winding up the spring, substantially as described.

94,069.—J. R. BROWN, New Haven, Conn.—*Pipe-Coupling.*—August 24, 1869.

Claim.—The combination of the socket B with the connection D, formed as described, with the flanged cylinder A, yoke F, and set-screw I, as and for the purpose specified.

94,070.—J. H. H. BUELL, Oriskany, New York.—*Trace-Buckle.*—August 24, 1869.

Claim.—1. The wedge C, having the two flanges formed on its top, as described, and provided with the two projections *a* and *g*, substantially as shown.

2. The frame A, provided with the loops B and inclined planes *o*, in combination with the wedge C, when used to form a trace-buckle, substantially as specified.

94,071.—FRANK BURNS, Upper Gilmanton, N. H.—*Knitting-Machine.*—August 24, 1869.

Claim.—The "needle-protector" E, formed and arranged upon a knitting-machine, substantially as and for the purpose herein specified.

94,072.—NELSON BURR, Batavia, Ill.—*Grinding-Mill.*—August 24, 1869.

Claim.—The combination of the two similar grinding-disks, here shown, each provided with the long ridges *a* and *d*, and the intervening shorter ridges *b* and *c*, all constructed and arranged as herein set forth.

94,073.—W. T. BUSH, Obion County, Tenn.—*Manufacture of Soap.*—August 24, 1869.

Claim.—The combination of the said ingredients, when the same are manufactured into soap, substantially as set forth.

94,074.—JOSIAH BUZBY, Crosswicks, N. J.—*Water-Wheel.*—August 24, 1869.

Claim.—1. The turbine water-wheel, having arranged around the periphery thereof a series of pivoted vibrating chutes E and stops *c*, whereby the said chutes are rendered adjustable and yielding to the passage of any unusual substance, without breakage or injury to any of the parts, and yet without possibility of coming in contact with the buckets, all as described.

2. The said chutes, with their discharge-ends drawn to a sharp edge, and arranged in close proximity to the buckets, while the plane of the chute-face is at right angles, or nearly so, to that of the bucket-face, thus causing the current of water to impinge with all its natural force, substantially as set forth.

3. The combination, with the described chutes E, of the swinging gates F F, with packing-strips, arranged as described, so as to regulate the ingress of water, or to shut it off entirely, in the manner specified.

94,075.—William H. Carpenter, New York, N. Y.—*Basket.*—August 24, 1869.

Claim.—The combination of the arched wicker bottom B, and the flat solid bottom B′, with each other, and with the sides of the basket, constructed substantially as and for the purpose herein described.

94,076.—A. J. Chambers and Thomas Jackson, New Washington, Ohio.—*Hog-Elevator.*—August 24, 1869.

Claim.—1. The beam A, pivoted on the sills B and supported by the collar D and braces C, and having the wheel E secured to its top, in the periphery of which are placed the hooks V, substantially as set forth.

2. The arm L, provided with a pulley at each end, in combination with the pulley-block G, when used substantially as set forth.

3. Wheel E, provided with the hooks V, arm L, pulley-block G, windlass P, provided with a pawl and ratchet, braces C, collar D, ground-sills B, rope H, and hook T, when all are combined to form an elevating-machine, substantially as set forth.

94,077.—J. Burchard Chapman, Morrison, Ill.—*Corn-Planter.*—August 24, 1869.

Claim.—1. The combination of the axle B with the shaft B′, being arranged, with reference to the frame and seed-boxes, so as to operate substantially as shown and described.

2. The combination, in a seed-box, of the seed-slide E with the dropper E′, substantially as and for the purpose set forth.

3. The combination of the rock-shaft F, having the levers F^1 and F^2, with the seed-slides E, and droppers E′, substantially as shown and described.

4. The combination of the rock-shaft F and lever F^3, having a counterweight, substantially as and for the purpose set forth.

5. The combination of the shoe G with the lever F^1, of the rock-shaft F, and the chain H, or its equivalent, arranged to operate substantially as shown and described.

6. The stake I, constructed substantially as shown and described.

94,078.—James Clayton, Brooklyn, N. Y.—*Valve for Pumps.*—August 24, 1869.

Claim.—The arrangement of the cap C and spring *b*, on the stem *c* of the valve B, in combination with the seat A, substantially as shown and described.

94,079.—Charles L. Coombs, Washington, D. C.—*Composition for Gumming Postage and Revenue Stamps.*—August 24, 1869.

Claim.—1. The method or process of forming mucilage for stamps, envelopes, and similar articles, by compounding tannin and gelatine, with or without albumen, in the manner substantially as herein described.

2. As a new manufacture for coating stamps, envelopes, and similar articles, a mucilage formed by compounding gelatine and tannin, with or without albumen, substantially in the manner herein described.

3. As a new article of manufacture, stamps, envelopes, and similar articles, coated with a mucilage formed by compounding tannin and gelatine, with or without albumen, substantially as herein described.

94,080.—Charles L. Coombs, Washington, D. C.—*Composition of Matter for Various Uses in the Arts.*—August 24, 1869.

Claim.—1. The soluble compound of tannin and gelatine, herein described.

2. The compound of tannin, gelatine, and albumen, herein described.

3. The use of tannin, or the mineral tanning-agents, such as alum, the salts of iron, zinc, lead, or their equivalents, for rendering articles, when treated with my composition, insoluble, as herein described.

4. The use of carbolic acid, creosote, or their equivalents, for hardening or rendering insoluble articles treated with my compound, as herein described.

94,081.—Edwin Cowles, Cleveland, Ohio.—*Railroad-Conductors' Ticket-Box and Fare-Detector.*—August 24, 1869.

Claim.—1. A portable cellular ticket case, A A′ B, provided with an arm-ring, C, and a handle, D E, constructed substantially as described.

2. The arrangement, within a case, A, having a slotted face, A′, and a hinged or movable back, B, of a number of ticket-cells, each one of which contains a ticket-extractor, J, and a stop, *c*, substantially as described.

3. A cellular ticket-case, constructed with a slotted face, A′, and with a space, N, between the rear ends of the cells and a ribbed back, B, substantially as described.

4. The combination of a cellular ticket-case with a punch and receptacle for the punchings, substantially as described.

5. A canceling-punch, H, applied to spring-head F, in combination with a receptacle, E, and a locking-device therefor, substantially as described.

6. A canceling-punch, H, and dating-types *n*, applied to a spring-head, F, and combined with a receptacle, E, and a locking-device, substantially as described.

7. The division-slide d^3, in combination with a punching-device and a receptacle for the punchings, substantially as described.

8. An extractor, J, constructed with tines upon its front end, substantially as and for the purposes described.

9. Notching the hooked ends of the extractors, substantially as and for the purposes described.

10. The stops E, upon the bottoms of the ticket-cells, in combination with extractors having tines formed on their front ends, substantially as described.

94,082.—Philipp Cramer, Barrington, R. I.—*Clothes-Wringer.*—August 24, 1869.

Claim.—The combination, in a clothes-wringer, of the upper operating-roller A with a central elastic roller, C, with its supporting-roller D and a lower roller, B, with an elastic adjustable bearing, spring-frame or carrier, with elastic spring and thumb-screw, arranged as shown and described.

94,083.—Jay M. Crosby, Marathon, N. Y., assignor to himself, William Ballard, and Frank Livingston. — *Railway-Car-Brake.* — August 24, 1869.

Claim.—1. A car-brake, the power to which is applied by means of the false bumper W *g g f*, by the pressure thereon occasioned by stopping the engine, or other means of locomotion attached to the car, in connection with the rods or chains *p p′*, *q q′*, *r r′*, springs *h*, coils *z*, and levers *i*, *k*, *l*, *m*, *n*, and *o*, substantially as herein described, and for the purpose set forth.

2. The united arm *j* and levers *i* and *k*, in connection with the chains *s* and *t*, and post or standard *x*, and the rods, bars, levers, chains, coils, and springs mentioned in the first claim, as herein described, and for the purpose set forth.

3. The self-adjusting blocks or brake-pads *d*, in connection with the parts above mentioned and claimed as herein described, and for the purpose set forth.

94,084.—William B. Davis, Brooklyn, N. Y.—*Composition for Covering Steam-Boilers, Pipes, and other Articles.*—August 24, 1869.

Claim.—The new composition, substantially as above described, and its use as a coating or covering for metallic articles.

94,085.—A. B. Davis, Philadelphia, Pa., assignor to himself and William C. Ewing, same place.—*Duplex Wrench.*—August 24, 1869.

Claim.—A duplex wrench, consisting of the screw-shank A, its permanent serrated jaw B, the slotted serrated jaw B′, its arms *f f′*, and yoke D, inclosing the nut F and the spring *i*, the whole being arranged and operating as herein described.

94,086.—Marinus De Graff, Chicago, Ill.—*Street-Car.*—August 24, 1869.

Claim.—The combination of the rack-shaft E and wheel *g* with the pinion *d*, spur-wheels *c* and *b*, ratchet-wheel *a*, and double-acting pawl *f*, substantially as and for the purposes specified.

94,087.—Solon Dike, New York, N. Y., assignor to himself and John A. Phillips, same place.—*Combined Supporter.*—August 24, 1869.

Claim.—1. The back-piece A, shoulder-pieces B B, and straps C C, when the latter are adjusted, by one buckle, in the center of the back-piece, to form an adjustable shoulder-brace, substantially as herein set forth.

2. A body-brace, when formed of the combination of a shoulder-brace, spinal brace, abdominal brace, rupture-brace, and removable uterine brace, all constructed and connected substantially in the manner and for the purposes herein set forth.

94,088.—Charles E. Doane, Brooklyn, E. D., N. Y.—*Label-Fastener.*—August 24, 1869.

Claim.—The within-described label-fastener, consisting of the plate A, having partially cut therefrom the diagonally-pointed strips *a* and *a*, so as to leave in the center thereof the opening B, substantially as and for the purpose shown.

94,089.—Benjamin Dobson and William Slater, Bolton, England.—*Lifting Flats in Self-Stripping Carding-Engines.*—August 24, 1869.

Claim.—1. The mechanical combination and arrangement of the parts marked G, H, and I, the slides X, and the springs X^3, for lifting and drawing down the top flats.

2. In combination with the above, the wheel Y and the catch Z, or their equivalents. to prevent the cross-driving-shaft being driven in the wrong direction.

94,090.—Alfred M. Dorman, Philadelphia, Pa.—*Hames-Fastener.*—August 24, 1869.

Claim.—1. Connecting the two parts, B and C, together, by means of a hinge-joint, having its tongue *b‴*, on the part B, and its jaws *e″ c″* and slot *c‴*, on the part C, and the width of the parts B and C thereat alike, substantially as described and shown, for the purpose specified.

2. The fixed projection *b′*, across the outer or under side of B, substantially as and for the purpose described.

3. The loop or slot *a″*, on the edge of bar A, substantially as and for the purpose described.

4. In combination with the bar B, the loose ring *b″*, applied so as to operate substantially in the manner described, for the purpose specified.

94,091.—C. Duclos, New Harmony, Ind.—*Steam-Engine Governor.*—August 24, 1869.

Claim.—The vertically-slotted tube B, slide G, and rod J, in combination with the balls D D and horizontal arms C, with springs E and nuts L, when said slide is connected to the balls by means of the arms F, which are hinged to the balls and to the slide, substantially as set forth.

94,092.—John H. Elward, Palo, Ill.—*Wash-Boiler.*—August 24, 1869.

Claim.—The combination of the partition D, spreader C, and tube B, substantially as herein shown and described.

94,093.—James G. Evans, Saint Louis, Mo.—*Oil-Can.*—August 24, 1869.

Claim.—An oil-can provided with an eduction-tube, A, on the inside of the can, in connection with a recess, C, below the general surface of the bottom of the can, and an air-tube, B, for admitting air through the bottom of the can, and conducting the same to the top of the can, substantially in the manner and for the purposes set forth.

94,094.—Michel G. Fagan, Troy, N. Y.—*Coal-Shovel.*—August 24, 1869.

Claim.—As a new article of manufacture, the within-described coal-shovel, consisting of the cast neck A, sheet-metal body B, and shank C, provided with the ribs E E, all constructed and arranged substantially as and for the purpose specified.

94,095.—D. J. Farmer, Wheeling, West Va.—*Machine for Making Horseshoe-Nails.*—August 24, 1869 ; antedated August 16, 1869.

Claim.—1. In combination with the four reciprocating wedge-shaped arms, constructed to operate as described, and the dies and the head-block E, the blocks H, and adjusting-screws K, for the purpose set forth.

2. The arrangement of the several parts of the main apparatus, as above described ; that is to say, the block D, the four long arms M N, each having the shoulder *m n*, the circular disk or head E, having the central aperture F, the four dies, the springs *s s* working in a recess in the side of the dies, the blocks H, the adjusting-screws K, the crank C, and the shaft B, all constructed, connected, and operating together, in the manner herein set forth.

94,096.—Maurice Fitzgibbons, New York, N. Y.—*Bureau-Drawer.*—August 24, 1869.

Claim.—A bureau-drawer, lined with Spanish cedar, of the construction mentioned, and having a cover *v*, lid *s*, and gummed strips, as described, arranged and operating substantially as and for the purposes specified.

94,097.—Joseph P. Frizell, Keokuk, Iowa.—*Stone-Drilling Machine.*—August 24, 1869.

Claim.—1. The arrangement and combination of the friction-jaws *j j*, with the valve-rod, its valves, and operative mechanism applied to it, and the cylinder and piston, as specified.

2. The combination and arrangement of the elastic retainer *r*, and cammed bar F, with the cylinder, and the ratchet of the piston, and drill-shaft, as set forth.

3. The arrangement and combination of the bent lever, pawl *l*, the spring l^2, and the stationary gear *i*, with the crank K, its shaft *h*, and the pinion *f*, and the rack *g*, for effecting the longitudinal movement of the steam-engine within the frame of the machine.

94,098.—George W. Fry, Uxbridge, Mass.—*Interfering-Pad.*—August 24, 1869.

Claim.—1. The elastic strap, or its equivalent, for the purposes described.

2. The metal strip and hook, when used as and for the purposes described.

3. The elastic strap, in combination with the metal strip and hook, or their equivalent, when applied substantially as specified, for the purposes described.

94,099.—Eugene G. Gaillic, Eastport, Me.—*Apparatus for Furling Sails.*—August 24, 1869.

Claim.—1. The combination and arrangement of the buntlines, rollers, ring, and track, herein described, when operated to haul a sail, substantially as specified.

2. The combination and arrangement of the top-sail halyards *h*, top-sail braces *a*, buntline *j*, earing-outhauls *i*, and rings and track, as described, when operated, as specified, to reef a sail, substantially as set forth.

3. The combination and arrangement of the bunting-gasket line *k*, buntline *j*, reef-tackle *d*, top-sail braces *a*, ring *q*, with its downhaul, top-sail sheet *c*, top-sail halyards *h*, and earing-outhauls *i*, when the

same are operated to set a sail, substantially as described.

4. The combination and arrangement of the top-sail halyards *h*, top-sail sheet *e*, clew-line *c*, buntline *j*, bunting-gasket line *k*, and ring *q*, when operated to furl a sail, substantially as specified.

5. The sheaves *o* and *n*, and the ring *p*, when combined and operating substantially as and for the purposes described.

6. In combination with the sail-furling and tautening-apparatus herein specified, the clews attached to the center of the yard, that hold the sail and roller to the track, and to which the middle of the sail is bent, substantially as and for the purposes specified.

94,100.—PERRY G. GARDINER, New York, N. Y. —*Car-Spring.*—August 24, 1869.

Claim.—1. The arrangement of a casing, A, constructed with a circular channel, B, either with parallel or tapering sides or walls, in combination with a number of India-rubber columns, C, placed therein side by side, and acted upon by a suitable cover or plunger, F, or its equivalent, the whole being arranged and combined in the manner and for the purpose described.

2. In combination with the above, a spiral metal spring, G, arranged inside of the circular channel in the casing, and operating substantially in the manner and for the purpose set forth.

94,101.—PERRY G. GARDINER, New York, N. Y. —*Railway-Car Spring.*—August 24, 1869.

Claim.—The arrangement of a cork cylinder surrounded by a spiral metallic spring, constructed and combined substantially in the manner and for the purpose described.

94,102.—CHARLES L. GARFIELD, Albany, N. Y. —*Snow-Plows for Railways.*—August 24, 1869.

Claim.—1. The combination of the incline plane *a a*, the horizontal plane *b*, the guide or director *d d*, and the wheel *c c c*, for united action, substantially as described.

2. The supporting-wheels *w w*, and connecting-axle *s s*, at the front of the incline plane *a a*, in combination with such incline plane, horizontal plane *b*, director *d d*, and wheel *c c c*, for united action.

3. The front wings *e e*, in combination with the incline plane *a a*, the horizontal plane *b*, director *d d*, and wheel *c c c*, substantially as described.

4. The case *o o o o*, in combination with the turbinated wheel *c c c*, and the truck, pulley, wheels *r r*, *p p'*, substantially as described.

5. The outer casing *k e*, in combination with the incline plane, the horizontal plane, the director, and the wheel *c c c*, for united action, as described.

6. The incline plane, the horizontal plane, and turbinated wheel, in combination.

94,103.—ROBERT GILL, New York, N. Y., assignor to ELLIOTT P. GLEASON, same place.—*Gas-Burner.*—August 24, 1869.

Claim.—The combination of the slot *a* and the conducting-grooves *s s* in the burner-tip, substantially as and for the purpose herein described.

94,104.—LEVI GRISWOLD, Portland, and GEORGE CAUL, York, Wis.—*Steam-Engine.*—August 24, 1869.

Claim.—1. The combination of the induction-valves of a steam-engine with a crank placed upon the shaft thereof, when so constructed and arranged that such valves may be used to carry the crank of the working or main cylinder past or away from the dead-centers or points, substantially as shown and described.

2. The arrangement of the valves or pistons upon rod F, with reference to cranks *k* and *k'*, upon the main shaft of an engine, it being such that the pressure applied to the ends of such pistons may be used to carry the cranks of the main or working-cylinders past or away from the dead-centers, in its revolution, substantially as shown and described.

94,105.—GEORGE HALL, Morgantown, West Va.—*Hand Seed-Sower.*—August 24, 1869.

Claim.—1. The distributing rod or bar K, provided with diamond-shaped recesses *b b*, and vertical grooves *e e*, substantially as and for the purposes herein set forth.

2. In combination with the distributing-rod or bar K, having the recesses *b b* and notches *e e*, the seed-box A, having perforated bottom B, and a suitable device for operating the rod, substantially as and for the purposes herein set forth.

94,106.—RICHARD HANEY and JAMES S. ESTES, Peoria, Ill.—*Cultivator.*—August 24, 1869.

Claim.—1. The axle *l*, with flanges *t'* and *z'*, substantially as shown and described.

2. In combination with a plow-beam, the plates *e e*, with flanges, bolt *d*, box *b b*, and journals *a a*, substantially as shown and for the purposes specified.

3. In combination with an axle *l*, and flange *z'*, the box *b b*, journals *a a*, plates *e e*, and bolt *d*, as shown, and for the purposes specified.

4. In combination with an axle *l*, having flange *t'*, and cap *p*, having flange *v'* encircling and covering the tapering ends of the hub, the wheel L, as shown and described.

5. In combination with the bars M M, and adjustable connecting-rods *m' m'*, the cross-beam A, standards B B B B, pole D, with branches E E and braces *c c c' c'*, substantially as shown, and for the purposes specified.

94,107.—MICHAEL HASTINGS, Brooklyn, N. Y.—*Pipe-Wrench.*—August 24, 1869.

Claim.—The combination, with the outer jaw or claw A, pivoted to the lever-handle B, of the inner jaw or tooth C, fitted to freely slide on the shank of the outer jaw, the freely-sliding supporting-collar or stop D, and the nut E, arranged to fit a screw-thread on the forward end of the lever-handle, substantially as specified.

94,108.—GEORGE HERRICK, Waverly, N. Y.—*Musical Instrument.*—August 24, 1869.

Claim.—The musical instrument herein described, having keys *d*, studs *s*, dogs *h*, pawls *k*, drums *a*, with teeth *b*, ratchet-wheel *t*, springs *x*, *y*, and *z*, and comb *c*.

94,109.—CHRISTIAN HESSE, Champaign, Ill.—*Safety-Door for Buildings.*—August 24, 1869.

Claim.—The cam-lever C, with handle *c* and bolts *c'*, when arranged on the edge of the casing of a safety-door, of the described construction, in such manner as to conceal all but the handle, substantially as and for the purpose described.

94,110.—PHILIP HIGDON, Lewisport, Ky.—*Baling-Press.*—August 24, 1869.

Claim.—1. In the described combination with a "press-box," A B C C, elevating-mechanism *g* I J, and a suitable tripping-device, the percussion-follower F G, constructed and arranged to operate as herein represented and described, for the purpose set forth.

2. The tripping-mechanism K L *f*, operating in combination with the follower F, pinion I, and rack *g*, substantially as described.

94,111.—OTIS J. HODGE, North Adams, Mass.—*Water-Wheel.*—August 24, 1869.

Claim.—1. The wheel D, furnished with buckets *i i*, arranged substantially as and for the purpose set forth.

2. The movable frames G G, constructed and operated substantially as and for the purpose set forth.

3. The chutes H, constructed as and for the purpose specified.

4. The sliding gates N N, constructed and operating substantially as set forth.

5. The combination of the chutes H H and the sliding gates N N, substantially as set forth.

6. The combination, substantially as herein set forth, of the wheel D, movable frames G G, chutes H H, and gates N N.

94,112.—GEORGE W. HOFFMAN, Hick's Mills, Ill.—*Sewing-Machine.*—August 24, 1869.

Claim.—1. The above-described arrangement for operating the shuttle and feed-devices, consisting

substantially of the connecting-bar b^2, adjustable bell-crank b^3, and rods C and C′, in combination with the needle-arm B^3, arranged and operated as and for the purpose set forth.

2. The feeding-dog D and reciprocating-rod C′, for operating it, in combination with the adjustable arm E, for varying its movement laterally, and, consequently, the feeding-motion, substantially as set forth.

94,113.—Thomas S. Hudson, East Cambridge, Mass.—*Manufacture of Inkstands.*—August 24, 1869.

Claim.—Forming the bottom of a glass ink or mucilage-stand by first shaping into flaps its extended side or sides, and then closing in these flaps, substantially as described.

94,114.—W. W. Hughes, Philadelphia, Pa.—*Malt-Kiln and Malt-House.*—August 24, 1869.

Claim 1.—The drying-chambers D D^1 D^2, &c., arranged one above another, and having perforated floors, on a level, or thereabout, with the floors of an adjacent malt-house, substantially as herein described.

2. The partitions *d* of the said chambers, inclined upward from the hot-air-flues *n*, substantially in the manner described.

3. The dampers *i*, so arranged between the furnaces, or in the flues of the same, that they can be used to direct the heated air into any or all of the drying-chambers, as may be required.

4. The slatted valves *k*, arranged at the back of each fire-place, for the purpose of regulating the direction of currents of cold air into the same, substantially in the manner described.

94,115.—Michael T. Hynes, Boston, Mass., assignor to himself and Patrick J. Whelton, same place.—*Ventilator.*—August 24, 1869.

Claim.—The casing B, with its apertures *d*, in combination with the pipe A, extending up within it to a level with the center of said apertures, when constructed and arranged substantially in the manner and for the purpose described.

94,116.—H. M. Irwin, Charlotte, N. C.—*Construction of Houses.*—August 24, 1869.

Claim.—1. A building hexagonal in form, when its entire interior area is divided by partitions D E into hexagonal and lozenge-shaped rooms, said rooms all communicating with each other through openings *e e*, substantially as described, and for the purpose specified.

2. The chimney-stack G, arranged at the junction of the partitions D D of the hexagonal rooms B B B, when the same is provided with flues communicating with the fire-places *g g g*, substantially as described, as and for the purpose specified.

94,117.—William H. Ivens and William E. Brooke, Trenton, N. J.—*Machine for Punching and Shearing Metal.*—August 24, 1869.

Claim.—1. The combination and arrangement of the eccentric elliptic gears *n n′* and *p p′*, and their cams *q q′*, with the elbow-levers *r r′*, or their equivalents, for operating the punching or shearing-heads B B′, substantially as set forth.

2. The combination of the rotating punch-holder *v′* and adjustable disk E, of the stripper D, with the adjustable die *w*, substantially as specified.

3. The combination of the cam *d′* and retaining-lever *c′* with the stripper D, provided with suitable adjustments *a″* and *a‴*, substantially as set forth.

4. The arrangement of the driving-gears *g h k l* and operating-gears *p p′ n n′*, and their cams *q q′*, above and between the cutting and punching-heads, substantially as shown and described, for the purpose set forth.

94,118.—Daniel Johnston, Sulphur Springs, Ohio.—*Hand-Rake.*—August 24, 1869.

Claim.—The combination of the head A and teeth B B with the clamp C and socket D, all constructed and arranged substantially as shown and described.

94,119.—John P. Kirk, Brooklyn, E. D., N. Y.—*Toy-Pistol.*—August 24, 1869; antedated August 14, 1869.

Claim.—1. The toy-pistol or gun, arranged and operated as described, as a new article of manufacture.

2. The use of a close-fitting piston arranged in front of a spring, for the purpose of compressing the air in the barrel of a pistol or gun, as set forth and described.

3. The arrangement for compressing a spring by means of a cord, pulley, and lever, or their equivalents, for the purpose of compressing the air in the barrel of a pistol or gun.

4. Closing air-tight the barrel of a pistol or gun, at or near its front end, and compressing the air behind it by means of releasing a compressed or stretched spring.

94,120.—George S. Knapp, Winona, Minn.—*Photographic-Camera Stand.*—August 24, 1869.

Claim.—1. The frame C, provided with the ball *i*, bearing in the socket *j* of post G, and having the hinged segments *e* and *f*, arranged as described.

2. The detachable and adjustable frame D, provided with the picture-holder *y*, having the clamps *f′* and *a′*, arranged as described.

3. The combination of the sliding bar *p*, with its clamp *k′*; cam-lever *t*, and spring *m*, all arranged to operate in connection with the points *i*, substantially as described.

4. The combination of the cupboard A, adjustable standard B, and frame C, when arranged as set forth.

5. The bar *y*, made adjustable both vertically and laterally on the frame D, and carrying the stationary head *f′* and adjustable head *a′*, all arranged to operate as described.

94,121.—Jacob R. Manny, Chicago, Ill., assignor to himself and Allen C. Selleck, same place.—*Diaphragm for Wash-Boilers.*—August 24, 1869.

Claim.—The diaphragm or false bottom C, when provided with the water-passages D and openings E, to furnish sufficient water for the tube, and leave a thin film of water between such passages, for rapid conversion into steam, substantially as specified.

94,122.—Merrick D. Marcy, Worcester, Mass.—*Machine for Making Bolt-Heads.*—August 24, 1869.

Claim.—1. In combination with the bed A, the bolt-holder H, the upsetter G, and the series of hammers I I, K K, provided with mechanism for operating them, as explained, a mechanism for gradually raising the bed while the bolt is being headed, such mechanism consisting of the wedge B, and the rack *k*, and pinion *i′*, or the equivalent thereof, for moving such wedge underneath the bed.

2. Also, in combination with the bed A, the bolt-holder H, the upsetter G, the hammers I I, K K, and the wedge, or mechanism for raising the bed, as and for the purpose described, a mechanism for causing the sudden depression of the bed, immediately after the heading of the bolt may have taken place, such mechanism being not only a weight, *v*, connected to the bed by a line, *t*, going over a pulley, *u*, but a clutch *w*, or means of engaging and disengaging the driving-pulley *g* of the pinion-shaft *h* with such shaft, as described.

94,123.—Solomon Metzger, Newberry, Pa.—*Vegetable-Cutter.*—August 24, 1869.

Claim.—The within-described vegetable-cutter, consisting of the frame A A, B and B, the hopper C, the cutter-head D, provided with the slot *d* and double cutter E, the crank-shaft F, the pitman G, the pinion H, and gear-wheel I, all constructed and arranged to operate substantially as and for the purpose specified.

94,124.—William A. Middleton, Harrisburgh, Pa.—*Fence-Post.*—August 24, 1869.

Claim.—A metallic socket, provided with the soil or skeleton-screw *b d e*, constructed as described, and used in combination with the wooden fence-post B, substantially as and for the purposes herein set forth.

94,125.—Henry Miller, Roadside, Va.—*Garden-Implement.*—August 24, 1869.

Claim.—The combination of the stock A with the implements herein described, in the manner substantially as set forth.

94,126.—James H. Moffett, Reading, Mich.—*Wagon-Reach.*—August 24, 1869.

Claim.—An extension-reach for wagons, having arms, A, reach B, bolts *s*, and springs *v*, constructed and arranged to operate substantially as specified.

94,127.—William R. Oatley, Rochester, N.Y., assignor to himself, E. H. Scranton, and L. G. Wetmore, same place.—*Card-Holder.*—August 24, 1869.

Claim.—As a new article of manufacture, a stationery-case, or rack, constructed of wire, substantially as described.

94,128.—Jairus Osgood, Blue Hill, Me.—*Machine for Making Sod Fence.*—August 24, 1869.

Claim.—1. The combination of the cutters G G H, with the incline B, the laterally-swinging platform I, and the delivering-part K, arranged and connected so as to adapt them to cut out the sod, and deposit it at the side of the track made by the machine, substantially as and for the purposes set forth.

2. In combination with the parts I K K′, constructed and operating as above set forth, the guide-sled L, as and for the purpose specified.

3. The combination of the adjustable rollers *s l* with the guide-sled L, as and for the purpose set forth.

4. The combination of the incline B or K, with the laterally-swinging platform I, the vertically-swinging connecting-piece B′ or K′, and the joints *b a*, or *k i*, substantially as and for the purposes herein set forth.

94,129.—Nathaniel Parks, Mohawk, N. Y.—*Wash-Boiler.*—August 24, 1869.

Claim.—The bridge or curved strips D D D, in combination with the diaphragm B and boiler A, and the device for fastening, C C, F F F, and E E E, as shown and described.

94,130.—Paul Pryibil, New York, N. Y.—*Machine for Turning Ovals.*—August 24, 1869.

Claim.—1. The balance-slide F, connected to the movable face-plate D of a lathe for turning ovals, by a lever, *f*, substantially in the manner shown and described.

2. The additional weights *a*, in combination with the balance-slide F, lever *f*, and face-plate D, substantially as set forth.

94,131.—John B. Read, Tuscaloosa, Ala.—*Manufacture of Paper.*—August 24, 1869; antedated August 17, 1869.

Claim.—The applicability of the stalks of the different species of the cotton-plant, (*Gossypium*,) including the fibrous, the ligneous portion, and the pith of the entire plant, to the manufacture of paper, *papier-mache*, and its compounds, the whole to be crushed, boiled, and beaten together, and made into paper or paper-pulp, substantially as herein described.

94,132.—Thomas D. Read and Lewis M. Ellis, Aberdeen, Ind.—*Water-Meter.*—August 24, 1869.

Claim.—1. The discharge-pipe B, connected with the inlet-pipe A and main pipe C, and having a valve-seat, *a*, in each end, substantially as shown and described.

2. In combination with the discharge-pipe B, and its valve-seats *a*, *a*, the double valve-head D, with its rod or plunger E, constructed as described and for the purposes set forth.

3. The arrangement of the discharge-pipe B, valve D, plunger E, collar F, and coiled spring G, all substantially as and for the purposes herein set forth.

4. The springs H H, when provided with hooks or shoulders *b b*, and used substantially in the manner and for the purposes herein set forth.

5. The arrangement of the wheel M, with projections *e e*, crank Y, hinged bar I, and spring K, all substantially as and for the purposes herein set forth.

6. The arrangement of the elbow P, pipe N, wheel O, valve R, and suitable gearing to operate an indicator, substantially as shown and described.

94,133.—Freeman F. Reynolds, Bethany, Ga.—*Gang-Plow.*—August 24, 1869.

Claim.—The combination of the movable beams I J, with the pivoted cross-bars K L, the fixed beam A, the curved plate M, and the adjusting-bolt *m*, adapted to be set in different holes in the curved plate, when the several parts referred to are constructed to operate together substantially in the manner and for the purposes described.

94,134.—Everett P. Richardson, Lawrence, Mass.—*Boot and Shoe Sewing-Machine.*—August 24, 1869.

Claim.—1. The hook J, passing around the edge of the sole, and employed, in connection with a clamp or bearing on the outside, to gripe the sole transversely, or in the direction of its thickness.

2. In combination with means, substantially as described, for sewing, the hook J, passing around the edge of the sole, and employed, in connection with a clamp or bearing on the outside, to gripe the sole transversely, or in the direction of its thickness.

3. The combination of the foot H and the griping-devices I J, substantially as set forth.

4. The throat-plate P, adapted to assume a position regulated by the thickness of the work, and afford an unyielding support against the thrust of the needle or piercing-instrument.

5. The combination of a spring, U, and a movable throat plate, P, when the former is made to act on the latter, through the medium of an inclined or wedge-shaped connection, so as to support it at any position which it may automatically assume.

6. The detachable connecting-rod, or any substantially equivalent device, for stopping the needle while it is out of the work, when used in combination with the griping-mechanism, the continued movement of which will automatically release the work, so that the same may be removed or inserted, as set forth.

7. The adjustable connecting-rod G and set-screw *v*, constructed and arranged to operate substantially as and for the purpose set forth.

8. The last *c*, with a groove or cavity, c^1, in its edge or margin, when used in combination with the hook *J*, substantially as and for the purpose set forth.

9. The last *c*, provided with a groove, c^2, for the purpose of removing the hook J, as described.

94,135.—Sylvester H. Roper, Boston, Mass.—*Knitting-Machine.*—August 24, 1869.

Claim.—1. The combination of a system of separately-moving latch-needles with a system of separately-moving sinkers co-operating therewith, in the manner and for the purpose described.

2. The combination, with such systems of latch-needles and sinkers, of mechanism for adjusting simultaneously the depth of descent of all the sinkers.

3. An automatically-rotating and traveling wing or arm, operating to bring the needles into action for widening, substantially as set forth.

4. The means, substantially as described, for arresting the forward movement of the needles, whilst the loop is on the latch, to insure the keeping open of the hook to receive yarn for the next stitch, and then advancing them to the full extent of their forward movement.

5. The combination, with stationary stops on the frame, of the sliding carriage of the thread-carrier, the sinker-cam carriage, and the double-acting pinion and racks, or their equivalents, the whole operating substantially as shown and set forth.

6. The combination, with the main and auxiliary tension-springs 19 and 20, of a friction-pad on the former, so arranged and located that a slight strain upon the yarn shall cause the eyes of the springs to coincide in line with the straightened thread, and relieve the same from the pad.

7. The combination, with the tension-springs, of the lever 14 and its adjustable spring 16.

94,136.—D. R. SATTERLEE, New Haven, Conn.—*Machine for Making Slate-Pencils.*—August 24, 1869.

Claim.—1. A series of cutters, constructed as described, so that the largest quantity of material is first cut, and diminished at each successive cut, substantially in the manner and for the purpose set forth.

2. The adjusting-bar *a*, arranged in the cutter-holder, for the adjustment of a whole series of cutters, substantially in the manner described.

3. The combination of the holder I with the series of cutters arranged thereon, when the said holder is constructed so as to remove all the cutters from the machine without detaching them from the holder, substantially as and for the purpose specified.

4. In combination with a carriage of several holders D or D′ the dust-carrying paus L, in the manner substantially as set forth.

94,137.—NICHOLAS SEUBERT, Syracuse, N. Y.—*Alarm-Lock.*—August 24, 1869.

Claim.—1. The hollow slotted barrel I, provided with the arm *i*, in combination with the angular arm F, substantially as and for the purpose specified.

2. In combination with the above-described devices, the triangular cam E and stud D, the latter secured to, and operated with the latch B, substantially as and for the purpose specified.

94,138.—LEWIS W. SHAEFFER, Union Township, Ohio.—*Smoke-House.*—August 24, 1869.

Claim.—1. The combination and arrangement of the drawer or furnace K, the suspended fire-box *m*, and the perforated metallic plate N, substantially as described.

2. The arrangement of the ventilators H and I, and cap M, in relation to the two compartments formed by the plate N, substantially as herein set forth.

94,139.—S. SHERWOOD, Independence, Iowa.—*Water-Wheel.*—August 24, 1869.

Claim.—1. The gate F, provided with the arms H, in combination with the lever I, when used in the manner and for the purpose set forth.

2. The wheel C, in combination with the box B, gate F, lever I, and shaft D, when all are constructed and operated substantially in the manner described.

94,140.—WILLIAM H. SIBLE, Harrisburgh, Pa.—*Mortising and Tenoning Machine.*—August 24, 1869.

Claim.—The tenon and mortising machine herein described, having adjustable sliding block K, with its set-screws *v* and *z*, the adjustable guide *y*, channel *n*, gate B, chisel D, clamping-bars *h* and *i*, rod G, braces R, and treadle T, when constructed and arranged substantially as specified.

94,141.—WILLIAM H. H. SISUM, Cherry Valley, N. Y.—*Harvester.*—August 24, 1869.

Claim.—1. In combination with the endless chain M *m*, casing E, inclosing the same and allowing the cutters to protrude, the frame-work D, gear-wheels H and B′, and the hinged joint C *c*, so arranged that the chain of cutters and their connections may be turned upon the axis C *c*, and thus raised out of contact with the ground, for convenient traveling, substantially as and for the purposes herein set forth.

2. Constructing the endless chain of harvesting-cutters M *m*, with the cutters *m* mounted centrally in the thickness of the chain M, and beveled in opposite directions on the opposite cutting-edges, so that the chain may be reversed in position and both edges made available, substantially in the manner and for the purposes herein set forth.

94,142.—SIMON SLACK, Dowagiac, Mich., assignor to himself and E. G. SALISBURY.—*Horse Hay-Fork.*—August 24, 1869.

Claim.—The circular arms E E, latch *x*, spring H, and keeper L, in combination with the cross-head B, and forks A A, when constructed and arranged as set forth.

94,143.—GEORGE T. SNYDER, Wilmington, Del., assignor to himself and GEORGE W. AIREY, Baltimore, Md.—*Rotary Steam-Vessel.*—August 24, 1869.

Claim.—1. The pilot-house F, when supported upon and by means of the cross-beam L, posts K K, and central shaft E, as set forth.

2. The central hollow shaft E, in combination with the tube or smoke-stack C, as herein described.

3. The combination of the segmental car D with the central suspending-shaft E and a revolving vessel, A, as and for the purpose specified.

4. The combination of the internal gear-wheels *b′ b′* and pinions *e e*, when said pinions are suspended by the car D, as specified.

94,144.—WILLIAM SPENCER, Winslow, Ind.—*Grain-Separator.*—August 24, 1869.

Claim.—1. The frame A, having two or more boxes formed in its bottom, when said frame is made adjustable by means of the lever K and its strap, substantially as shown and described.

2. The arrangement of the adjustable frame A, having two or more boxes formed in its bottom, the revolving cylinder or drum B, hopper D, spout H, and lever K, all substantially as shown and described.

94,145.—WELCOME SPRAGUE, Farnham, N. Y.—*Combined Straw-Cutter, Corn-Sheller, and Grinding-Mill.*—August 24, 1869.

Claim.—1. The wheel C, formed with the depressed face *b* and cutters *c*, and acting as a driving-wheel, substantially as and for the purpose described.

2. The arrangement with the above of the grinder G *g*, and the sheller F *f*, the disk *f* of which forms the balance-wheel of the machine, the whole receiving motion by one action, as set forth.

94,146.—MELVIN STEPHENS, Brooklyn, N. Y., assignor to himself and NATHAN STEPHENS, same place.—*Joint for Cement Pipes.*—August 24, 1869.

Claim.—1. A ring, applied within and between the ends of cement or other pipes, to sustain the cement or other material introduced to make a joint between such pipes, substantially as set forth.

2. The rings *l* and *z*, constructed and applied in the manner and for the purpose specified.

3. The concave ring *e*, fitted so as to be opened, and provided with means for drawing the ends together and securing the same, so as to confine and consolidate the cement and hold the ends of the pipes, as set forth.

94,147.—B. K. TAYLOR, Harrisburgh, Pa.—*Tuyere.*—August 24, 1869.

Claim.—The plug D, provided with the flat or concave surfaces *d* and ribs *d′*, in combination with the plate B, when constructed and operating as herein shown and described.

94,148.—MICHAEL TROMLY, Cincinnati, Ohio, assignor to himself and W. L. HASBROUCK, same place.—*Clock-Escapement.*—August 24, 1869.

Claim.—The combination of the two jaws, constructed, pivoted, and operating as herein described, with the rods R S, or their mechanical equivalents, whereby the rods are connected to each other and to the pendulum, substantially as described.

94,149.—CHARLES TRUESDALE, Cincinnati, Ohio, assignor to himself and WILLIAM RESOR AND COMPANY, same place.—*Top Plate of Cooking-Stoves.*—August 24, 1869.

Claim.—The provision, in a divided stove-top, of the spring or yielding joint, substantially as set forth.

94,150.—JOHN J. UNSWORTH, Washington, D. C.—*Support for Elliptic Spring.*—August 24, 1869.

Claim.—The longitudinal spring C, provided with clutch *d* and *d′*, for grasping the elliptic spring A, and the metallic standard S, provided with an aperture, and rubber located therein, the whole being constructed, applied, and arranged to operate in conjunction with elliptic springs, substantially as specified.

94,151.—JOHN C. VANPELT, Cincinnati, Ohio.—*Refrigerator.*—August 24, 1869.

Claim.—1. The upper chamber E, communicating with the interior room or closet *b*, and having a thermometer, F, and double window G G′, as and for the purpose set forth.

2. The refrigerator herein represented and described, having the walls of its preserving-room *b* composed of metallic shells A B, forming a refrigerating-jacket, *a*, having funnels C for the introduction of the cooling-medium thereto, and a discharge-pipe, D, and provided with an upper chamber, E, communicating with the room or closet *b*, and inclosing a thermometer, F, as set forth, for the purposes shown.

94,152.—ELIJAH WARE, Southford, Conn.—*Injector for Steam-Generator.*—August 24, 1869.

Claim.—The combination and arrangement of the valvular regulating-cone F, formed with a longitudinal central aperture, *f*, and side openings *e*, for passage of water through, as well as around or outside of it, the outer cone E, around which steam is admitted, and the conical portion G of the shell A, substantially as specified.

94,153.—ELI G. WARNER, Union Township, Ohio.—*Harrow.*—August 24, 1869.

Claim.—The construction of a harrow, with curved teeth passing through a perforated board, B, said teeth to be raised singly, by means of a lever, C, and collectively, by means of a lifting-bar, G, which, by raising or depressing, will also regulate the depth of the teeth in the ground.

94,154.—WILLIAM WATSON, Danville, Ill.—*Scraper.*—August 24, 1869.

Claim.—The combination of the scraper A, beam B, and handles J J, platform H, on the axle G, chains I I, and small platform L, all substantially as shown and described.

94,155.—CHARLES WEBER, West Meriden, Conn.—*Whistling-Toy.*—August 24, 1869.

Claim.—The air-supply pipe A and air-discharge pipe B, in combination with a whistle and with a revolving or jumping toy, substantially as shown and described.

94,156.—JACOB WEIMER, Mount Vernon, N. Y.—*Permutation-Lock.*—August 24, 1869.

Claim.—The arrangement of the cam-tumblers F and G, the gate-tumblers H I J, and lever-catch L, all constructed and operating substantially as set forth.

94,157.—CHARLES G. WHEELER, Chicago, Ill.—*Generating Gas for Motive-Power, for Extinguishing Fires, and for other Purposes.*—August 24, 1869.

Claim.—1. The reservoir A, when provided with the chamber B, having a check-valve, D, and stop-cock G, substantially as specified.

2. The composition herein described, consisting of niter, charcoal, and bicarbonate of soda, substantially as and for the purpose specified.

94,158.—SIDNEY S. WHEELER, Danbury, Conn., assignor to EDWARD A. NICHOLS, Yonkers, N. Y.—*Hat-Pouncing Machine.*—August 24, 1869.

Claim.—1. The employment of the horizontal double-hinged and swiveled arm or frame, which carries the rotating pouncing cylinder or cone, in combination with a horizontal rotating hat-block and the pouncing cylinder or cone, substantially as described.

2. In combination with the hinged arm and pouncing-cylinder, a counterbalancing weight, or its equivalent, substantially as described.

94,159.—JOHN P. WHIPPLE, Woonsocket, R. I.—*Turning-Tool.*—August 24, 1869.

Claim.—The combination, with the stock A, of the pivoted clamp B, arranged within a slot made through the stock, and controlled by a set-screw, D, to effect its hold on or release of the cutter C, substantially as specified.

94,160.—GEORGE A. WHITCOMB, Morrison, Ill.—*Milk-Cooler.*—August 24, 1869.

Claim.—The arrangement of the detachable funnel-shaped strainer E, the jacket *d*, and circumferential flange *a*, reservoirs A C, cooler B, and pipes D F, all constructed and operating as set forth.

94,161.—WILLIAM A. WILSON, Savannah, Mo.—*Wrench.*—August 24, 1869.

Claim.—The head-block *b*, combined with the wrench herein described, substantially as and for the purpose set forth.

94,162.—ABRAHAM N. WOLF, Mill Creek Township, and JOEL HAAG, Bernville, Pa.—*Water-Wheel.*—August 24, 1869.

Claim.—1. The valves C C, in combination with gates B B, operating together, substantially as and for the purpose described.

2. The combination, substantially as set forth, of guards D D, valves C C, and gates B B.

3. The slides *h h*, in combination with valves C C, when said valves are pivoted to the gates B B, substantially as set forth.

4. In combination with valves C C, the slides *h h*, rods *g g*, and grooved wheel E, all arranged to operate substantially as described.

5. The wheel F, in combination with gates B B, guards D D, and valves C C, all combined as and for the purpose set forth.

94,163.—J. V. WOOLSEY, Sandusky, Ohio.—*Machine for Polishing Spokes.*—August 24, 1869.

Claim.—1. The combination of the cam M, which is adjusted upon the driving-arbor that revolves the spoke D′, the pivoted adjustable stay K, and frame vibrating upon rock-shaft H, and treadle B′, with the revolving endless polishing-apron E, all constructed to operate in the manner and for the purpose substantially as described.

2. The adjustable yielding center N, in combination with the pivoted stay K, constructed to operate substantially as described.

3. The adjustable central supporting-roller C, when arranged with relation to rollers B and C, endless apron E, and spoke D′, for the purpose substantially as described.

94,164.—J. V. WOOLSEY, Sandusky, Ohio.—*Spoke-Tenoning Machine.*—August 24, 1869.

Claim.—1. The combination of the cutter-heads D E, having adjustable cutter G H, and arranged upon revolving shaft B, with the cutter-heads D′ E′, having cutter G′ H′, and arranged upon a revolving shaft in the adjustable frame J, in the manner and for the purpose substantially as described.

2. The combination of the adjustable center T, adjustable inclined bearings S S, and binder A′, with the sliding frame R, for the purpose substantially as described.

94,165.—ELIAS M. WRIGHT, Castile, N. Y.; assigns one-half to GARDNER HERRICK, Albion, Mich.—*Wash-Boiler.*—August 24, 1869.

Claim.—The construction and arrangement of the middle steam-chamber A, the end-chambers with concave bottoms B B, the circulating-holes E F G, and the two covers with the outside chamber D, all substantially as and for the purpose herein specified.

94,166.—ANDRE AVERY, Worcester, Mass.—*Cloth Tentering and Drying Machine.*—August 24, 1869.

Claim.—1. The combination, with the disks L, and perforated cylinder which carries the same, of the screws O O and spiders N N, substantially as and for the purposes set forth.

2. The rotating perforated cylinder K, the adjustable disks L, and central supporting-wheel M, arranged, relatively to each other, substantially as and for the purposes set forth.

3. The relative arrangement, with frames for supporting the cloth, of the heaters, and devices for forcing the air through the cloth, substantially as set forth.

4. The adjustable feed-cylinder or device D D′, composed of the two overlapping sections, constructed with cam-shaped ends, substantially as and for the purposes set forth.

5. The combination, with the feed-cylinder or device D D′, of the slotted feed-bar C and guide-levers *a*, substantially as and for the purposes set forth.

6. The combination of the tentering or stretching

blocks *f* with the feed-cylinder D D′, constructed substantially as shown and described.

7. The combination, with the feed-rolls E, of the stop-plates G and tentering-blocks *f*, substantially as and for the purposes set forth.

8. The combination of the feed-cylinder D D′, tentering-blocks *f*, intermediate feed-roll E′, with points arranged radially, and cloth-disks L, substantially as shown and described.

9. The combination, with the feed-rolls E E′, feed-cylinder D D′, and stretcher-blocks *f*, of the guides *d d*, all constructed substantially as and for the purposes set forth.

10. A drying and tentering machine, the parts of which are all constructed and combined together for joint operation, substantially in the manner shown and described.

94,167.—Alzirus Brown, Worcester, Mass.—*Harvester.*—August 24, 1869.

Claim.—1. A connecting-rod for mowing and reaping machines, having a projection *e*, substantially as and for the purpose set forth.

2. The combination, with the connecting-rod, heel-end of the cutter-bar, and the shoe which supports the heel of the finger-beam, of a projection *e* and flange *d*, substantially as and for the purpose set forth.

3. The combination, with the connecting-rod H, cutter-bar F, flange *d*, and projection *e*, of the supporting or guard rod I, substantially as and for the purposes set forth.

94,168.—D. D. Foley, Washington, D. C.—*Vehicle for Carrying Mail.*—August 24, 1869.

Claim.—A horse-carriage, for the purpose of collecting mail-matter from street letter-boxes, consisting of entrance A, tilting doors D D, as shown and described, and projecting roof F, with receptacle B, or its equivalent device, substantially as shown and described.

94,169.—Clark Jillson, Worcester, Mass.—*Propagating-Box for Plants.*—August 24, 1869.

Claim.—1. The combination, with the plant-box, of a solar-heat-retaining box, partially filled with stones, or the equivalent thereof, substantially as and for the purposes set forth.

2. The arrangement of the perforated solar-heat-retaining box, perforated plant-box, and slatted earth-supporting frame, substantially as set forth, whereby a constant circulation of heated air is kept up, as and for the purposes described.

3. The combination, with the plant-box, constructed as described, of the double-bailed slatted earth-frame C, substantially as and for the purposes described.

4. A plant-propagating box, composed of the plant-box A, solar-heat-retaining box B, slatted earth-frame C, supporting-legs I, and water-box E, said parts being constructed and arranged in relation to each other, substantially as and for the purposes set forth.

94,170.—George Abel and John Peddler, Temperanceville, Pa.—*Ingot-Mold.*—August 31, 1869.

Claim.—A two-part ingot-mold, having a tongued and grooved joint, and exterior corrugations *c c*, substantially as described.

94,171.—Solomon A. Alexander and Edward Dunn, Sunbury, Pa. — *Rest for Locomotive Cross-Heads.*—August 31, 1869.

Claim. — 1. The rest itself, with either T or L ends, perforated for an adjustable pin, or a series of stationary pins, as shown in accompanying drawings, and described in accompanying specification, or with notches or teeth placed at intervals, to supply the place of said pin or pins on the rest.

2. In combination with the rest the adjustable bridle, for the purpose of attaching the rest to the engine, (on which the machine is to be used,) substantially as described.

3. The bar, as herein described, for the purpose of moving cross-heads, or any portion of the rest, as described.

94,172.—James H. Allen and John Schwab, Louisville, Ky.—*Combined Latch and Lock.*—August 31, 1869.

Claim.—1. The bolt C, in combination with the cross-bar B, springs E I, and a casing, having key holes J J, when constructed and arranged to serve both as a lock-bolt and as a knob-bolt, and operated substantially as herein described.

2. The cross-bar B and the steel spring E, with the catches F F and the key-holes J J, in combination with the key D, the bolt C, tumbler G, and the knob H, and the steel spring I, when arranged, constructed, operated, and used in the manner set forth.

94,173.—James W. Bagby, Northcutt's Store, Ky.—*Animal-Trap.*—August 31, 1869.

Claim.—1. The arrangement of plate A, stem B *b*, spring-coil D, catches E F, hooks G, and triggers H, substantially as set forth.

2. In combination with the described elements of the preceding clause, the set-screw I, for the purpose herein explained.

94,174. — William D. Ballard, Davisburg, Mich.—*Horse Hay-Fork.*—August 31, 1869.

Claim. — 1. In horse hay-forks the unloading-device herein described, consisting of the rotating forked bolt C, pulley D, forked guide E, provided with eye *e*, the levers H, clevis I, and trippling-line J, arranged and operating substantially as described.

2. The combination of the forks F, pivoted to each other as described, the links B, and the clevis A, when constructed, arranged, and operating as and for the purpose set forth.

94,175.—Menzo M. Benster, Detroit, Mich.—*Guide for Sewing-Machine.*—August 31, 1869.

Claim.—The parts B D, constructed as described, arranged on the presser, and adjustable to either side of the needle-hole.

94,176.—George Berkstresser, Bedford, Pa.—*Churn.*—August 31, 1869.

Claim.—The dasher A, when constructed with spiral beaters *c*, as shown and described, in combination with the opposite spirally-curved stationary beaters D and churn-body, all arranged as described.

94,177.—A. G. Bill, Cuyahoga Falls, Ohio.—*Flax-Brake.*—August 31, 1869.

Claim.—1. The rollers B C and D E, when arranged in relation to each other, and operating conjointly, in the manner as and for the purpose set forth.

2. The pivoted hangers F and springs I, in combination with the rollers B C and D E, when constructed and arranged to operate in relation to each other, substantially as and for the purpose set forth.

3. The pinions L and wheels M, in combination with the rollers B C and D E, in the manner substantially as described, and for the purpose specified.

94,178.—John Blackie, New York, N. Y.—*Printing-Telegraph.*—August 31, 1869.

Claim.—1. The segmental-formed detent S, upon the arm *a*, operating in the manner and for the purpose as set forth.

2. The stop-arm *a‴*, upon the arbor of the fly *f′*, in combination with the segmental hook or detent S, as and for the purposes set forth.

3. The combination of the segmental-formed detent S, arm *a*, detaining-stop C, and fly *f*, operating substantially as set forth.

4. The combination of the arms *a′* and *a⁗*, pivoted at the point n^1, and operating as and for the purposes described.

5. In combination with the printing-surface, the striking-apparatus, consisting of the lever St, arm A′, and hammer *b*.

6. In combination with the striking-apparatus, the cam *m*, or its equivalent, and the spring Sp⁗, operating as and for the purposes set forth.

7. The stop-arm *a″*, pivoted at *n*, so as to act in the manner and for the purposes named.

94,179.—J. Dean Bonney, Pembroke, Mass.—*Spring-Seat for Chairs, Cars, Carriages, &c.*—August 31, 1869.

Claim.—The improved spring-seat or bed-bottom

before described, consisting of the two frames A A′ united by the springs *a a*, &c., and provided with the cushion C and band D, as explained, and with the stays *d d*, &c., as accessories to the band, the whole being arranged and operating essentially in manner hereinbefore set forth.

94,180.—M. V. BRIGHAM, Mannsville, N. Y.—*Reel and Swift.*—August 31, 1869.

Claim.—The within-described device, consisting of the bed-piece A, the screw C, the standard D, provided with the journal *d*, the nut E, the standard F, the horizontal shaft G, provided with the screw *g*, the grooved wheel H, the spindle I, provided with the grooved pulley K, the arms L and L, provided with the studs M, the arm N, the worm-wheel O, provided with the stud *o* and the spring *n*, all constructed and arranged to operate substantially as and for the purpose specified.

94,181.—JACOB BUMP, Hartford, N. Y.—*Vegetable-Washer.*—August 31, 1869.

Claim.—A vegetable-washer, consisting of the rotating case A, provided with the internally-projecting pins B, said pins being of such a length, and so arranged, as to cause the contents of the case to pass between them as it is revolved, substantially as described.

94,182.—FREDERICK R. BUTLER, Rocky Hill, Conn., assignor to himself and LEONARD R. WELLES.—*Clothes-Drier.*—August 31, 1869.

Claim.—The hollow hub *a′*, clips *c c′*, rivets *b′*, with the rods *d* and cord *e*, substantially as and for the purpose described.

94,183.—JOHN B. CARTER, Hartsville, Ind.—*Button or Stud.*—August 31, 1869.

Claim.—As a new article of manufacture, the cuff or collar-button, constructed with an elongated neck N, plates F S, one or both convex or conical, head H, and projecting shoulders *i′*, in the manner and for the purposes specified.

94,184.—S. P. CASTLE, Urbana, Ohio, assignor to O. H. CASTLE, same place.—*Skate.*—August 31, 1869; antedated August 14, 1869.

Claim.—1. The constructing the body A of a skate, substantially as described, and for the purposes set forth.

2. The attaching runner B to body A, substantially as described, and for the purposes set forth.

3. Shoe-upper O, in combination with guard or border C, substantially as described, and for the purposes set forth.

4. Clasp G, substantially as described, and for the purposes set forth.

94,185.—OLIVER H. CATEY, Williamsburgh, Ind.—*Marker for Corn-Ground.*—August 31, 1869.

Claim.—The adjustable wings I^1 I^2, &c., in combination with the runners A B, &c., when the different parts are constructed and operated substantially as herein shown and described.

94,186.—DAVID COLLOM, Tallmadge, Ohio.—*Bee-Hive.*—August 31, 1869.

Claim.—In the construction of a hive, with the four hiving-boxes as described, in combination with the cap A, the cleats *s s*, for the purpose set forth.

94,187.—JOB A. DAVIS, Watertown, N. Y.—*Sewing-Machine.*—August 31, 1869.

Claim.—1. The combination, with the vertical stationary race of a rotating shuttle, of a swell or take-up, N, constructed and located on the race, substantially as shown, and operating upon the shuttle-thread as shown and described.

2. The combination, with the revolving shuttle-carrier, of the arched swell or rib H, located upon and extending diametrically across the carrier, and having a fixed central hook thereon, and operating upon the shuttle-thread, as shown and described.

3. The combination of the arched rib or swell H on the carrier with the swell N on the race, the two conjointly operating upon the shuttle-thread, substantially as set forth.

4. The combination, with the rib H and swell N, of the hook centrally located upon the shuttle-driver, and operating conjointly upon the shuttle-thread, substantially as set forth.

5. The combination, with the lever X, of the presser-bar and the top-feeding lever, arranged and operated substantially as described, so that one of the latter shall always be lifted from the cloth while the other bears upon it, substantially as shown and set forth.

6. The combination of the slotted lever T, constructed and operating substantially as described, with the needle-bar, feed-bar, and presser-bar.

7. The combination, with the groove or projection on the needle-bar, of the spring-thread clamp 10 and its pin 13, and the tension-device, attached to and moving with the needle-bar, substantially as set forth.

94,188.—EDWARD C. DEAN, HENRY HAMILTON, GEORGE P. TENNEY, and ALBERT T. PUTNAM, Detroit, Mich.—*Kilns for Drying Bricks.*—August 31, 1869.

Claim.—1. The building or oven A, provided with non-conducting floors *e* and H, flues *g*, and valve *h*, when constructed and arranged to operate as above set forth.

2. In connection with the above, the combination of the carrier, or endless belt C, the drums B, the wheels *d*, and the tracks D and E, when constructed and arranged to operate as above described.

3. In connection with said building, or oven A, constructed and provided as aforesaid, with the parts *e*, H, *g*, and *h*, the combination of the steam-pipes F and the perforated hot-air-pipe I, constructed and operating as and for the purposes aforesaid.

94,189.—FRANÇOIS DE BOWENS, Philadelphia, Pa.—*Machinery for Cutting Match-Sticks.*—August 31, 1869.

Claim.—1. The arrangement of the splint-blocks C upon the table A, in combination with the cutting-knife D, operated substantially as herein shown and described.

2. The arrangement of the knives D D′ in duplicate, one close behind the other, so that each following knife cuts out the ridge left by the preceding knife, substantially as shown, fig. 5, and described herein.

3. Depositing the match-sticks in the frames S as they leave the knives D, in the manner herein shown and described.

94,190.—ALEXANDER DIXON, Aurora, Ill., assignor to himself and JAMES JOHNSON HALL.—*Pump.*—August 31, 1869.

Claim.—The peculiar arrangement of the two cylinders A, bed-plate B, stuffing-boxes *a*, side-pipes *b*, valve-chambers C, suction-pipe D, discharge-pipe E, air-chamber F, piston-rod *c*, bearings *d*, rack *e*, segmental-cogged wheel *f*, sockets G, and hub *g*, or their equivalents, when constructed, combined, and operating, substantially as and for the purposes herein described.

94,191.—JACOB EDSON, Boston, Mass.—*Sea-Drag.*—August 31, 1869.

Claim.—A ship's drag, with four wings, in combination with the levers *l* and *n*, the hook, with its cones and apertures, combined with hinges at the lower end and bolts and staples at the upper end, as fully set forth and described.

94,192.—ISAAC N. ELWELL, Flint, Mich.—*Gas-Stove.*—August 31, 1869.

Claim.—The combination and arrangement of the parts A, B, C C′, D, E, F, G, H, I, J, K, L, *a*, *b b′*, *e*, *j j′*, and *l l′*, when constructed and operating substantially as and for the purposes herein set forth, shown, and described.

94,193.—MICHEL G. FAGAN, Troy, N. Y.—*Cooking-Stove.*—August 31, 1869.

Claim.—A diving-flue cooking-stove, having a straight top, A, with chamber H in back part, underneath said top, and above the oven, in combination with the exit-pipe G and damper M, for the purposes described and set forth.

94,194.—David J. Farmer, Wheeling, West Va.—*Machine for Making Cut Nails.*—August 31, 1869.

Claim.—1. The improved machine herein described, constructed and arranged to operate substantially in the manner and for the purposes set forth.

2. The knives or cutters K L, K′ L′, &c., arranged alternately oblique and straight, and the successive pairs thereof brought further front, as represented and described, for the purpose set forth.

3. The griping-jaws or dies N N′, &c., arranged and operating substantially as described, in combination with the cutters K *k* L, &c., and the headers P, for the purpose specified.

4. The headers P, constructed with the double faces *p p*, and so arranged and operated as to form the heads on two nails or tacks at one revolution of the machine, substantially as described.

5. The combination, with the feeding-rollers B B′ of the crank-wheel R^2, connecting-rod S, rock-shaft T T^1 T^2, rod U *u*, lever V V′, pawl *v v′* and ratchet-wheel *b b′*, all arranged to operate substantially in the manner described, for the purpose set forth.

6. In the described combination with the feeding-devices, the oscillating arm T^2, constructed with a hinge-joint, *t*, as described, for the purpose set forth.

7. The combination, with the cutters K *k* L, K′ *k′* L′, &c., and the longitudinal feeding-rollers B B′, of the gauges or stops E, and presser-bar F, arranged to operate substantially as described, for the purpose specified.

94,195.—Daniel Fisher, Fair Haven, Ohio.—*Fence-Post.*—August 31, 1869.

Claim.—The wedge-shaped metal socket, provided with the side flanges, as set forth.

94,196.—Louis A. Gignac, Troy. N. Y.—*Machine for Boarding and Graining Leather.*—August 31, 1869.

Claim.—1. The combination of the suspension-arm M, controlling-arm P, rocking-arm R, slotted-arm S, links T, and rubber-board G, with each other, and the actuating-rod N, or its equivalent, substantially as described, and for the purpose set forth.

2. The combination of the rubber-board G, the reciprocating moving rubber-table E, and the bolster-table F, substantially as described, and for the purpose set forth.

3. The arrangement of the reciprocating moving rubber-table E between the rubber-board G and the bolster-table F, substantially as shown and set forth.

4. The combination of the rails *k k* and wheels *e*, with the movable rubber-table E, the bolster-table F, the actuating-rod J, and its eccentric wheel or crank K, in manner substantially as shown and for the purpose specified.

5. The combination of the cross-pieces I I, longitudinal pieces H H, adjusting and supporting screws and nuts *g*, springs and guide-rods *h* and *f*, with the bolster-table F, wheels *c*, rails *k k*, and the moving rubber-table E, substantially as shown and for the purpose set forth.

94,197.—Louis A. Gignac, Troy, N. Y., assignor to himself and P. Pollock, same place.—*Curriers' Knife.*—August 31, 1869.

Claim.—An improved currying-knife, having at one end of its removable jaw B a tongue, F, to fit into a hook-like socket, E, at one end of the permanent jaw A, while the other end G fits into a socket, *a*, in the cross-shank I I of said jaw A, and having the cross-handle C secured thereto, by means of said cross-shank and rivets *b b*, combined with blades J J and tightening-screws *c*, in manner substantially as described, for the purposes set forth.

94,198.—Webster Gillett, Ypsilanti, Mich.—*Electro-Magnetic Alarm for Railroad-Cars.*—August 31, 1869.

Claim.—1. The transverse actuating-levers G, stem J, and spring *a*, as arranged in combination with the circuit-breakers L, in the manner substantially as and for the purpose set forth.

2. The transverse actuating-levers G, circuit-breakers L, as arranged in relation to and in combination with the battery C and signaling-apparatus O, in manner substantially as described, and for the purpose specified.

94,199.—James Godfrey, Allegheny City, Pa.—*Fence.*—August 31, 1869.

Claim.—1. Providing each panel of a fence with a post, *b*, which is triangular in form, when viewed in cross-section, and pivoting the rails *f f′* to the posts *a* and *b*, the whole being constructed, arranged, and operating substantially as herein described, and for the purpose set forth.

2. In connection with the above, the brace *h* and bolt *d*, constructed, arranged, and operating as herein described, and for the purpose set forth.

94,200.—Andrew Goodyear, Albion, Mich.—*Lathe for Turning Hubs.*—August 31, 1869.

Claim.—1. The lever-guide U, with or without a friction-roller, in connection with the fulcrum T, for steadying the hub while being turned, arranged and operating substantially as and for the purposes set forth.

2. In a hub-turning machine, of substantially the described construction, the curved, inclined, and beveled-edged knives, in combination with the guide U, and fulcrum T, as described, for the purpose set forth.

94,201.—Andrew Goodyear, Albion, Mich.—*Machine for Shaping Hubs.*—August 31, 1869.

Claim.—The machine described, consisting essentially of the wheel D, with arms E G, and knives F H, the carriage L, and mandrel M, with spur V, support Y, gearing N O, and stop Z, the whole being combined, arranged, and operated in the manner and for the purpose set forth.

94,202.—Gustaf Gustafson, Oakland, Cal.—*Shrub and Flower Box.*—August 31, 1869.

Claim.—1. A flower, shrub, or tree box, formed of the sides B, hinged upon the bottom A, and secured together at the top by bent hooks D, or other equivalent device, substantially as described.

2. In combination with the hinged sides B, the loose or false bottom E, substantially as and for the purposes set forth.

94,203.—George Hayes, New York, N. Y.—*Ventilator.*—August 31, 1869.

Claim.—The metallic flange F, the frame G, the grating J, the slide K, and the cap L, constructed and arranged substantially as shown and described, for the purposes set forth.

94,204.—Theodore William Heinemann, New York, N. Y.—*Method of Seasoning and Preserving Wood.*—August 31, 1869; antedated August 17, 1869.

Claim.—1. Generating steam by heating alcohol, or other volatile liquids, solely, or in combination with water, substantially in the manner described, and for the purpose mentioned.

2. Impregnating wood, or other porous materials, by infusing in the pores thereof impregnating-substances, by means of the pressure of steam generated from volatile liquids, solely, or in combination with water, substantially in the manner described, and for the purpose mentioned.

3. Saturating wood, or other porous materials, with impregnating-substances, by means of steam-pressure attained at a temperature lower than 290° Fahrenheit.

94,205.—Robert Heneage and Albert Storer, Buffalo, N. Y.—*Machine for Rounding the Corners of Slate-Frames.*—August 31, 1869.

Claim.—The slotted bars C D, with their pivots *b c f*, table B, hand-lever F, and connecting-arm G, when the parts are constructed, arranged, and operated substantially as described, and for the purpose specified.

94,206.—Peter Henry Hink and Herrmann Kaack, Moline, Ill.—*Mangle.*—August 31, 1869.

Claim.—The combination of the standards A B with the stationary roller C, and the adjustable rollers D and E, weight G, hinged table K, and hinged

leg *a*, all constructed and arranged to operate as herein shown and described.

94,207.—C. Hogeboom, M. Hogeboom, and L. Van Vleck, Winslow, Ill.—*Spring-Bed Bottom.*—August 31, 1869.

Claim.—1. The flnked bolt A, when used for the purpose of fastening bed-springs as described herein.

2. The double right-handed and double left-handed springs, when combined and arranged as herein set forth.

3. The slotted bar H, in combination with the spring-bed bottom herein described.

94,208.—C. Hopkins, Philadelphia, Pa.—*Apparatus for Rejeweling Watches.*—August 31, 1869; antedated August 19, 1869.

Claim.—1. The combination of the adjustable spring center and the centering-needle I, with the reaming and cutting-pieces M, all constructed, arranged, and operated together, substantially in the manner described.

2. The burnisher herein described, constructed with two prongs beveled inward at their ends, substantially as specified.

3. The improved rejeweling-apparatus herein described, its constituent parts operating together as set forth.

94,209.—George M. Hopkins and John A. Straight, Albion, N. Y.—*Water-Indicator.*—August 31, 1869; antedated August 17, 1869.

Claim.—1. The combination and arrangement of pipe D, valve G, fusible plug L, rod F, stop-cock C, and pipe B, substantially as above set forth.

2. The combination and arrangement of the fusible-metal nut L, valve G, and lead packing H, as shown and described.

3. The gauge-cock P, in combination with the above devices, as set forth.

4. The combination and arrangement of the wrench Q, stop-cock C, and accompanying devices, as shown and described.

94,210.—B. B. Hotchkiss, New York, N. Y.—*Metallic Cartridge.*—August 31, 1869.

Claim.—The internally re-enforced reeapping-cartridge herein described, drawn or struck from sheet-metal, with the solid rim B^1, the rounded corner B^5, the hole e', in the center of the back, and the cavity *e*, for the fulminate, all combined and arranged as and for the purposes herein set forth.

94,211.—George R. Houghton, Flint, Mich.—*Apparatus for Fluting and Quilling.*—August 31, 1869.

Claim.—The combination of the table or bed A, slide B, screws *a*, bridges C, rods *h*, thumb-nut and screws *c*, and blocks D, when arranged and operating substantially as and for the purpose described.

94,212.—Edmund Howard, Flushing, and W. H. Jackson, Brooklyn, N. Y.—*Sewing-Machine for Working Button-Holes.*—August 31, 1869.

Claim.—1. The lever C, arranged to carry the shuttle-thread and draw the loops of the needle-thread to the edge of the cloth, and lock them there, substantially as described.

2. The vibrating hook F, in combination with the elbow-levers D and E, constructed and arranged to operate as described, whereby the hook is made to carry the shuttle-thread up over the edge of the fabric to engage with the needle-thread, and then move out of the way of the needle, as set forth.

3. In combination with the lever C and the hook F, with its operating-levers, the plate A, provided with its cams *a*, *b*, *b'*, and *k*, for operating the levers C, D, and E, with hook F, substantially as herein described.

4. The pivoted wedge-shaped piece T, in combination with the rocking-arm I, for varying the extent of the feed-motion, substantially as herein described.

94,213.—Jarvis Howe, Milford, Mass.—*Crimping-Brake.*—August 31, 1869; antedated August 21, 1869.

Claim.—1. The outer jaw, constructed and operating substantially as and for the purpose specified.

2. The outer jaws, when connected together by a screw-bolt, substantially as and for the purpose specified.

3. The piece K, constructed and operating substantially as and for the purpose specified.

4. The combination of the outer and inner jaws, by means of suitable mechanism, substantially such as is herein described.

5. The combination of the slides D D', piece K, nut L', and inclines *a a'*, and *c c'*, substantially as described.

94,214.—Otto Jacobi, Philadelphia, Pa.—*Manufacture of Carbonate of Lead, Acetate of Copper, and Acetate of Iron.*—August 31, 1869.

Claim.—1. The apparatus for making carbonate of lead, acetate of copper, and acetate of oxide of iron, consisting of tub A, provided with two false perforated bottoms B and D, air-pipe *h*, T-shaped distributing-pipe C, air-holes *o o o o o o* and *n n n n*, and layers of charcoal, *e f g*, or their equivalents, all arranged and operating as specified.

2. The process of making carbonate of lead, acetate of copper, and acetate of oxide of iron by means of said apparatus, substantially as described.

3. The use of a solution of carbonate of soda or potash, inside and outside of said apparatus, for the purpose of completing the conversion of the acetate of lead into carbonate of lead.

4. The mode of producing vapors of acetic acid and bringing them in contact with metallic lead, copper, or iron, substantially and for the purpose as set forth.

94,215.—S. H. Jennings, Deep River, Conn.—*Velocipede.*—August 31, 1869.

Claim.—1. The devices herein described for guiding the vehicle, when arranged and operated as set forth, consisting of the clevis N, with its handle Q, the clevis R, with its slotted arm T, and the foot-guide V, attached to the elbow-arm S.

2. The foot-lever E, with the foot-rests G pivoted thereto, in combination with the connecting-rod D, and crank C, when arranged and operated substantially as described.

3. The arrangement of the hand-levers K, connecting-rods M, foot-levers E, connecting-rod D, and crank C, when operated as herein substantially described.

4. The balance-wheels W, with their axle X, combined and arranged with the axle A, connected together by gearing, substantially as herein described.

94,216.—John Jones, Chesnut House, Stratford, and Samuel Parker Bidder, Jr., Hillfield, Mitcham, England.—*Coal-Breaking Machine.*—August 31, 1869; patented in England, November 17, 1868.

Claim.—1. The construction and employment of apparatus for breaking down coal, slate, stone, and other minerals, wherein two or more wedges are caused to be driven consecutively, by hydraulic or screw power, between the surfaces of the material to be broken down, in such manner that the pressure exerted at one and the same point can thereby be increased at will, substantially as hereinbefore set forth.

2. Constructing apparatus for breaking down coal, slate, stone, and other minerals, consisting of two tension-bars A, detachable from the hydraulic press D, and acting in combination with the pressing-blocks F and wedge or wedges G, with or without the clearance-box E, substantially as and for the purposes set forth.

94,217.—John A. Kaussler and Horace B. Cook, White Pigeon, Mich.—*Stump-Extractor.*—August 31, 1869.

Claim.—1. The clamp L, when constructed and operating substantially as and for the purposes described.

2. The rock-shaft E, cams *e*, compound lever F, and pins *f*, or their equivalents, in connection with the frame A, standards C, and wheels D, when arranged and operating substantially as and for the purposes herein specified.

3. The arrangement of the parts A, B, C, D, E, F,

G, H, I, J, K, L, *a*, *b*, *c*, *d*, *e*, *f*, *g*, *h*, *i*, *j*, *k*, *l*, *m*, *n*, and *o*, or their known equivalents, when combined, constructed, and operating substantially as and for the purposes herein set forth and shown.

94,218.—JOHN KENNEDY, Claverack, N. Y.—*Stopping-Mechanism for Knitting-Machine.*—August 31, 1869.

Claim.—The combination of the slotted tripping-lever F, spring C, beveled gear-wheels D D′, ratchet B, drop-hook *b*, spring *c*, spur *a*, and forked lever *g*, when all are constructed and arranged and operated as, or substantially as and for the purpose herein described.

94,219.—JOSHUA KIDD, New York, N. Y.—*Apparatus and Process for Obtaining Light from Gas and Oil.*—August 31, 1869.

Claim.—Uniting the flames from a kerosene or other oil or spirit lamp with a gas flame, substantially as described and set forth.

94,220.—CAMILLE KREJCI, Scranton, Pa.—*Printers' Ink.*—August 31, 1869.

Claim.—1. An ink for printing purposes, produced by combining coal-tar with wood charcoal and nitric acid, or their equivalents, in the manner substantially as herein described, as a new article of manufacture.

2. Combining coal-tar with wood charcoal and nitric acid, or their equivalents, as herein described, and for the purpose set forth.

94,221.—DANIEL LEIBERT, Washington, D. C.—*Lotion for the Destruction of Insects.*—August 31, 1869.

Claim.—The compound, composed of the ingredients, and in the quantities herein specified, for the destruction of vermin upon trees, vines, shrubs, &c.

94,222.—JOHN C. LEISTNER, Cincinnati, Ohio.—*Alarm-Attachment for Stills.*—August 31, 1869.

Claim.—The provision of the alarm-whistle J to the tail-pipe of a still-worm, for the purposes designated.

94,223.—MOSES W. LESTER, Chicago, Ill.—*Base-Burning Stove.*—August 31, 1869.

Claim.—1. The inclined air-pipes L and tubes M in connection with the annular plate D, arranged and operating substantially as and for the purposes herein set forth.

2. The annular plate D, provided with flange *d* and studs *d′*, arranged and operating substantially as described.

3. In anthracite-furnaces, the combustion-ring E, provided with wings *e*, in combination with the annular plate D, when arranged and operating for the purpose set forth.

94,224.—MOSES W. LESTER, Chicago, Ill.—*Hot-Air Furnace.*—August 31, 1869.

Claim.—1. In air-heating furnaces, the combination of the combustion-chamber O with the annular air-chambers M and N, the pipes P, and the tubes Q, when constructed, arranged, and operating as and for the purpose set forth.

2. The gas-ring D, provided with studs *d* and wings *d′*, and the combustion-ring E, arranged and operating substantially as and for the purposes herein set forth.

3. The rock-shaft T, provided with arm *c* and the grate S, when pivoted to said arm and supported by the bolt *g*, the whole arranged and operating substantially in the manner and for the purposes herein specified and shown.

94,225.—WILLIAM W. LEWIS, Cincinnati, Ohio.—*Machine for Making Horseshoes.*—August 31, 1869.

Claim.—1. In combination with a fixed former, two revolving bending-arms, adjustable as to the extent of their projection from their axis of revolution, arranged to operate conjointly on the heated blank, in the manner substantially as described.

2. The combination of the adjustable revolving arms with the movable former and blank-holder, and with the stationary former, substantially as described.

3. The reciprocating device K, constructed substantially as described, and operating, in relation to the blank, in the threefold capacity of supporter, carrier, and former, in combination with the stationary former.

4. The combination, substantially as described, of the sliding yoke L, vibrating arm O, formers K and X, and the blank-holder.

5. The lever E, with the gauges or supporters A, on one end, and the cams I on the other, or the equivalent thereof, in combination with revolving rollers F, or their equivalent, for operation in conjunction with the cams, substantially in the manner and for the purpose described.

6. The combination of the cam N, arm O, and reciprocating device K, substantially as described.

94,226.—HERMAN W. LÜDERS, Philadelphia, Pa.—*Steam-Generator.*—August 31, 1869.

Claim.—1. The inclined generating-tubes B, the vertical pillar-tubes H, the transverse tubes *m* and *n*, and the drums K K and L, combined and arranged substantially as herein shown and described.

2. The arrangement of the steam-generating tubes, whereby any one may be removed, exchanged for another, turned over, or changed end for end, substantially as described.

3. In combination with a tubular boiler, the end-tubes *m*, with inclined upper surfaces, and the sectional end-tubes *n*, connected by ball-and-socket joints, substantially as described.

94,227.—HARRIET S. MALTBY, Cincinnati, Ohio.—*Pastry-Roller.*—August 31, 1869.

Claim.—The combination of the reversible apron A with the guide G, the rollers R, the frame F, and the jaw J, all arranged as and for the purpose specified.

94,228.—GEORGE E. MARSHALL, Laurel, Ind.—*Process of Preparing Wood-Fiber for Paper-Stock.*—August 31, 1869.

Claim.—The herein-described process of treating wood for preparing paper-stock; that is to say, first subjecting it to the action of steam, in a closed vessel, then rinsing it with water to remove the dissolved gum and acids, and then cooking it in an alkaline solution, all without removing it from the boiler, substantially as herein set forth.

94,229.—JOHN H. MARTIN, Columbus, Ohio.—*Trace-Buckle.*—August 31, 1869.

Claim.—A slide, E, applied to the buckle-frame D, and constructed with a tongue, *g*, in combination with a cross-bar, J, substantially as described.

94,230.—J. T. MCDIVIT, Fayetteville, Ohio.—*Hames-Fastener.*—August 31, 1869.

Claim.—The threaded hook B″ and screw-nut C″, in combination with a chain D″ attached to the ends of hames, substantially as shown and described, and for the purposes set forth.

94,231.—JOSEPH D. MOON and JOHN T. FOSTER, Jersey City, N. J.—*Steam-Engine Valve.*—August 31, 1869.

Claim.—The packing *d*, or its equivalent, in combination with the hinge-joint, constructed and operating substantially as herein set forth.

94,232.—HENRY D. MORRIS, Baldwinsville, N. Y.—*Machinery for Making Axes.*—August 31, 1869.

Claim.—1. Jointly, the method of and mechanism for forging and shaping axes, substantially as herein described.

2. The arrangement, in one machine, of the several sets of dies and the shearing-device hereinbefore described.

3. The construction and arrangement of the dies B B and C C, substantially as described.

94,233.—MARY ANN S. MULLIN, Osgood, Ind.—*Rack for Sugar, Cream, Salt, &c.*—August 31, 1869.

Claim.—The semicircular rack A, provided with receptacles *d d d*, and ring C, in which is attached the alarm-bell D, all constructed to operate substantially as specified.

94,234.—George L. Newhall and John F. Cummings, Chelmsford, Mass.—*Flying-Horse Machine.*—August 31, 1869.

Claim.—The combination and arrangement of the spindle *a*, the shell-shaft *d*, the annular-grooved shell, and balls *c*, the drivers *m* and *n*, and crank-shafts *p*, the arms *f*, braces *h*, truss-rods *g*, suspension-rods C, and the horses, all arranged and operating in the manner and for the purpose specified.

94,235.—Charles Nida, Greenville, N. J.—*Liquid-Meter.*—August 31, 1869.

Claim.—1. The perforated cylinders surrounding the chambers G G′, and the expanding chambers G G′, provided with hoops *e* and elastic bands *f*, all arranged substantially as and for the purpose specified.

2. The combination and arrangement of the chambers G G′, beam J, arm M, with plates *p p*, shaft K, four-armed lever *j k l l*, with slot *n*, and friction-rollers *s s*, on shaft L, springs *o o*, all inclosed in a casing, A, and the valve E, in chamber D, communicating with the chambers G G′, and provided with induction and eduction pipes, all constructed to operate substantially as described.

94,236.—Thomas G. Otterson, Camden, N. J.—*Preserve-Jar.*—August 31, 1869.

Claim.—1. The cover C, having a recess, *r*, in its outer lower edge, for the purpose specified, and a shoulder, *n*, for contact with rubber gasket, as herein set forth.

2. A spring, (for securing and holding the covers of fruit-jars,) constructed as shown in Fig. 3, and arranged to operate substantially as described.

94,237.—William H. Pierce, Bangor, Me.—*Mincing-Machine.*—August 31, 1869.

Claim.—1. Combining with the dish B, an oval rotary cutter, C, substantially in manner as and for the purposes specified.

2. The combination of the revolving dish B, oval cutter C, adjustable bracket *h*, adjustable spring *e*, or its equivalent, and platform A, substantially as and for the purposes specified.

94,238.—Salmon M. Prentice, Aurora, Ill.—*Fence.*—August 31, 1869.

Claim.—1. The panels B A, when supported and secured to the earth by the braces *u l* and the wedge *y*, or their equivalents, and connected, by the middle rail *x* and the wire staples, with hooked ends *j*, linked or connected with the hooked ends *s* of the wires *f*, constructed and arranged as herein shown and described.

2. The mode of connecting fence-panels by wire staples with hooked ends *j*, crossed and linked or connected with the wires *f* at their hooked ends *s*, as herein substantially specified.

3. The braces *u l* with hooked ends *t*, used in connection with the wedge *y*, or their equivalents, when used as a means of supporting and securing fences to the earth, as herein substantially specified.

94,239.—John Rich, Painesville, Ohio.—*Lathe-Chuck.*—August 31, 1869.

Claim.—1. Constructing a lathe-chuck, with the collar A, the shaft E′, with its convex center E, the screw-plug C, with concave center F, the shaft E′ secured in the tube or collar A by shellac cement, for the purpose as described.

2. The combination of the tube or collar A, shaft E′, screw-plug C, head B, and vise-jaws D, the whole combined as described.

94,240.—Horace T. Robbins, Boston, Mass., assignor to Ellis, Knapp & Co., New York City.—*Umbrella.*—August 31, 1869.

Claim.—1. The additional locking-spring *g*, in combination with the runner *a*, chamber *b*, sliding tube *c*, and key *o*, substantially in the manner and for the purpose specified.

2. The knob *h*, in combination with the locking-spring *g*, the runner *a*, chamber *b*, sliding tube *c*, and key *o*, substantially as and for the purpose specified.

94,241.—Andrews Robes, Somerville, and John C. Chapman, Cambridgeport, Mass.—*Pipe-Wrench and Pipe-Cutter.*—August 31, 1869.

Claim.—1. The tool *k*, within the hollow screw *d* and block *b*, rendered adjustable, with reference to said screw and block, by means of the sleeve-nut *g*, nut *n*, and plug *l*, substantially as shown and set forth.

2. The within-described combined wrench and pipe-cutter, consisting of the frame A, adjustable jaw or block *b*, hollow screw *d*, handle *h*, jamb-nut *m*, rod and cutter *c*, sleeve-nut *g*, nut *n*, and plug *l*, all constructed and arranged substantially as specified.

94,242.—William D. Robinson, Buffalo, N. Y.—*Ships' Fenders.*—August 31, 1869.

Claim.—The fender within described, consisting of side pieces A A′ and end blocks *a a′*, with the longitudinal space *b* between the sides, the whole arranged and operating as herein set forth.

94,243.—Otis E. Sanford, La Porte, Ind.—*Extension-Table Slide.*—August 31, 1869.

Claim.—The extension sections A A A, the metallic main slides B B, stop-slides C C, secured by and playing in the double-grooved dovetails *b b b b*, operating in the manner and for the purpose herein shown and described, substantially as set forth.

94,244.—John Georg Schwarz, Indianapolis, Ind., assignor to himself and John George Brand.—*Grout-Cutter.*—August 31, 1869.

Claim.—1. The sliding gate E F G H, when constructed with the knives I I and the nuts K K, substantially as set forth.

2. The combination and arrangement of gearing P, shaft O, crank M, cross-head *m′*, slide L, and knife-gate E F G H, substantially as described.

3. The whole device, considered as a whole, when constructed and operated substantially as set forth.

94,245.—W. T. Sears and William Edson, Boston, Mass., assignor to W. T. Sears.—*Ventilator.*—August 31, 1869.

Claim.—The air-box A B, in combination with the window W and the heating-surface D D′ D″, substantially as described, and for the purpose set forth.

94,246.—Charles A. Seely, New York, N. Y.—*Process for Extracting Oils, &c.*—August 31, 1869.

Claim.—1. The process of extracting oils, fats, and resins, herein described.

2. The use of volatile hydrocarbon solvents, in the manner and for the purpose as described.

94,247.—Robert H. Seymour, New York, N. Y., assignor to Henry Seymour and Company, same place.—*Shear.*—August 31, 1869.

Claim.—The shears consisting of the blade A, with pintle *a*, cast with or forming part thereof, and the blade B, all constructed as herein described.

94,248.—Henry E. Shaffer, Rochester, N. Y.—*Fruit-Jar.*—August 31, 1869.

Claim.—The combination of the spring-bar E and guide-pins *d d*, with the clamp C and screw D, the whole arranged substantially as described, and operating in the manner and for the purpose specified.

94,249.—Adam W. Shidler, South Bend, Ind.—*Evaporator.*—August 31, 1869.

Claim.—1. The cellular trough D, tubes E, provided with the plugs F and cock G, substantially as described, and operating for the purpose specified.

2. In combination with the above, the tank C, pan B, and arch A, when constructed, arranged, and operating substantially as and for the purposes herein set forth.

94,250.—Daniel Smallwood, Middletown, Ohio.—*Washing-Machine.*—August 31, 1869.

Claim.—The gate H, pivoted to swing with the corrugated roller I, in combination with heaters G and other devices in a washing-machine, as constructed and shown.

94,251.—James S. Smith and John Codd,

Swanton, Ohio. — *Harvester-Cutter.* — August 31, 1869.

Claim.—1. The metallic shoe C, with the uprights or guides, extended arms *c*, and the anti-friction balls or roller-bearings 6, when constructed and operating substantially as herein described.

2. The combination and arrangement of the double cutters or knives A, finger-bar B, metallic shoes C, with uprights or guides, extended arms *c*, and the anti-friction ball or roller-bearings 6, when constructed and operating substantially as herein set forth.

94,252.—JOHN P. SMUCKER, Ashland, assignor to himself and RUSSEL S. OWEN, Bryan, Ohio.—*Husk Mat.*—August 31, 1869.

Claim.—As a new article of manufacture, husk mats, constructed, substantially as herein described, with a metallic or wooden base, A, as set forth.

94,253.—JOHN BLAKE TARR, Fairhaven, Mass.—*Press for Casting Metal.*—August 31, 1869; antedated August 25, 1869.

Claim.—1. The follower A, attached to a screw, G, which works through a pivoted nut, H, in combination with a mold, substantially as and for the purpose described.

2. The combination, in a press, of a follower A, and its screw G, and guide-rods J J, with a laterally-adjustable nut H, substantially as described.

94,254.—HUGH THOMAS, New York, N. Y.—*Lubricator for Ventilator.*—August 31, 1869; antedated August 18, 1869.

Claim.—The cups *c c'*, and *b*, in combination with the hollow spindle *a*, arranged for lubricating the upper and lower bearings of said spindle, substantially as shown and described.

94,255.—CHARLES R. TOMPKINS, Rochester, N. Y.—*Hanging Circular Saws.*—August 31, 1869.

Claim.—1. The shaft *c*, when secured at either end to square blocks *p*, for the purpose of preventing it from turning, while at the same time admitting of the adjustment of said shaft in the manner and for the purpose before described.

2. The swinging-frame *i*, the fixed shaft *c*, the loose pulleys *f g h*, and the square-flanged locking-blocks *p*, of a cut-off saw, constructed, arranged, and operating in the manner and for the purpose before described.

94,256.—FREDERICK TOWNSEND, Albany, N. Y.—*Stone-Channeling Machine.*—August 31, 1869

Claim.—1. One or more chisels, applied to a rotary shaft, and operated upon by springs, or other blow-giving power, substantially as described.

2. One or more cams, or the equivalents thereof, adapted for retracting chisels which are applied to a rotary shaft, and which are acted upon by springs, substantially as described.

3. Providing for adjustment one or more chisel-retracting cams, so as to cause rotating chisels to strike at different angles of inclination, substantially as described.

4. Radially-reciprocating chisels, which are acted upon by springs, and which are applied to a wheel, composed of circular plates and guides, substantially as described.

94,257.—ISAAC H. TRABUE, Livingston County, Ky.—*Press.*—August 31, 1869.

Claim.—The combination and arrangement, in the press herein shown, of the fixed pulleys G, rope K, movable pulleys I, plunger H, and rope L, substantially as shown and described.

94,258.—W. A. VAN BRUNT, Horicon, Wis.—*Seeding-Machine.*—August 31, 1869.

Claim.—1. The plate H, with lug *h* and set-screw *h'*, when used in combination with drag-bar and tooth, as described.

2. The boxes M M, when constructed of the two parts *m m'*, inclosing between them the disk, as described, each of said parts *m m'* being cast in a single piece, substantially as set forth.

94,259.—HENRY VAN DE WATER, Attica, N. Y.—*Water-Wheel.*—August 31, 1869.

Claim.—1. The relative arrangement of the rectangular valve-gates G, stepped upon the valve-seat W, revolving upon a central pivot, *h*, and operated by the gate-rods L, with the guide-plates R and stay-plates K, substantially as described.

2. A water-wheel of that class known as the Jouval turbine, formed by the combination and arrangement of the valve-gates G, the valve-seat W, the gate-rods L, the guide-plates R, the stay-plates K, and the buckets B, substantially as described.

94,260.—CHARLES WARD, Detroit, Mich.—*Device for Filling Steam-Generators.*—August 31, 1869.

Claim.—The arrangement of the pipe C, the check-valve D, and cock B, with the boiler A, substantially as described.

94,261.—WALTER WARD, Mount Holly, N. J.—*Wrench.*—August 31, 1869.

Claim.—The handle A, with its tooth *b*, engaging in the ratchet on bar D, of jaw C, and operating substantially as described.

94,262.—THOMAS WESTERMAN, Clinton Township, Pa.—*Fence.*—August 31, 1869.

Claim.—Providing the rails 1 with notches 3, one notch being in the upper edge and the other notch in the lower edge of the rails, and used, in combination with the braces C and D, for bracing the panels A and B, as herein described.

94,263.—AMOS P. WILLARD, Battle Creek, Mich.—*Means for Putting Up and Using Powders.*—August 31, 1869.

Claim.—As a new article of manufacture the cup A and handle B, when both are worked from one piece of timber, and provided with the muslin cover C to the cup, substantially as and for the purposes set forth.

94,264.—HENDERSON WILLARD, Grand Rapids, Mich., assignor to himself and JOSEPH WALKER, same place.—*Mode of Removing Stumps.*—August 31, 1869.

Claim.—The holes A and B made in a stump, substantially as herein described, and for the purposes fully set forth.

94,265.—CHAUNCEY D. WOODRUFF, Toledo, Ohio, assignor to himself and WILLIAM KRAUSS, same place.—*Grain-Bin.*—August 31, 1869.

Claim.—The grain-bin A, in combination with the tubes B within said bin, and extending from the bottom thereof, when constructed, arranged, and operating as and for the purpose aforesaid.

94,266.—DANIEL WRIGHT, Jr., Waltham, Mass.—*Clamp-Screw for Calipers, &c.*—August 31, 1869.

Claim.—1. A handle or nut, made in two parts, connected with a spring, and tapped for the reception of a screw, for the purpose set forth.

2. The conical end D'' of the divided nut D, in combination with the hollow conical washer E, or the conically-shaped recess in the part operated upon, substantially as shown and described.

94,267.—T. H. ANDRESS, Sparta, N. J., assignor to himself and JOHN DECKER, same place.—*Thill-Coupling.*—August 31, 1869.

Claim.—The combination of the slotted plate D, flanged at one end, with the coupling C, bar B, and axle A, substantially as herein shown and described, and for the purpose set forth.

94,268.—DANIEL APPLEGATE, Noblesville, Ind.—*Clod-Fender.*—August 31, 1869.

Claim.—The arrangement, upon the side of a plow or cultivator beam, A, of the slotted plate B and curved rods C C, all constructed substantially as specified.

94,269.—WILLIAM AURICH, Chicago, Ill.—*Vapor-Burner.*—August 31, 1869.

Claim.—As a new article of manufacture, a vapor-burner, consisting of the solidly-capped tube A, pro-

vided with holes *g* and apertures *a*, the swinging doors *f*, rigidly connected by the rod *h* and the plug C, all constructed and arranged for operating, as herein shown and described.

94,270.—SAMUEL AYRES, Danville, Ky.—*Fastening for Breastpins.*—August 31, 1869.

Claim.—1. The combination of the pivoted lever *b* and spring *d* and hook B *a*, the said parts being each constructed and arranged, with reference to one another, as shown and described.

2. The combination of the said lever, spring, and hook with the stay *f* and eye *e*, on the breastpin, as and for the purpose specified.

94,271.—SAMUEL AYRES, Danville, Ky.—*Rain-Water Strainer and Cut-Off.*—August 31, 1869.

Claim.—1. The combination of the movable trough B, bail *d*, and pipe A, as and for the purpose specified.

2. The construction and arrangement, with reference to each other, of the bail *d*, pipe A, and flange *f*, for the purpose set forth.

94,272.—CALVIN BAKER, St. Joseph, Mo.—*Bridge.*—August 31, 1869.

Claim.—In combination with the inclined thrusting-beams *a a*, connected at a point, *f*, above the floor, and extending below the floor, the sockets S S, resting on suitable bearings directly against the banks of the stream, and employed to receive and support the lower ends of the beams, substantially as described.

94,273.—JOSEPH BANIGAN, Woonsocket, R. I., assignor to the WOONSOCKET RUBBER COMPANY.—*Apparatus for Pressing and Vulcanizing India Rubber.*—August 31, 1869.

Claim.—1. Using two or more molds or plates in a steam-tight heater, operated from the outside thereof, substantially as described.

2. The combination of the yokes C C′, bolts D D, and screwed spindle E, for the purpose of relieving the heater from pressure, as set forth.

3. The swinging crane F, and swivel *f′*, and roller on the top of crane, for facilitating the securing and removal of the door, as and for the purpose set forth.

4. The combination of the collars e^1 and e^2, clip *e*, and lever E^2, arranged and operating as and for the purposes set forth.

94,274.—TRACY BEADLE and WILLIAM P. YATES, Elmira, N. Y.—*Permutation-Padlock.*—August 31, 1869.

Claim.—1. The combination of the revolving notched disks I with the swinging plate F, carrying spring-latch C, when arranged to operate together, and respectively constructed, substantially as described.

2. The spring-lever T, in combination with the notched disks I, graduated disk M, and notched lug V, to change the combination, substantially as herein shown and described.

3. The numbered ring X, attached to the lock in the manner described, for the purpose of numbering the same, as herein set forth and shown.

94,275.—JACOB I. BEAR, Decatur, Ill.—*Spring-Wagon Seat.*—August 31, 1869.

Claim.—1. The staples D D, passing through and securing together the spring-slats C C, &c., in combination with said slats, substantially as and for the purpose shown.

2. The lever-supports E E, when made adjustable by means of the screws and slots, substantially as herein shown and described.

94,276.—GEORGE C. BELL, Buffalo, N. Y.—*Method of Making Square-Necked Bolts.*—August 31, 1869.

Claim.—The method herein described of forming square necks on bolts from rods having one diameter less than the other, without upsetting, by first reducing the same, by means of rollers, to form the body, and then squaring the neck by compressing it between swaging-dies.

94,277.—E. W. BROWN, Cambridge, Ill.—*Furling and Reefing Sails.*—August 31, 1869.

Claim.—1. The arrangement of the roller A, with reference to the mast and spars, as herein set forth and shown.

2. The combination of the cords B, the sails, rollers, guide-pulleys C, and binding-shafts, all substantially as specified.

3. The combination, with the cords B, sails and spars, of the guide-pulleys M N, when arranged as specified.

4. The combination, with the rollers A, grooved in the upper end, as described, of the guide I and guide-pulleys thereon, substantially as specified.

94,278.—WILLIAM H. BROTHERS, Winooski, Vt., assignor to himself and ELISHA ALLEN, same place.—*Jack for Spinning.*—August 31, 1869.

Claim.—1. The slide-plate o^1, carrying the intermediate gearing for the forward-moving scroll *y* as set forth, when combined with the slide P, as described, so that it will be elevated out of gear when the forward motion of the carriage is completed.

2. The slide-bar P, operated by a lug, s^1, of the carriage, to throw the forward-moving scroll out of gear, as set forth.

3. The hook Z, for holding the slide-plate o^1 elevated, when arranged so that it will automatically drop into a notch of the slide-plate when the same is elevated, while it will be thrown out of the notch by a stop on the carriage, to lower the plate o^1, substantially as herein shown and described.

4. The slide-bar T, connected with the bell-crank S, so as to be operated by the arm *q* and roller *r* of the carriage, substantially as herein shown and described.

5. The slide-bar T, when provided with the shoulders d^2, e^2, and f^2, and with the spring g^2, as described, so as to actuate the rocking-shippers U and V, substantially as herein shown and described.

6. The shipper-lever W, when connected both with the rock-shaft V and with the slide-bar X, to operate the loose wheel b^1, substantially as herein shown and described.

7. The slide-plate B′, when connected, by a bell-crank C′, with the sliding shipper-bar X, so as to operate the belt g^1, the loose wheel b^1, and the toothed clutch-wheel Y, by its motion, substantially as herein shown and described.

8. The hollow cone y^1, arranged on the shaft N, in combination with the loose toothed clutch-wheel Y and intermediate gearing, substantially as described, to operate the shaft N from the shaft O, for the purpose of imparting a slower motion to the carriage.

9. The rock-shaft U, carrying the arms c^2, i^2, and j^2, substantially as described, so as to receive motion from the slide-bar T, and to impart it to the wheel V and bar X, substantially as herein shown and described.

10. The faller D, when counterbalanced by the weight *h*, and connected by the strap *j* with the loose pulley K on the shaft E, to regulate the building of the cop, substantially as herein shown and described.

11. The carriage C, when provided with the stops or projections *q r* s^1 y^2, and v^2 w^2, substantially as described, so that it will automatically set the various parts of the driving-machinery to regulate its own motion, as specified.

94,279.—CHARLES BUNGE, Geneva, N. Y.—*Revolving Spring-Toy Gun.*—August 31, 1869.

Claim.—1. The combination of the perforated revolving feed-plate E with the stationary reservoir-plate, which has the chambers *h* and the bore *g*, in line with the barrel, all arranged and operating substantially as herein shown and described.

2. The separated breech-end H of the barrel, when forced by a spring, *i*, against the reservoir-plate F, substantially as and for the purpose herein shown and described.

94,280.—S. N. CHAPIN, New Britain, Conn.—*Ferrule.*—August 31, 1869.

Claim.—As a new article of manufacture, a ferrule, *a*, when provided with one or more points *c*, bent inward, so as to enter the end of the handle A, substantially as and for the purpose set forth.

94,281.—JOSHUA E. CHAPMAN, West Reading,

Conn.—*Turbine Water-Wheel.* — August 31, 1869; antedated August 19, 1869.

Claim.—The spiral form and arrangement of the buckets D, shaft C, curb B, and conductor or forebay A, all as shown and described, for the purposes set forth.

94,282.—JONATHAN L. CHESTON, South Easton, Pa.—*Fire and Burglar Alarm.*—August 31, 1869.

Claim.—The arrangement, within the box A, of the grooved and notched drum C, provided with hammers B B, and operated by means of the cord G and weight H, with the bell D, lever K, spring L, weight M, with its dovetail resting in the slotted end of the spring P, cord N, and pulley O, all substantially as shown and described.

94,283.—J. N. COLLINS, Menasha, Wis.—*Bag-Holder.*—August 31, 1869.

Claim.—The combination of the arms G G, cross-pieces F F, bars E E, with ratchet-teeth on one end, stop-plate L, cleat K, block C, thumb-screw *d*, and pillar A, constructed, arranged, and operating substantially as shown and described, and for the purposes set forth.

94,284.—CHARLES CROZAT CONVERSE, Brooklyn, N. Y., assignor to SAMUEL S. GREELEY.—*Wooden Pavement.*—August 31, 1869.

Claim.—A pavement, constructed of rows of blocks, of rectangular form, arranged in rows, with the grain vertical, and having between the rows strips of wood of a width equal to the length of the blocks, and arranged longitudinally with the grain, the longitudinal strips forming an even surface with the surface of the blocks.

94,285.—JOHN COYNE, Allegheny City, Pa.—*Machine for Cutting Nails.*—August 31, 1869.

Claim.—1. The combination of the slotted lever-head A and adjustable rubber B, arranged, with reference to the other parts of the machine, as shown and described.

2. The combination of the above device with the cams *a* and *b*, arranged as set forth, and co-acting to govern and regulate the relative movements of the nipper-rod and griper-lever, as specified.

94,286.—JOHN COYNE, Allegheny City, Pa.—*Apparatus for the Manufacture of Pig-Bloom.*—August 31, 1869.

Claim—1. The molds, hinged at the outer ends to the bolts H, connected to the spring-supports I, and all combined with the table A, and arranged as specified.

2. The arrangement of the beveled projections M, on the molds, and the spring-supports, substantially as specified.

3. The flange D and hoop E, combined with the table A and stand C, substantially as specified.

4. The combination, with the molds G, of the T-shaped guards, substantially as specified.

94,287.—HERRMANN CARMER, Sonora, Cal.—*Washing-Machine.*—August 31, 1869.

Claim.—The heater G, and the grooved hollow and slotted cylinder A, arranged in the tub B, and provided with the operating-wheels C D, and hand-lever E, all substantially as specified.

94,288.—JAMES M. CROSE, Lebanon, Ind.—*Tank-Regulator.*—August 31, 1869.

Claim.—The combination of the tank A, escape-pipes and valve D, tilting lever and buckets thereon, having escape-valves, air-passage valves I, weight G, rods P' Q, levers and float C, when arranged for operation by the water for opening and closing said air-passage, substantially as specified.

94,289.—JAMES A. CURRIE, Xenia, Ohio.—*Combined Planter and Cultivator.*—August 31, 1869.

Claim.—1. The combination of the plow-beams E, arranged in pairs, the front plow-standards F, whether placed between or at the side of the pair of plow-beams E, rear plow-standards H, whether one or both are used, and seed-hoppers J, with each other, and with the frame C and axle B, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the pivoted perforated dropping-plate K, perforated supporting-plate L, jointed connecting-bars S, and foot-lever M, with each other, and with the perforated bottoms of the seed-hoppers J, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the jointed connecting-bars P, shaft O, lever Q, and adjusting-post R, with each other, and with the pairs of plow-beams E and frame C, substantially as herein shown and described, and for the purposes set forth.

94,290.—F. DAVISON, Richmond, Va.—*Nail-Machine.*—August 31, 1869.

Claim.—1. The arrangement of the inclined vibrating feed-box A, of the inclined shelf H, and anti-friction rollers C, substantially as specified.

2. The arrangement of the curved block M, swiveled straps, and vibrating bar B, substantially as specified, for the purpose set forth.

3. The arrangement of the bifurcated bent carrier N, recessed die P, spring-nipper Q, and guides Q', substantially as specified.

94,291.—J. HARVEY DAY, Walla-Walla, Washington Territory.—*Rock-Crushing Mill.*—August 31, 1869.

Claim.—1. A crusher for ores, consisting of weight H, having a continuous grinding-shoe at its periphery, and moving about a universal joint at the lower side, substantially as herein described.

2. The disks, either consisting of the central cone E and the rim F, or made in any other shape, and all united together, as described, either for crushing or amalgamating, and having discharge-openings, substantially as herein described.

3. A crusher, or a crusher and amalgamator, consisting of a series of disks, one above another, in combination with the weight H, the whole united by universal joints, and operating substantially as herein described.

94,292.—JOHN DECKER, Sparta, assignor to himself and E. DE CAMP, Boonton, N. J.—*Combined Weighing and Measuring Scale.*—August 31, 1869.

Claim.—The beam A, weight B, balance C, fulcrum E, and hook F, arranged and combined substantially as described, for the purpose set forth.

94,293.—CLARENCE DELAFIELD, Castleton, and FRANK G. JOHNSON, Northfield, N.Y.—*Railway-Car Wheel.*—August 31, 1869.

Claim.—The disks A B, when provided with the projections E, in combination with the wood strips F, as herein described for the purpose specified.

94,294.—JULES MARIE DE LA RUE, Nogent sur Marne, near Paris, France.—*Floating Velocipede.*—August 31, 1869; patented in France, December 14, 1868.

Claim.—The herein-described nautical velocipede, consisting of the floats A A', united by the cross-bars *g*, the paddle-wheel H, inclosed in box O, spring-supports M M', for the saddle N, the forks O O', balance-rudder K, and tiller-ropes L L', all combined, arranged, and constructed as shown.

94,295.—JAMES M. A. DEW, Chicago, Ill., assignor to himself and OSWELL A. BOGUE, same place.—*Lamp.*—August 31, 1869.

Claim.—1. A kerosene-oil lamp, consisting of the body E, chamber F, and burner B, with tube C attached, all constructed and arranged as herein shown and described.

2. The chamber F, in combination with the body of a lamp, when constructed and arranged substantially as and for the purpose set forth.

3. Tinning the interior surface of the body or chamber of brass lamps, substantially as and for the purpose set forth.

94,296.—THOMAS DOW, Yorktown, Ill.—*Plow-Clevis.*—August 31, 1869.

Claim.—The concave plate A, provided with holes X, and lugs C and D, in combination with the two-part roller G G, clevis J J, provided with shank L

P, flange N, and spring-bolt T, constructed and arranged to operate as and for the purpose set forth.

94,297.—Cleaveland F. Dunderdale, New York, N. Y.—*Manufacture of Illuminating-Gas.*—August 31, 1869.

Claim.—The vessels A B and H I, the flexible pipe F, coiled tube G, pipe *m*, and boiler L, all combined and arranged as herein described, for the purpose specified.

94,298.—William Bancroft Espent, Spanish Town, Jamaica.—*Apparatus for Purifying Saccharine Liquids, and for Curing, Drying, and Treating Sugar and other Materials.*—August 31, 1869.

Claim.—1. The extraction of fluids from substances containing them, by placing the substance to be operated on upon a surface of wire-gauze or other open material, forming the bottom of a chamber, which, when the substance has been introduced, is closed air-tight by a cover. Beneath this chamber there is a space in which vacuum being formed by any means, the air above the substance being expanded, forces its way down through the substance into the vacuum-space, and in so doing carries with it the moisture from the substance.

2. The filtering of raw and fermentable juices and fluids by causing the juice or fluid to be driven rapidly through filtering-substances by the force of the atmosphere in its endeavor to restore equilibrium in the vacuum-space within, or in the inner side of the filtering-substance.

94,299.—John O. Fairbairn, Milwaukee, Wis.—*Ruffling-Attachment for Sewing-Machines.*—August 31, 1869.

Claim.—A ruffler for sewing-machines, consisting of the plates B, C, and D, with the guide E connected to the plate B, and serving to guide the material by bearing against the seam, all arranged as herein described.

94,300.—Amos P. Foster and Daniel B. H. Bartlett, Lowell, Mass., assignors to themselves and Charles F. Howe, same place.—*Pocket-Lamp.*—August 31, 1869.

Claim.—1. The arrangement and construction of the lamp *a*, with or without the chimney *g*, case *h*, match-tube *i*, with cap *k*, when operating as described and specified.

2. In combination with the lamp *a*, the match *j*, with case *h*, when arranged as described.

94,301.—John G. B. Gill, Chesnut Grove, S. C.—*Cotton-Seed and Corn Planter.*—August 31, 1869.

Claim.—The combination of the planting or drill wheel, provided with grooves and iron spikes upon its periphery, with the slide, to regulate the supply of seed, as and for the purpose specified.

94,302.—Kingston Goddard, Richmond, N. Y.—*Peat-Mold.*—August 31, 1869.

Claim.—The combination of the grooved frames B C, beveled posts D, with the metal plates A, arranged substantially as described, so that said frames can be drawn together, so as to press closely the said plates.

94,303.—David Gore, Carlinville, Ill.—*Ditch-Gauge Scoop.*—August 31, 1869.

Claim.—1. The gauge A *a'* B C D, constructed and operating substantially as herein shown and described, and for the purpose set forth.

2. The combination of the bars and sights I J, with the beam A of the gauge A *a'* B C D, substantially as herein shown and described, and for the purpose set forth.

3. The scoop E F G, constructed and operating in connection with the gauge A *a'* B C D, substantially as herein shown and described, and for the purpose set forth.

94,304.—George W. Grader, Memphis, Tenn., assignor to himself and William B. Wiggs, same place.—*Machine for Linting and Relinting Cotton-Seeds and Motes.*—August 31, 1869.

Claim.—1. The combination and arrangement of two ginning-cylinders B B' and their accessories, the first for removing the long lint or fiber, and the second to complete the cleaning of the seed and motes, substantially as herein described.

2. In combination with the two sets of devices for successively treating the seed and motes for the removal of the lint or fiber, as described, the separate lint or fiber discharges, arranged and employed substantially as and for the purpose set forth.

3. The breast E', constructed with the rasp-face, composed of zigzag teeth or projections, *e'*, as described, for the purpose explained.

4. In combination with the breast E', the shaft K, mounted in vertically-sliding boxes, as described, the crank-disk O, connecting-rod N, links Q, slotted projection R, and stud S, arranged and adapted to operate substantially as described.

5. In combination with the ginning-cylinder B', the shield or fender G', constructed and arranged, relatively to said cylinder B', and its vibrating breast E', substantially as represented and described, for the purpose set forth.

6. In the described combination with the ginning-cylinders B B', the rollers C C', for throwing back the seed when the lint or fiber is separated, when mounted in sliding boxes F, so as to be capable of adjustment relatively to said ginning-cylinders, as and for the purposes set forth.

7. The boxes F of the rollers C C', adapted to slide transversely on their supports, and constructed with down-turned ends or lugs, traversed by adjustable set-screws *f f*, bearing against the ends or sides of their supports, as shown and described, to adjust them on said supports, as set forth.

8. The brush-cylinders D D', having their heads constructed for the reception of the strips or brushes, with radial shoulders or supports on their peripheries, and on their inner sides with radially-slotted lugs or flanges *d*, and the strips or brushes secured by transverse bolts *d'* passing through the slots in the lugs or flanges *d*, as shown and described, for the purposes set forth.

94,305.—A. D. Granger, Talbotton, Ga.—*Self-Watering Scrubber.*—August 31, 1869.

Claim.—1. In combination with the water-box of a scrubbing-brush, a bottom, composed of two or more perforated strips, B, and projecting rubber pieces C, arranged alternately in the manner shown and described, and for the purpose specified.

2. In combination with the above, the perforated cover a^2, conical sides, clamps *a* a^1 D, and handle F, constructed as herein described, for the purpose specified.

94,306.—William Griffith, Jr., Pottsville, Pa., assignor to himself, Joseph S. Patterson, and Thomas C. Zulick, same place.—*Furnace for Producing Iron Direct from the Ore.*—August 31, 1869.

Claim.—1. The deoxidizing-chamber B, containing the retorts D D, when arranged above or in connection with a welding-furnace, substantially as described, so that the retorts will be heated by the gases escaping from the welding-furnace, as described.

2. The retorts D D, when made substantially as described, of conical form, and molded, as specified.

3. The steam-generator F, when arranged within the deoxidizing-chamber, to supply steam to the fire-box, as set forth.

4. The funnel H, when arranged in combination with the furnace A, having the cap or valve I, and with the retorts D, having the movable bottoms E, all arranged, combined, and operating substantially as herein shown and described.

94,307.—J. C. Gross, Goshen Hill, S. C.—*Combined Turn and Subsoil Plow.*—August 31, 1869.

Claim.—The combination of the curved or semi-circular bar D, staples F, and screw-nuts G, with the standards E J and beam A of the plow, as herein shown and described, for the purpose specified.

94,308.—Remig Grotz, Chicago, Ill.—*Grain-Drier.*—August 31, 1869.

Claim.—1. The revolving screw C, having a pipe, B, arranged to convey heated air or steam through its center, substantially as described.

2. The rods I I, provided with beaters *i i*, arranged and operating as set forth.

3. The driving of the cold blast through a mass of heated malt, grain, &c., into the fire of the furnace, substantially as and in the manner set forth, or in other equivalent manner.

4. The application of steam-pipes B′, *m m*, and *n n* to the herein-described drying-apparatus, in the manner substantially as herein set forth and specified, or in any other equivalent manner.

94,309.—Stinson Hagaman, Weissport, Pa.—*Slate-Polishing Machine.*—August 31, 1869.

Claim.—1. So constructing a machine for grinding and polishing school-slates that the slates are revolved around the axis of the shafts on which they are held, and around the axis of a central shaft, B, substantially as herein shown and described.

2. The annular track E, springs F, and friction-rollers *b*, when arranged in combination with the revolving disks C and shafts D, substantially as and for the purposes herein shown and described.

3. The stationary segment H, when provided with internal gear, in combination with the pinions *c*, on the shafts D, and with the central shaft B and disks C, substantially as and for the purpose herein shown and described.

4. The nuts *g*, and sleeves *e*, when arranged on the shafts D, in combination with the springs F, disks C, and grinding-wheels J, all made and operating substantially as herein shown and described.

94,310.—Stinson Hagaman, Weissport, Pa.—*Slate-Polishing Machine.*—August 31, 1869.

Claim.—1. In a slate-polishing machine, the combination of the horizontal grinding-wheel C with the mortised disks F, shafts E, either stationary or revolving, gauges *b*, and levers G, whereby the said disks F are elevated or depressed, all constructed and operating substantially as herein shown and described.

2. The construction and arrangement in the frame A, upon each side of the center shaft B, of horizontal mortised disks F upon the vertical shafts E, either revolving or stationary, provided with the adjustable gauges *b*, and elevated or depressed by means of the levers G, substantially as herein shown and described.

3. The construction and arrangement of the vertical shaft B, supporting the horizontally-revolving wheel C, the mortised disks F, upon the shafts E, pressing the slate to be ground against the under surface of the grinding-wheel C, as herein shown and described.

4. The construction and arrangement of the levers G, pivoted in the frame A, and supporting upon their inner ends the vertical shafts E, substantially as herein set forth for the purpose specified.

94,311.—J. A. Ham and W. Carpenter, Jr., Barry, Mo.—*Churn.*—August 31, 1869.

Claim.—1. The combination of the wheels H L M K E, and the shafts on which they rotate, with the top N of the churn, the three first mentioned of said wheels being arranged above, and the remaining two below the said top, in the manner shown and described.

2. The subject-matter of the above clause, in combination with the double dasher, as and for the purpose specified.

94,312.—Jacob A. Hanger, Staunton, Va.—*Churn.*—August 31, 1869.

Claim.—1. The cross-bar M, provided with arms *n*, when vertically movable upon the rotary dasher-shaft J, within the rotating tub E, in combination with the arms *c*, fixed to the bottom of the churn, substantially as and for the purpose described.

2. The cover G, turned in a solid piece, and provided with the cross-piece H, the ends of which project and rest in recesses in the churn body, substantially as and for the purposes set forth.

94,313.—William Hawkins, Oregon, Mo.—*Ice-Cream Freezer.*—August 31, 1869.

Claim.—The cream-holder A, provided with the exterior longitudinal ribs C, and the irregularly-formed dashers N, as herein described, for the purpose specified.

94,314.—Jacob Hepperly, Peoria, Ill.—*Water-Wheel.*—August 31, 1869.

Claim.—The arrangement of the screen or grating *h*, sliding hatch W, adjustable circle O, with box embracing shaft *f*, induction-pipe U, and opening V, substantially in the manner and for the purposes as herein described.

94,315.—Britain Holmes, Buffalo, N. Y.—*Dumping-Wagon.*—August 31, 1869.

Claim.—1. In combination with the forward bolster and axle, the socket B and pivot-post C.

2. The rubber spring *e*, and bearing-block *e′*, in combination with the said socket and pivot-post, substantially as set forth.

3. The ribbed and tubular cast-iron axles, when constructed substantially as described.

4. The oil-reservoir *h*, aperture *j*, and groove *i*, constructed, arranged, and operating substantially as and for the purpose set forth.

5. The two pivoted sections R R of the bottom arranged so as to dump the load at the center, substantially as set forth.

6. The arm *u* of the bolster D, combined and arranged with the brace V and axle-rod *r*, as shown and described.

94,316.—Charles L. Inslee, New York, N. Y., and William H. Inslee, Newark, N. J.—*Steam-Engine Valve-Gear.*—August 31, 1869.

Claim.—1. The arrangement of valves F G and valve-seats *a b*, with reference to chambers B C and ports D E, as and for the purpose set forth.

2. The construction and arrangement, with respect to each other, of the rod O, slide P, screw Q, and yoke L, for the purpose of adjusting the throw of the valves F G, as set forth.

94,317.—Luther A. Johnson, H. W. Collender, and James E. Boyle, New York, N. Y., assignors to Michael Phelan, H. W. Collender, and James E. Boyle, same place.—*Cue-Leather Trimmer.*—August 31, 1869.

Claim.—1. A cue-leather trimmer, composed of a hand-tube or holder and a cutting-blade or blades, adapted to both shave off the periphery of and round over or chamfer off the leather, substantially as described.

2. Making the holder A with a slot or slit, so that its parts may be sprung together, to bring the cue up to the stationary cutting-mechanism, substantially as described.

94,318.—Alden H. Jumper, Sunman, Ind.—*Ax.*—August 31, 1869.

Claim.—An ax, formed with a split or open poll, substantially as herein shown and described, and for the purpose set forth.

94,319.—Nathan W. Kingsley, Swansea, Mass.—*Horse Hay-Fork.*—August 31, 1869.

Claim.—1. In combination with the lifting-arm F, handle A, and pawl I, the holding-tine G, operated by the link-connection H, substantially as shown and described, for the purposes specified.

2. The improved horse hay-fork herein described, consisting of the handle A, shank B, lifting-tines E, holding-tine G, link-connection H, lifting-arm F, and pawl I, provided with any suitable tripping-device, and arranged to operate substantially as shown and described, for the purposes specified.

94,320.—Philip Klotz, Baltimore, Md., assignor to Bentley C. Bibb, same place.—*Base-Burning Fire-Place Heater.*—August 31, 1869.

Claim.—1. A double-legged fuel-feed, substantially as described.

2. The chamber F^2, at the upper termini of the two feed-legs F^1 F^1, substantially as described.

3. The fuel-feeders F^1, inclined backward and laterally, and supported wholly or in part at points above the fire-brick lining, substantially as described.

4. The horizontal flue-section C, in a fire-place heater, which is organized substantially as described.

94,321.—JOHN LAIRD, Canton, Ohio.—*Bridge.*—August 31, 1869.

Claim.—1. The use of the cast sections A A, constructed as described, and forming a continuous arch, from shoe to shoe, substantially as herein set forth.

2. The cast section A, constructed as described, the end-pieces projecting above and below, so as to secure the upper and lower bars of the arch, substantially as herein set forth.

3. Connecting the arch of a bridge with the shoes by means of the blocks B B, substantially as herein set forth.

4. The combination of the shoes C C, blocks B B, cast sections A A, and bars *a* and *b*, all constructed as described, and connected substantially in the manner and for the purposes herein set forth.

94,322.—JOHN LAIRD and G. F. LAIRD, Canton, Ohio.—*Bridge.*—August 31, 1869.

Claim.—1. The combination of the channeled beams *b b*, plate-iron *d*, outside-supporting blocks *c c*, inside-supporting blocks *f f*, and bolts *e e*, all constructed and arranged substantially as shown and described.

2. The arrangement of the beams *b b*, iron *d*, blocks *c c* and *f f*, shoes B B, spans C C, and bars *a a*, all as herein shown and described.

94,323.—SAMUEL LAWRENCE, Lowell, Mass., assignor to himself and AMBROSE LAWRENCE, same place.—*Flask for Casting Dental Plate.*—August 31, 1869.

Claim.—The flask, constructed as described, with the parts combined and arranged in the manner and for the purpose specified.

94,324.—SAMUEL LAWRENCE, Lowell, Mass., assignor to himself and AMBROSE LAWRENCE, same place.—*Composition for Molds and Models in Casting Dental Plates and other Articles.*—August 31, 1869; antedated August 24, 1869.

Claim.—The composition of the herein-described ingredients, in the portions specified, for the purpose and in the manner described.

94,325.—OBED LOOK, Bridgeport, Conn.—*Carriage-Wheel.*—August 31, 1869.

Claim.—1. The continuous rods, or spokes *j j*, connected from the opposite sides of rim *h h*, in combination with disks *a* and rim *h*, for the purpose specified and set forth.

2. The disk-hub *a*, nut *b*, ears *f*, screw C, rods *j j*, rim *h*, arranged as specified.

94,326.—ISAAC LOW, East Fairfield, Ohio.—*Harrow.*—August 31, 1869.

Claim.—1. The within-described harrow, consisting of the frame C, D D, F, and F, braces G G, &c., rod H, sections I I, levers K K and L, *l* and *l'*, rods M, cross-bars O and R, and rubber band or chain P, all constructed and arranged to operate substantially as and for the purpose shown.

2. The means employed for raising and lowering the harrow-sections, consisting of the levers K K and L, *l* and *l'*, and rods M, substantially as and for the purpose shown.

3. The employment of the rubber chain or bands P P, for increasing the pressure upon the harrow-sections, substantially as herein shown, and for the purpose specified.

94,327.—CHARLES MCCLAIN, Carlyle, Ill.—*Cooking-Stove.*—August 31, 1869.

Claim.—The plate B, cast with a rim or flange b^1, and with a flue or long pipe-collar b^2, in combination with the top plate A of a cooking-stove, said top plate being made without a pipe-collar, substantially as herein shown and described, and for the purpose set forth.

94,328.—JAMES F. MCMILLEN, Mansfield, Ohio.—*Syringe.*—August 31, 1869.

Claim.—In combination with a plunger-syringe, the reservoir A, the tubular plunger-rod B, and rod D, with the valve *g*, and spring *h*, arranged and operating substantially as described, for the purposes set forth.

94,329.—CHARLES T. MOORE, White Sulphur Springs, West Va.—*Printing-Telegraph.*—August 31, 1869.

Claim.—1. The combination, with a set of keys or other instruments, arranged substantially as described, for closing the circuit of a breaking toothed cylinder and a printing-cylinder, arranged to be operated simultaneously with, and relatively to the breaking-cylinder, by means substantially as specified.

2. The combination, with a set of keys, arranged to open the circuit, as described, of a toothed breaking-cylinder, and a set of weighted actuating-gears d^2, substantially as specified.

3. The combination, with a set of keys, arranged to open the circuit, as described, of a toothed breaking-cylinder, and a spring or weight-actuated indicating-apparatus, arranged for operation simultaneously with, and relatively to the said breaking-cylinder, substantially as specified.

4. The combination, with the bars *c* and c^1, for opening and breaking the circuit, of the keys *b*, catch-levers c^3, pawl d^4, vibrating bar d^7, and breaking-cylinder *d*, all substantially as specified.

5. The combination, with the type-cylinder *e*, arranged for rotation, as described, of the pressing-levers f^1, toothed cylinder f^5, and armature, when arranged substantially as specified.

3. The cut-out *i*, arranged for engaging with the wheel f^4, to prevent the movement of the type-cylinder, substantially as specified.

94,330.—WILLIAM A. MORGAN, Brooklyn, and THOMPSON B. MOSHER, New York, N. Y.—*Hot-Corn Holder.*—August 31, 1869.

Claim.—A spring holder for corn-ears, made of one continuous wire, substantially as herein shown and described.

94,331.—STEPHEN, EARL OF MOUNT CASHELL, Moore Park, Ireland.—*Double Window.*—August 31, 1869.

Claim.—1. The combination of the outside sashes B and C, the inside or winter-sashes *h*, and the screen-sashes L, with the frame A, substantially as shown and described.

2. In combination with the ordinary window, the inner or winter-window, when the sashes are made in three or more parts, with their rails tongued and grooved together, substantially as described.

94,332.—J. W. MYERS, Lyons, Iowa.—*Washing-Machine.*—August 31, 1869.

Claim.—1. The combination of rubbers B C, agitators M M, tub A, shaft F, and driving-gears I K, as shown and described.

2. The combination, with a rotating rubber, of one or more agitators M, as and for the purpose specified.

94,333.—J. WELLINGTON NESMITH, Black Hawk, Colorado Territory.—*Machine for Punching Metal Screens.*—August 31, 1869.

Claim.—1. The combination of the punching-roller, grooved roller, eccentric bearings K, and operating-levers M, when arranged substantially as specified.

2. The combination of the punching-roller, grooved roller, eccentric bearings, levers, and eccentric stops, when arranged substantially as specified.

3. The combination, with the shaft A, having a fixed collar and clamping-nut, of the radially-slotted rings B, and punches D, when all arranged substantially as specified.

4. The combination of the punching roller, grooved roller, and laterally and vertically adjustable bearings G, when all arranged as specified.

94,334.—S. W. ODELL, Ouachita Parish, assignor to himself and JOHN NIXON, New Orleans, La.—*Cotton-Check.*—August 31, 1869.

Claim.—The metallic spring-check A, when constructed and stamped with numbers alone, or with numbers and letters, substantially as herein described, for the purpose set forth.

94,335.—HARRISON OGBORN, Richmond, Ind., assignor to AARON CHANDLER, Davenport, Iowa.—*Seat for Schools, Halls, Churches, &c.*—August 31, 1869.

Claim.—The standard K and arm A, when provided with the lugs C C′, G G′, and spring L, and connected together by a rivet or bolt, M, constructed and arranged to operate as herein described, for the purpose specified.

94,336.—P. A. PEER, Kalamazoo, Mich.—*Skate-Runner.*—August 31, 1869.

Claim.—The construction of a skate-runner, having a round point at both toe and heel, said round points to be hollowed or bored out, as shown, and operating substantially as and for the purposes specified.

94,337.—JULIUS FREDERICK MOORE POLLOCK, Manchester, England.—*Brick-Machine.*—August 31, 1869.

Claim.—1. The arrangement of the driving-shaft B, cams Y, cross-head X, valve-stem W, steam-chest V, steam-cylinder U, piston-rod T, cross-head S, rods Q, cross-head or bar P, dies O Z, and bed or die-plate R, substantially as herein described, for the purpose specified.

2. The described arrangement, with relation to the cam gear-wheels D, the dies O Z, and bed-plate R, of the crank K, pitman M, and feeder N, the shaft F, gear-wheels E G H, and endless carrier J, for the purpose specified.

94,338.—ALBERT N. PUTNAM, Antrim, N. H.—*Pump.*—August 31, 1869.

Claim.—The combination and arrangement of the arm *o*, shaft *k*, with packing *l*, and brake *n*, when used in connection with the pump-body *a*, as herein described and set forth.

94,339.—WILLIAM RECK, Mendota, Ill.—*Plow-Coupling.*—August 31, 1869.

Claim.—A plow-coupling, consisting of the two rods A B, and of the clamp C, which has two screws *d e*, substantially as herein shown and described, to operate as set forth.

94,340.—GEORGE RICHARDS, Richland Centre, Wis.—*Wagon-Standard.*—August 31, 1869.

Claim.—1. Pivoting the stake of a wagon-bolster to a bolt which is itself pivoted in a cap on the end of said bolster, allowing the stake to be lowered in any direction desired, substantially as herein set forth.

2. Securing the stake F in an upright position to the cap B on the end of the bolster A, by means of the bolt G, having projections *b b*, and operated by the spring *a*, all substantially as shown and described.

3. The arrangement of the cap B, having the slot *c* and recesses *e e*, with the bolt C, ear E, stake F, bolt G, spring *a*, and projections *d d*, all substantially as and for the purposes herein set forth.

94,341.—JOHN JAMES RIDGE, St. Johns, Southwark, England.—*Process and Apparatus for Treating Flour, Meal, and other Farinaceous Substances.*—August 31, 1869.

Claim.—1. The herein-described improved process for the treatment and preparation of farinaceous substances, substantially as specified.

2. The combination of the vessel A, having a perforated top, the vessel B, provided with the pipes E and F, and arranged for treating either by fire, gas, or steam, and the plates G, substantially as specified.

94,342.—J. B. ROBINSON, Duncansville, Pa.—*Puddling Furnace.*—August 31, 1869.

Claim.—1. In combination with a puddling or boiling furnace, the bottom A, constructed and arranged substantially as shown and described.

2. In combination with a puddling or boiling furnace, the flue B and bridge-wall F, arranged substantially as described.

94,343.—THOMAS SCANTLIN and JAMES M. SCANTLIN, Evansville, Ind.—*Evaporator for Sugar and other Liquids.*—August 31, 1869.

Claim.—1. The open boxes C C, arranged on the outside of the pan, to connect with the compartments of the same, substantially as herein shown and described.

2. The gates *i*, arranged in the boxes C, on the outside of the evaporating-pan, substantially as herein shown and described.

3. The ash-pit, in combination with a portable furnace, for the purpose of regulating the heat, as set forth.

4. The flanges *j j*, formed on the upper edges of the furnace, to produce open air-passages *k k*, for cooling the upper part of the furnace, substantially as herein shown and described.

94,344.—GEORGE SHATSWELL, Waukegan, assignor to himself, PARNELL MUNSON, and CHARLES L. SAMPSON, Chicago, Ill.—*Window.*—August 31, 1869.

Claim.—In combination with the tongued stop G′, the sash C, arranged to swing and slide, as and for the purpose set forth.

94,345.—NOAH SHAW, West Eau Claire, Wis., assignor to himself, JAMES F. MOORE, WILLIAM W. LEE, and ALVIN B. ALDEN.—*Hollow Grate-Bar.*—August 31, 1869.

Claim.—The pump C, pipe G, hollow bars D D, with their continuations H K, and check-valve L, when arranged with reference to boiler B, substantially as specified.

94,346.—ELIAS SHOPBELL, Ashland, Ohio.—*Machine for Upsetting Tire.*—August 31, 1869.

Claim.—1. The combination of the serrated sliding frame A, stationary serrated frame B, serrated blocks *b b′*, and serrated eccentrics *a a*, substantially as described.

2. In combination with the above, eccentric lever *d*, substantially as described.

94,347.—JOHN SIMPSON, Chester, S. C.—*Hay and Cotton Press.*—August 31, 1869.

Claim.—1. The cords K, when so arranged as to be wound automatically upon the shaft H as the followers are moved apart, as herein shown and described, for the purpose set forth.

2. The arrangement of the followers A and B, racks D, pinions E, spur-wheels F, shaft H, and its pinions G, ratchets L, and pawls M, all arranged to operate together substantially as herein shown and described.

94,348.—ZACHARIAH B. SIMS, Bonham, Texas.—*Clevis.*—August 31, 1869.

Claim.—The clevis D, and screw eye-bolt B, combined to operate together as described.

94,349.—ZACHARIAH B. SIMS, Bonham, Texas.—*Cotton-Plow and Planter.*—August 31, 1869.

Claim.—1. The frame, consisting of the plow-beam A and radial pieces B, bolted together, and the cross-bar C, and provided with a series of openings, Q, substantially as and for the purpose described.

2. The handles D, supported on the cross-bar C, and made adjustable by means of screw-rods E, in connection with the series of jam-nuts *a a*, substantially as and for the purpose described.

3. The marker, consisting of a weight and cord or chain, in connection with the adjustable hooks *b*.

4. The removable valve-plates J, substantially as and for the purpose described.

5. The valve K, secured to the spring-strip L, and operating as and for the purpose described.

6. The mode of securing the plows to the standards, by means of the loops *k* and the notch *n*, as described.

7. The plow-standards, having a plate, P, welded or riveted thereto, and made adjustable, as described.

94,350.—ZACHARIAH B. SIMS, Bonham, Texas.—*Cotton-Plow.*—August 31, 1869.

Claim.—1. The curved flanges *a a*, in combination with the plows F F, all constructed and operated as described.

2. The flanged protector *d*, in combination with the curved flanges *a a*, as and for the purpose set forth.

3. The plows F F, in combination with the curved flanges *a a* and protector *d*, as and for the purpose set forth.

4. The plow-tooth I, in combination with the plows F F, all constructed, arranged, and operated in the manner and for the purpose set forth.

94,351.—ZACHARIAH B. SIMS, Bonham, Texas.—*Cotton-Plow.*—August 31, 1869.

Claim.—The reversible plows *b b'*, in combination with the plows *c d*, for breaking up the soil and laying off seed-furrows, as and for the purpose set forth.

94,352.—ZACHARIAH B. SIMS, Bonham, Texas.—*Cotton-Picker and Cleaner.*—August 31, 1869.

Claim.—1. The rotary breakers or teeth *g g*, in combination with the fixed breakers *d d*, and inclined way *b*, substantially as described.

2. The breakers *g g*, *d d*, and inclined way *b*, in combination with the inclined cylinder *m*, spirally-arranged teeth *l l*, wire grating *n*, and cloth, substantially as described.

94,353.—ZACHARIAH B. SIMS, Bonham, Texas.—*Cotton-Hoe.*—August 31, 1869.

Claim.—1. The back A, provided at its lower part with the arches *o o' o''*, in combination with the cutters *a c*, and removable cutter *b*, substantially as described.

2. The handle H, consisting of the straight portions *e l*, and the angular part *s''*, substantially as described.

3. The handle H, constructed as described, in combination with the curved projections *k*, substantially as described.

94,354.—ZACHARIAH B. SIMS, Bonham, Texas.—*Stalk and Cane Puller.*—August 31, 1869.

Claim.—The combination, with the handle A and prongs B, of the fulcrum C, made adjustable vertically and longitudinally, in the manner and for the purpose set forth.

94,355.—ZACHARIAH B. SIMS, Bonham, Texas.—*Three-Horse Equalizer.*—August 31, 1869.

Claim.—The single-trees B B, jointed eccentrically to the double-tree A, the latter being provided with the stretcher-loops C C, arranged eccentrically thereon, substantially as and for the purpose described.

94,356.—H. M. SMITH, Long Branch, N. J.—*Potato-Digger.*—August 31, 1869.

Claim.—1. The revolving cylindrical screen K, formed by the combination of the tubular side bars k^1, bands or rims k^2 k^3, and shaft J, when used in connection with the frame and gearing of a potato-digger, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the buckets k^5 with the interior surface of the flanged band or rim k^3, at the rear end of the revolving screen K, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the spout or chute L with the buckets k^5, rear end of the revolving screen K, and frame A, substantially as herein shown and described, and for the purpose set forth.

4. The tubular screen, back-head, and loose front head, constructed and arranged together as described, to allow the latter to be slipped back from the revolving cylinder or screen.

5. The arrangement, in relation to the other parts, of the inside elevator, for the purpose of raising the potatoes in the manner set forth.

6. The arrangement of the adjustable hinge at the back end of the plow, for the purpose of raising or lowering it, to suit the mouth of the revolving screen.

7. The adjustable scraper T, constructed and operating substantially as herein shown and described, in combination with the plow-plate N and frame A, as and for the purpose set forth.

8. The combination of the curved toothed plate X, and key or stop Y, with each other and with the tongue V and frame A, substantially as herein shown and described, and for the purpose set forth.

94,357.—JOSEPH R. SMITH, Chicago, Ill.—*Moth-Proof Lining.*—August 31, 1869.

Claim.—A new article of manufacture, made by uniting a veneer of red-cedar, camphor, or similar wood, with paper or cloth, as herein described, for the purpose of lining boxes, trunks, drawers, &c., as set forth.

94,358.—JOSEPH SPOONER and EBENEZER SPOONER, New York, N. Y.—*Tubular Paper-Box Cutter.*—August 31, 1869.

Claim.—1. The combination, with a set of paper-cutters, arranged, at suitable intervals, on a revolving shaft, of a roller, L, swinging around on a pivot at one end, to receive the paper tube, and rotating in its bearing, so as to bring the said tube into contact with the cutters, all as shown and described.

2. Swiveling one end of the roller, upon which the paper roll is placed to be cut, to its supporting-standard, in such a way that its other end may be swung outward, as and for the purpose set forth.

3. An improved machine for cutting paper boxes, formed by the combination of the adjustable plates B and C, adjustable knife-plate E, adjustable knife-standards G, adjusting-blocks J, circular revolving knives F, and swiveled roller L, with each other, and with the bed-plate A and standards O, substantially as herein shown and described, for the purpose set forth.

94,359.—T. CHALKLEY TAYLOR, Philadelphia, Pa.—*Mode of Bleaching Granulated Sugar.*—August 31, 1869; antedated August 20, 1869.

Claim.—The method herein described of bleaching granulated sugar.

94,360.—OAKES TIRRILL, Boston, Mass.—*Apparatus for Carburetting Air and Gas.*—August 31, 1869.

Claim.—1. The method of increasing the pressure of the gas, or the quantity of such gas supplied to the burner, in proportion to the decrease in the volume of the hydrocarbon-vapor with respect to that of air or coal or other gas with which it is mingled, substantially as and for the purposes set forth.

2. The employment of a tapering spool or its equivalent, connected with the air or gas pumping devices, substantially as described, so as to steadily increase the pressure of gas in the machine while the same is in operation, for the purpose specified.

3. The use of the tapering spool, hereinbefore described, with machines for carburetting coal and other gases, substantially in the manner and for the purposes described.

94,361.—JAMES S. TOTTEN, Lebanon, Ohio.—*Shaft and Pole-Holder.*—August 31, 1869.

Claim.—The combinations, with the spring-bar C of a carriage and the shaft-bar B, of holding-traps D, looped or buckled around the one, and adapted for buttoning to the other, substantially as specified.

94,362.—V. B. TOWNSEND, Worcester, Mass.—*Floating Velocipede.*—August 31, 1869.

Claim.—In combination with a boat or deck, supported upon long, hollow, water-tight cylinders, the paddle-wheel extending across the boat or through the deck, from cylinder to cylinder, or approximately thereto, such paddle-wheel being connected to and driven by a cranked shaft, placed forward of the wheel-house, and having pedal-cranks actuated as described, and the rudder being connected to a tiller placed forward of the cranked axle, and so that its handles are in position to be grasped by the person who drives the axle-cranks with his feet, the combination and arrangement of the mechanism being substantially as shown and described.

2. In combination with the foregoing, the paddle-wheel shaft, made adjustable, as to height, substantially as described.

94,363.—BENJAMIN D. WASHBURN, Boston, Mass.—*Shutter-Fastening.*—August 31, 1869.

Claim.—1. In window-blind fastenings, the projections *x x*, upon either or both ends of the shell or case, when such tips or projections contain the

slots *d d*, in the manner and for the purpose herein described.

2. The combination of the hook A, shell B, tips *x x*, and slots *d d*, in the manner and for the purpose herein described.

94,364.—WILLIAM WASSAL, Wellsville, Ohio.—*Apparatus for Turning Heavy Clay Pipes.*—August 31, 1869.

Claim. — A concave pipe-holder, provided with rockers, or other equivalent means, for turning pipes, substantially as specified.

94,365.—NICHOLAS WHITEHALL, Newtown, Ind.—*Planter and Cultivator.*—August 31, 1869.

Claim.—1. The arrangement of truck-connecting bars F, plow-stocks A, tongue I, and latch M, substantially as specified.

2. The arrangement of the connecting-bars F, side-supports G, and short axles for reversing their positions, and the positions of the wheels, substantially as specified.

3. The detachable seed-box and slide-support E, plow-stocks A, blocks Q, and valve-slide, all combined and arranged substantially as specified.

4. The vibrating plows A′, yoke C′, treadles H, rods F′, and vibrating levers, all arranged substantially as specified.

5. The combination, with the narrow wheels G, of the broad wheels N, when arranged and applied substantially as specified.

94,366.—EDWARD WIARD, Louisville, Ky., assignor to B. F. AVERY, same place.—*Plow.*—August 31, 1869.

Claim.—1. The adjustable exchangeable seats D, constructed and arranged substantially as herein shown and described, in combination with the standard C and with the plow-plates E, F, G, H, or either of them, as and for the purpose set forth.

2. The combination of the circular adjustable cutter I, with the skeleton standard-frame C, when used in connection with the seats D and plow-plates E, F, G, H, or either of them, substantially as herein shown and described, and for the purpose set forth.

94,367.—EDWARD WIARD, Louisville, Ky., assignor to B. F. AVERY, same place.—*Plow.*—August 31, 1869.

Claim.—1. The cast standard-skeleton D, constructed substantially in the manner herein shown and described, and for the purposes set forth.

2. The point F and arm *f*′, constructed and attached to the skeleton D, substantially in the manner herein shown and described.

3. The brace-bar G, constructed with lugs g^1 g^2, and secured to the mold-board E and land-side of the skeleton D, substantially in the manner herein shown and described, and for the purpose set forth.

94,368.—JAMES M. WILLBUR, Cleveland, Ohio.—*Embossing-Press.*—August 31, 1869.

Claim.—1. The employment, in an embossing-press, in connection with the hinged arm C, carrying the die, of the toggles *f g*, link *h*, and cam-lever *l*, all constructed and arranged substantially as herein described, whereby an increasing and continuing pressure is applied to the arm C, thus making a perfect impression.

2. In combination with the hinged arm C, carrying the die of an embossing-press, the pin P and spring *k*, the toggles *f g*, link *h*, and cam-lever *l*, and the regulating-screw E, all constructed, arranged, and operating substantially as and for the several purposes herein specified.

3. The described arrangement in an embossing-press of the hinged arm C, carrying the die, the rocking platen D *b*, pin P, and spring K, the toggles *f g*, link *h*, and cam-lever *l*, and the regulating-screw E, all mounted in a frame, A B, and constructed to operate substantially as herein set forth.

94,369.—ARCHIBALD WILLISCROFT, Wilmington, Del.—*Hose-Pipe Nozzle.*—August 31, 1869.

Claim.—1. The combination of the sliding plate C, having two or more different-sized holes formed through it, and the ring-plate B, with each other and the nozzle-pipe A, substantially as herein shown and described, and for the purpose set forth.

2. The pin D, provided with the spring E and thumb-piece F, when constructed and arranged, with reference to the inclined projection G, and sliding plate C, as herein shown and described, for the purpose specified.

94,370.—GEORGE W. WILSON, Tolono, Ill., assignor to himself and HORACE FRANCISCO, same place.—*Millstone-Balance.*—August 31, 1869.

Claim.—The weights D, provided with horizontal grooves, whereby they are adapted to be adjusted both vertically and horizontally upon the open ring B, as herein shown and described, for the purpose specified.

94,371.—RICHARD WITTY, Chicago, Ill.—*Steam-Engine Piston.*—August 31, 1869.

Claim.—The construction and arrangement of the valve-seats *a a′*, spindles *b b*, valves *d d*, nuts *e e*, and springs *i i*, with reference to the piston A and follower B, all substantially as shown and described.

94,372.—A. S. WOODWARD, Pepperell, Mass., assignor to himself and H. A. PARKER, same place.—*Carriage-Hub.*—August 31, 1869.

Claim.—The metallic hub A, cast in one piece, with the chamber B extending from end to end thereof, and communicating with the openings for the spokes through the outer shell, as herein described, for the purpose specified.

94,373.—JOHN AGATE, Pittsford, N. Y.—*Apparatus for Cooling and Refrigerating.*—August 31, 1869.

Claim.—The cold-water tub B, in combination with the refrigerating-chamber A, provided with a worm, C, or its equivalent, when the parts are arranged to operate substantially as described.

94,374.—HENRY AITKEN, Falkirk, Scotland.—*Roasting and Treating Iron-Ores.*—August 31, 1869.

Claim.—1. The treating of iron-ores or iron-stones by cooling down, in any of the modes herein set forth, after they are coked, that is, as soon as the whole or nearly the whole of the volatile matters are driven off, so as to prevent, as much as possible, the destruction or waste of the fixed carbon.

2. The direct employment, in blast or other reducing furnaces, of the coked iron-ores or iron-stones, in the heated state, as soon as the whole or nearly the whole of the volatile matters are driven off.

94,375.—ERASTUS W. AYER and MELVILLE C. AYER, South Waterford, Me.—*Article of Food from Pumpkin and Squash.*—August 31, 1869.

Claim.—1. The process herein described for preparing pumpkin and squash, as new articles of food, substantially as specified.

2. Pumpkin, prepared as herein specified, as a new article of food, substantially as described.

94,376.—W. F. BACON, Skowhegan, Me.—*Chuck.*—August 31, 1869.

Claim.—The adjustable bed-piece A, rib B, bolt C, with nut F and washer G, the screw E, sliding jaw D, substantially as shown and described.

94,377.—A. C. BAKER, Westfield, Mass.—*Steam-Heater.*—August 31, 1869.

Claim.—The steam-heater herein shown, consisting of the upright castings A A, &c., constructed and arranged together as shown, each casting being formed with steam and water space within, and half flues at each side, substantially as herein set forth and described.

94,378.—OREN BALDWIN, Keokuk, Iowa.—*Wash-Boiler.*—August 31, 1869.

Claim.—1. The box B, constructed with an upwardly-tapered oblong spout, C, having a discharge-opening, *e*, and an overhanging deflecting-lip, *c*, substantially as described.

2. The corrugated strip *a*, forming arched water-passages leading to the passages *g*, in combination with the spout C and box B, substantially as and for the purposes described.

94,379.—James M. Barrett, Plymouth, N. C.—*Liniment.*—August 31, 1869.

Claim.—The liniment or medical compound herein described, compounded of the ingredients and in the proportions herein specified.

94,380.—Orson Bartlit and George D. Edson, Rockford, Ill.—*Glove.*—August 31, 1869.

Claim.—A mitten, constructed of the four parts A, B, C, D, shaped as shown, and so united that no seam is formed at the folding-point between the thumb and hand-portion or straining-point of the article, substantially as described, and for the purpose set forth.

94,381.—N. S. Barton, Mannsville, N. Y.—*Churn.*—August 31, 1869.

Claim.—1. The driving-wheels F F, gear-wheels G G, pinion-wheels B B, and shaft C, when the same are so combined and arranged that a double reverse motion is obtained by the revolution of the wheels F F, so that dashers that are attached to the shaft are caused to travel in opposite directions, substantially as described.

2. The dashers D and E, when the former is permanently connected to the shaft C, and the latter to the tube-neck *b*, and both in such manner that, through the wheels B, F, G, they are caused to travel and work in opposite circuits, substantially as described.

94,382.—George Beatty, Cleveland, Ohio.—*Toe-Plate for Boots and Shoes.*—August 31, 1869.

Claim.—The metallic tip, or guard-plate A, when the same is provided with a series of sharp projecting pins, or spikes, *a a*, substantially as described, as and for the purpose specified.

94,383.—James C. Bell, Lebanon, Ind.—*Plow.*—August 31, 1869.

Claim.—The combination and arrangement of clod-fender E, bar *h*, clip *m*, beam A, and fulcrum-rod *f*, substantially as and for the purpose specified.

94,384.—Joseph B. Blanchard, Boston, Mass.—*Needle for Sewing-Machine.*—August 31, 1869.

Claim.—A sewing-machine needle, provided with a lateral opening, *c*, into the eye thereof, constructed with burr-like points *d d*, looking inward, or so as to admit the ready passage of the thread to the eye, but preventing the escape of the thread therefrom, and with the corners *b b* of said lateral opening *c* rounded, so as to prevent injury to the material in the passage of the needle.

94,385.—Charles A. Blessing, Philadelphia, Pa.—*Bath-Tub.*—August 31, 1869; antedated August 27, 1869.

Claim.—The tub A, having a female-screw flange, *a*, screw connecting-pipe C, when the same is provided with screw-threads *c c'* and opening C', and the pipe B, with its curved or elbow-ends b^1 b^2, when the same are so combined and arranged as to operate substantially as herein described, as and for the purpose specified.

94,386.—Ernst A. Bohne, Brookhaven, Miss.—*Railway-Car Coupling.*—August 31, 1869.

Claim.—The coupler herein described, having buffer-head A, slotted block B, spring p^1, with block P, chain *c'*, hook H, pin C, with stud *n*, and helical spring *w*, constructed and arranged substantially as specified.

94,387.—Joshua Briggs, Peterborough, N. H.—*Piano-Forte Stool.*—August 31, 1869.

Claim.—1. The removable socket-piece *f*, having a tongue, *g*, cast integral therewith, substantially as and for the purpose set forth.

2. The removable back, whose posts are fitted in metal sockets *f*, of tongues *g*, the latter being adapted to enter and be held by metal loops *h*, secured to the bottom of the seat, as shown.

94,388.—Joshua Briggs, Peterborough, N. H.—*Ottoman Piano-Stool.*—August 31, 1869.

Claim.—In an ottoman-stool for piano-fortes, whose seat is adjustable in height, setting the hinges upon the inclined top edge of the frame *b*, concealing them by drawing under them the top-covering cloth, and sinking the seat beneath the surface of the frame, substantially as set forth.

94,389.—John H. Brown, Watertown, Mass., assignor to Moses K. Moody, New York City.—*Sewing-Machine for Sewing Boots and Shoes.*—August 31, 1869.

Claim.—1. The combination of the stationary rack and revolving gears, for operating the looper, substantially as described.

2. In combination with the traversing and rocking head, and a needle-feed, a releasing and holding mechanism, constructed and operating as described, to hold the shoe whilst the needle is traversed.

3. The gauge or holder *m*, hung on an eccentric, in combination with an operating lever and catch for adjusting said gauge in relation to the sewing-line, substantially as described.

94,390.—Otto Brück, New York, N. Y.—*Fan.*—August 31, 1869.

Claim.—The combination of springs *c c*, with the tubes *b d* and fan A, and with a catch capable of retaining the fan when drawn in, substantially as set forth.

94,391.—Edwin L. Brundage, Middletown, N. Y.—*Machine for Making Horseshoe-Nails.*—August 31, 1869.

Claim.—1. The arrangement of the moving cylinder G, steam-chest H, steam-ports *b b*, exhaust-port *e*, steam-passages *c* and *d*, through the stationary piston-rod J and valve I, the whole being constructed and operating as described.

2. The combination of the steam-hammer G with the anvil D, the graduated dies, the point-cutters, and the revolving and progressive grippers, to manufacture horseshoe-nails, the whole constructed and operating in the manner and for the purpose substantially the same as described.

3. The arrangement of the cams N and O, lever M, and valve-rod L, all constructed and operating together, as and for the purpose substantially the same as described.

4. The arrangement of the cam-slot Q in the hammer, the lever R, and pawls *p* and *t*, all operating to give motion and stop to the carriage F, as and for the purpose described.

5. The combination of the series of cams *d' d' d'*, cutter-holder U, rock-shaft V, and the adjustable spring *f'*, all constructed and operating as and for the purpose substantially the same as described.

6. The arrangement of the hammer-point cutter *b''*, spring *g''*, guide *c''*, and anvil-cutter *y'*, the same being constructed and operating in the manner and for the purpose substantially the same as described.

7. The combination of the gripper *k k*, fulcrum-pin *t''*, ring *o'*, spring *p''*, and opener Y, constructed, arranged, and operating in the manner and for the purpose set forth.

8. The arrangement of spring *w''*, follower *q''*, the spring *p''*, or an equivalent bearing, and the grippers *k k*, as and for the purpose set forth.

9. The combination of the stationary cam Z, opener Y, pinion-socket *l*, and spring-grippers *k k*, with the gripper-carriage F and rack *m*, in the manner and for the purpose described.

10. The combination of the dies *m' n'* and cutters *a' c'*, all arranged and operating to nick the rod and sever the blank, in the manner and for the purpose substantially the same as described.

94,392.—George Anthony, Buchanan, Telford Station, Pa.—*Shaft-Coupling.*—August 31, 1869.

Claim.—The section *b* of a carriage-shaft or pole A, jointed to the axle, and having at its end a recess, in combination with a tongue, *c*, adapted to the recess in the section *b*, and with a spring, *h*, provided with a key, *f*, adapted to openings in the section *b* and tongue *c*, as set forth.

94,393.—J. S. Burch and J. O. Burch, Buffalo, N. Y.—*Window-Curtain Holder.*—August 31, 1869.

Claim.—The combination of the elastic rollers C C with tape or cord B and curtain-roller A, when con-

structed and operated as and for the use and purpose set forth.

94,394.—HENRY BURT, Newark, N. J., assignor to himself and LOVIAS D. TOWSLEY, same place.——*Globe-Valve.*—August 31, 1869.

Claim.—1. The double or split hand-wheel 5, combined with the compound stems 4 and 6, as specified and shown.

2. The spring E, in combination with the split or double wheel 5, and the compound stem 4 and 6, for the object set forth.

94,395.—HENRY BURT, Newark, N. J., assignor to himself and LOVIAS D. TOWSLEY, same place.—*Boiler-Feeder.*—August 31, 1869.

Claim.—The construction and arrangement of the cylinder *a*, pipes *h* and *m*, chests *i* and *c*, pipe *n*, chamber *y*, the valves *l*, *p*, and *e*, and cocks *r* and *s*, substantially as hereinbefore described.

94,396.—CHARLES W. CAHOON, Portland, Me.—*Locomotive-Engine.*—August 31, 1869.

Claim.—1. The adjustable friction driving-wheels connected to the locomotive, as set forth, and capable of an intermittent or continuous operation, as herein described.

2. The cylinder *c*, bell-crank *a*, and connecting-rods with crank-shaft C, driving-wheels D, and supplementary adjustable driving-wheels E E, when constructed and arranged as described.

94,397.—B. N. CARPENTER, Mount Jackson, Virginia.—*Vehicle.*—August 31, 1869.

Claim.—1. The adjustable friction-rollers a'', combined with the coupling-bar A, in the manner and for the purpose described.

2. The flexible band a', combined with the link *c* and hooked lever *b*, as and for the purpose specified.

3. The combination of the slide-bar f^2, bent lever h^2, hook n^2, and latch-bar c^2, for throwing on the shipper-lever, substantially as described.

94,402.—SAMUEL CURTIS, Lynn, Mass.—*Sea-Drag.*—August 31, 1869.

Claim.—A sea-drag, composed of the wooden base and raised portion *f*, constructed and united together by a system of metallic straps, radiating from the center of the drag, as described, in combination with the central eye-bolt, *c*, for receiving the end of the cable, said bolt being connected with the other parts of the drag, and stiffened in the manner shown and specified.

94,403.—CORNELIUS H. DE LAMATER, New York, N. Y.—*Steam-Engine Condensing-Apparatus.*—August 31, 1869.

Claim.—The construction and arrangement of the valves 1 and 2, in relation to the piston K, condenser M, hot-well O, and chamber N, as herein set forth.

94,404.—GEORGE W. DICKINSON, Charleston, Ill.—*Corn-Planter and Grain-Drill.*—August 31, 1869.

Claim.—The combination and arrangement of the corrugated wheel B, pivoted lever *a*, cross-head *c*, sliding bar D, lever *d*, strap *s*, roller *t*, cam *y*, and ratchet *v*, substantially as and for the purposes specified.

94,405.—GEORGE W. DOTY, Wooster, Ohio.—*Compound to be Applied to Fruit-Jars for Receiving Written Labels.*—August 31, 1869.

Claim.—The preparation of a wash to be applied to the surface of glass or metallic surfaces, the said wash being compounded substantially as described, and for the purpose set forth.

94,406.—SAMUEL M. FIREY, Clear Spring, Md.—*Seeder and Fertilizer Combined.*—August 31, 1869.

Claim.—1. In combination with short axles D D, the diagonal beams A^2, of the frame A, arranged above the axles, substantially as before described.

2. The combination of the short axles D D, the diagonal beams A^2, and the frame A, with the horizontal brace-rod E, arranged beneath and connected with the axles D, substantially as before described.

3. The elastic or yielding seeding-cylinder, substantially as before described.

4. An elastic and inelastic seeding-cylinder, constructed substantially as before described.

5. An elastic seeding-cylinder, having a fixed axis, and constructed with encircling iron bands and ribs, substantially as before described.

6. The addition, to the gum tube, of a flaring hopper-shaped mouth, also of gum, thus forming a pliable and yielding hopper, and facilitating the transmission of grain to the tube, substantially as before described.

7. The funnel or flaring mouth of the conducting-tube, secured to the case of the seeding-cylinder by means of a clasp, so that the tube may be removed at pleasure, substantially as before described.

8. The combination of a conducting-tube and funnel with the case of the seeding-cylinder and the hinged securing-clasp, constructed and arranged substantially as before described.

9. The double drag-bars, hinged, separately and directly, to the drilling-tube, and to the frame, thereby doubling the strength of the drag-bars, while two of them also serve as the tripping-levers of the drill-tube, substantially as described.

10. The adjustable notched carriage i^3, of the inner drag-bar I^1, in combination with the adjustable seat i^2, of the spring *h*, secured thereon, as described.

11. The stirrup *i*, capable of adjustment horizontally on the outer drag-bar I^2, to which it is also locked vertically, in combination with the adjustable carriage i^3, and the adjustable seat i^2, substantially as described.

12. The rock-shaft of the fertilizing-hopper, secured in oscillating seats or boxes, so as to allow it to be removed, with its arms, at pleasure, substantially as described.

13. The vibrating feeding-arms *m*, divided, so that each arm will form a pair, m^5, and vibrated, so that

94,398.—JESSE T. CLYMER, Galion, Ohio.—*Stove-Pipe Drum.*—August 31, 1869; antedated August 25, 1869.

Claim.—1. The foraminated valve G, when the same has its seat in the inverted cone F, and is operated by means of the rods H and K, levers I and J, and thumb-screw L, substantially as described.

2. The foraminated valve G, when the same is operated as shown, and is used in combination with a series of cones, E E^1 E^2, and axial rod D, when the whole is so united, combined, and arranged, as to operate substantially as described, as and for the purpose specified.

3. The conical sections A and A', foraminated valve G, rod D, cones E E^1 E^2, and ventilators N O, having valves *n o*, when the whole is so combined and arranged as to form a drum, substantially as described, as and for the purpose specified.

94,399.—PHILIP S. P. CONNER, Philadelphia, Pa.—*Pressure-Adhesive Gum for Envelopes, &c.*—August 31, 1869.

Claim.—An adhesive composition, consisting of the ingredients described, for the purpose specified.

94,400.—CHARLES H. CRANDALL, Stonington, Conn.—*Sail for Vessels.*—August 31, 1869.

Claim.—Constructing sails so that the seams shall radiate from the clews, substantially as and for the purpose specified.

94,401.—GEORGE CROMPTON, Worcester, Mass.—*Loom.*—August 31, 1869.

Claim.—1. In combination with the harness-frames, horizontal harness-levers, hooked jacks, inclined cording and pattern-mechanism, arranged substantially as described, the angular lifter, depressor, and eveners, when each evener (actuated by a connecting-rod from the crank-shaft, and pivoted at or near the cloth-making line) is connected to and actuates its lifter or depressor, (which are not so pivoted,) having guides thereon, by means of parallel links or pairs of links, (or when the lifter and depressor are so pivoted and are connected to sliding unpivoted eveners,) substantially as described.

2. In combination with the shipper-lever, the long slide-bar f^2 and incline k^2, for knocking off the shipper-lever, substantially as described.

each arm of the pair will only pass over one-half of the opening, to feed the fertilizer, substantially as described.

14. The combination of the removable rock-shaft m^2 and its oscillating boxes m^3 with the feeding-arms m, constructed and arranged substantially as described.

15. The fertilizing-arms m, operated by means of the elliptical groove or cam q^2, in connection with the radial arm q and the segment-pinions o and p, as herein described.

16. The slides of the fertilizing-hopper, operated, so as to increase or diminish the feed of the fertilizer, by means of the eccentrically-grooved pivoted plate, as herein described.

17. The expansible and contractible pulley constructed and operating substantially as described.

18. The expansible and contractible pulley, constructed in sections, in combination with the arms, to which they are hinged, substantially as described.

19. The sectional pulley, expanded and contracted, automatically, by means of a pendulous weight, or its equivalent, substantially as described.

20. In combination with a sectional pulley and its automatically-operating weight, the cam and the pivoted arms, arranged and operating substantially as before described.

21. The pendulous weight, made adjustable, in the manner and for the purpose herein described.

22. The expanding and contracting pulley M, in combination with the toothed wheels O and P, operating substantially as before described.

23. The combination of a hopper, for feeding continuously, with receiving-chambers, for discharging the corn at intervals, according to horizontal distance, substantially as before described.

24. The intermittently-feeding corn-chambers, suspended by means of a horizontal hinged bar, substantially as before described.

25. The combination of the intermittently-feeding wings of the corn-chambers with the toothed wheels O P and the sectional pulley, substantially as before described.

26. The sides of the intermittently-feeding chambers, hinged, so as to form a yielding side thereto, for the purpose of preventing the choking of the chambers, substantially as herein described.

27. The combination of an expansible and contractible pulley with a fixed case or guiding-plates and flexible supporting-arms, substantially as described.

28. The combination of the pendulous weight T, cam z, expansible and contractible pulley M, with the foot-lever 19, for the purpose described.

94,407.—GEORGE B. FITTZ, Louisville, Ky.—*Sorghum-Pan Skimmer.*—August 31, 1869.

Claim.—1. The combination of skimmers M, adjustable arms L L, and shaft I, adapted to be moved back and forth over the pan, substantially as described, all constructed and arranged to operate as set forth.

2. In combination with a pan, A, shaft I, arms L, and skimmers M, the slides C, shaft E, cranks G J, and connecting-rods H H, all constructed, arranged, and operated substantially in the manner described.

3. The pivoted arms N N, arranged and operating substantially as described, in combination with the reciprocating skimmers M, having slotted lugs S V, by which they are hung to the arms L, substantially as and for the purpose set forth.

94,408.—GREGORY GERDOM, Albany, N. Y.—*Fastening Metal Tubes to Glass Cups or Vessels.*—August 31, 1869.

Claim.—A fastening for metal tubes to glass vessels, consisting of the cup-shaped socket b secured to the tube B, and capable of receiving the neck a of the glass vessel, the end of the tube B being made to project through said neck, and turned out over its edge or shoulder, all as shown and described.

94,409.—HENRY GROGAN, Flatbush, N. Y.—*Still.*—August 31, 1869.

Claim.—1. The hot-water condenser G, in combination with the suspended drum C, pipe E, and the goose-neck of the still, whereby the water in said condenser is heated by means of the steam discharged from the drum, substantially as and for the purpose described.

2. The distillate-separator L, combined, substantially as described, with a siphon for discharging the liquids therefrom, and also combined with a vapor-discharge pipe, R, operating in conjunction with a steam-jet, T, substantially as above set forth and described.

3. The combination, with a condenser, of an overflow-pipe, V, for carrying off the surplus water from the tank of the condenser, and a vapor-discharge pipe, Y, whose discharge-end is inserted in the mouth of the overflow-pipe V, substantially as and for the purposes above described.

94,410.—FRIEDRIG GÜBSER, Newport, Ky.—*Railway-Frog.*—August 31, 1869.

Claim.—The switching-frog, constructed with the rails or tracks A and B, the former provided with the depression a and the elevated channel C, arranged and adapted to operate as and for the purposes set forth.

94,411.—JOHN T. HARRIS, Tyngsborough, Mass.—*Mode of Obtaining Fiber and other Products from the Maize-Plant.*—August 31, 1869.

Claim.—1. The cutting-frame, fixed or revolving or other frames or arms, either of plain or grooved faces, and whether a portion of a circle or a whole circle, either horizontal, vertical, or at any angle, as and for the purposes herein described.

2. The blades or cutting-arms, revolving as shown or fixed, and other arms or frames, revolving in contact with them, either horizontal, vertical, or at any angle, as and for the purposes herein described.

3. The relieving-screw, in combination with the shaft at one or both ends, as and for the purposes herein described.

4. The combination of the whole machine, substantially as herein described, for the purposes hereinbefore stated.

5. The apparatus, as shown in Figs. 1, 2, and 3, plate 3, to operate as herein described, and for the purposes set forth.

6. The apparatus, as shown in Figs. 3 and 4, plate 4, to operate as herein described, and for the purposes set forth.

7. The arrangement of the central pipe a', as in Figs. 1 and 2, plate 4, with its steam-jet and cone, to operate substantially as and for the purposes herein set forth.

8. The apparatus in the form shown in Figs. 3 and 4, plate 4, with its central tube, steam-jet and cone, and with or without the air-cone, and with its collectors, scum-ring, &c., substantially as and for the purposes herein described.

9. The collectors e'' h'', Figs. 3 and 4, plate 4, substantially as and for the purposes herein described.

10. The arrangement of the scum-ring, i'', Figs. 3 and 4, plate 4, substantially as and for the purposes herein described.

11. The cover with its escape-pipe u, and water-lute or joint v, as shown in Figs. 2 and 3, plate 3, and Fig. 4, plate 4, combined, arranged, and to operate as herein set forth.

12. The creating of a forced upward current or circulation in the liquid, by means of the steam-jet and cone, in one central, or any convenient number of tubes, either within or without the boiler or vessel, substantially as and for the purposes herein described.

13. Creating a forced downward current, by means of the steam-jet and cone, as herein shown in Figs. 2, 3, and 4, plate 4, and either with or without the air-cone, in one central, or any number of tubes, substantially as and for the purposes herein described.

14. Treating the maize or Indian-corn plant so as to extract, first, the glutinous and saccharine matter, and then the silica, substantially as and for the purposes herein described.

15. Treating the fibers from the said plant with alkali, after the said fiber has been separated from the gluten and saccharine matter, substantially as herein set forth.

94,412.—IRA HART, Clarksburg, West Va.—*Post-Hole Auger.*—August 31, 1869.

Claim.—The bowl B, provided with detachable cutters C, as shown and described, for the purpose specified.

94,413.—JAMES T. HARVEY, Murrysville, Pa.—*Vegetable-Cutter and Feed-Grinding Machine.*—August 31, 1869.

Claim.—The feed-preparing machine herein described, having cylinder C, knives K, band F, guides D, plate A, burr-stone I, and plate H, constructed and arranged substantially as specified.

94,414.—FRANK HUDNER, New York, N. Y.—*Car-Wheel and Axle.*—August 31, 1869.

Claim.—1. The jam-nut G, arranged as described, in combination with the screw-collar and wheel C, with threaded hub-extension E, for the purpose set forth.

2. The sleeve D, when made separate from the axle, substantially as herein described, in combination with the axle A, wheel C, and screw-collar F.

3. The washers *i i*, interposed between the wheel C and sleeve D, for the purpose set forth.

94,415.—D. W. JAMESON, Warren, Ohio.—*Machine for Grinding the Cutters of Mowing-Machines.*—August 31, 1869.

Claim.—The rod A, fastened to the top of the standards C C, and the manner of attaching the frame G, by means of slots in the arms B B, and operating conjointly, as and for the purpose substantially as set forth.

94,416.—MELVIN JINCKS, Wallace, N. Y.—*Plug Cutter.*—August 31, 1869.

Claim.—The combination of the bit-stock A, bit *b*, adjustable guide B, and cutter D, all constructed and arranged substantially as shown and described.

94,417.—JAMES A. JOHNSON, Pendleton, Ind.—*Corn-Planter.*—August 31, 1869.

Claim.—1. The combination and arrangement of the supporting-frame A, and hinged frame F, carrying the seed-boxes and bevel-wheels, for dropping the corn, substantially as shown and described.

2. The combination of the hinged frame F with the seed-boxes F′ and seed-wheels G, substantially as described.

3. The combination of the hinged frame F with the flexible tubes *g′* and drill-teeth K, substantially as shown and described.

94,418.—JOHN HENRY KELLER, Boalsburgh, Pa.—*Reel for Reaping-Machine.*—August 31, 1869.

Claim.—The reel for reaping-machines, herein described, suspended from the swinging frame C, and having band-wheels *a*, *d*, and *c*, bands *n* and *s*, ratchet-bar *u*, lever *y*, with its flanch *v*, and constructed and arranged substantially as specified.

94,419.—HENRY F. KING, New York, N. Y.—*Self-Closing Faucet.*—August 31, 1869.

Claim.—A faucet having a hollow rod, A, carrying a valve, bearing upward against its seat, in connection with the elastic packing *e*, which closes the valve with the assistance of the water, said rod acting as a handle, and forming a chamber for entrance of water when the supply is cut off, as herein described, for the purpose set forth.

94,420.—BENJAMIN S. LAWSON, New York, assignor to AUGUSTUS M. MILLER, Brooklyn, N. Y., and ALFRED GILL, Orange, N. J.—*Sash-Holder.*—August 31, 1869.

Claim.—The window-sash adjuster herein described, having elastic wedge *a* and roller *c* arranged in a slot, as described, substantially as specified.

94,421.—JOHN C. LOVE, Philadelphia, Pa., assignor to HOLMES, BOOTH, and HAYDENS, Waterbury, Conn.—*Lamp-Burner.*—August 31, 1869.

Claim.—The deflector F, with a flame-slot extending to the vertical portion of said deflector, or nearly so, in combination with the plates or dome J, to direct the air upon the sides of the flame, the deflector F setting closely around the dome J, substantially as and for the purposes set forth.

94,422.—WILLIAM E. LUDLOW, Cincinnati, Ohio, assignor to HENRY C. METCALFE, same place.—*Basket-Rest for Ladders.*—August 31, 1869.

Claim.—The removable rest or platform A B B′.

94,423.—WILLIAM E. LUDLOW, Cincinnati, Ohio, assignor to HENRY C. METCALFE, same place.—*Step and Extension Ladder.*—August 31, 1869.

Claim.—The parts C *c* D, composing a sliding joint for a step and extension ladder, as set forth.

94,424.—JOHN MATTHEWS, Jr., New York, N. Y.—*Tumbler-Washer.*—August 31, 1869.

Claim.—1. A tumbler-washing apparatus, constructed to operate as a pump on elevating and depressing the support which carries the tumbler, substantially as specified.

2. The combination of the stationary hollow ram G, the vertically-reciprocating barrel H, with their valves F I, the perforated distributing cap K, and the tumbler-guide and rest J J, essentially as described.

3. The tumbler-guide and rest J J, constructed to operate as an outside washer, in combination with the distributing-cap K, forming an inside washer to the tumbler, the pumping-barrel H, and the stationary hollow ram G, with their valves I and F, essentially as specified.

4. The combination, with the pumping-barrel H, and hollow ram G, of the column D, constructed and arranged for operation in connection with the tumbler-rest and inside and outside sprinklers or washers, essentially as described, and whereby the water to be used in washing and as fouled by washing is passed within and through or under cover of said operating column, substantially as herein set forth.

5. The combination of the spring M with the reciprocating barrel H, and stationary hollow ram G, essentially as specified.

94,425.—WILLIAM MATTHEWS, Vinton, Ohio.—*Horse Hay-Rake.*—August 31, 1869.

Claim.—1. The post *c*, with foot-piece c^2, when constructed as described, and arranged to operate in connection with the rake, in the manner set forth.

2. The frame B, rockers *a*, and foot-piece c^3, when combined and arranged in the manner and for the purpose set forth.

94,426.—GEORGE MCFEELY, Steubenville, Ohio.—*Steam-Pump.*—August 31, 1869.

Claim.—1. The tapering steam-pipe B, in combination with the curved pipes A A, joined at their upper and lower ends, for connecting with the suction-pipe and discharge-pipe, when arranged as shown and described.

2. The bush C, constructed and arranged substantially as shown and described.

94,427.—WILLIAM MCLUCAS, Wood Grove, Ohio.—*Sad-Iron Heater-Oven.*—August 31, 1869.

Claim.—1. The uprights or standards A A, when they are provided with a series of staples, *b′ b′*, plate B, and reflector C, when the latter is provided with a hinged back, C′, with or without the openings or slots D D and doors D′ D′, substantially as described.

2. The uprights or standards A A, having staples *b′ b′*, plate B, stationary reflector C, and movable reflector E, when the same are so combined and arranged as to operate substantially as described.

94,428.—ANSON C. MCMAHAN, Lincoln, Ill.—*Compound for Curing Cholera in Hogs and Chickens.*—August 31, 1869.

Claim.—The medical compound herein described, compounded in the proportions and in the manner substantially as specified.

94,429.—J. VAUGHAN MERRICK and W. H. MERRICK, Philadelphia, Pa.—*Hoisting-Apparatus.*—August 31, 1869.

Claim.—Duplex hoisting-apparatus, inclined or vertical, in which one car or hoisting-cage is caused, by the mechanism herein described, or any equivalent to the same, to arrest the other car or cage,

should the hoisting-rope of the latter break, all substantially as herein set forth.

94,430.—James A. Metcalf, Lawrence, Mass.—*Oiler.*—August 31, 1869.

Claim.—An attachment to oil-can tubes, or similar tubes of other vessels, consisting of a metallic plug, with a vent-hole, such plug forming, or inserted in the wide lower end of such tubes, substantially as and for the purpose set forth.

94,431.—J. A. Morgan, Bloomfield, Iowa.—*Parlor-Bedstead.*—August 31, 1869.

Claim.—The bedstead herein described, having case A, bedstead B, rods *c*, pins *s* and *a*, cranks *y*, and braces *v*, constructed and arranged substantially as specified.

94,432.—Robert Neale, Brooklyn, E. D., N. Y.—*Transfer Engraving.*—August 31, 1869.

Claim.—The method, herein specified, of engraving, by transfer, names and other lines of characters, by means of separate types mounted in a roller, fitted to clamp and hold the same, substantially as set forth.

94,433.—John H. Noakes, New York, N. Y.—*Skate.*—August 31, 1869.

Claim.—The central support *d*, provided with the key hole slot *m n*, in combination with the clamps *b b*, moving in dovetail grooves, and right and left screw *s*, with a groove *g*, at its center, all arranged, constructed, and operated in the manner and for the purpose set forth.

94,434.—Washington F. Pagett and Silas H. Gard, Springfield, Ohio. — *Garden-Plow.*—August 31, 1869.

Claim.—1. The foundation-plate C, constructed substantially as and for the purpose specified.

2. The arrangement and combination of the foundation C with beam A, plow P, scraper D, arm E, chafer F, and wheels W R, substantially as and for the purpose specified.

3. The arraugement of the cross-bar I and nibs H H, in connection with the standard or beam A′ when used in connection with a plow, substantially as and for the purpose described.

4. The combination of parts *i*, i^1, i^2, i^3, *t s*, *c*, R, constructed as described, and as specifically shown in Fig. 3, and for the purpose set forth.

94,435.—George N. Palmer, Greene, N. Y.—*Churn.*—August 31, 1869.

Claim.—1. The scraper *g*, substantially in the manner and for the purpose described.

2. The perforated tubes M M, substantially in the manner and for the purpose described.

3. The lid D, provided with tube E, and perforated tubes M M, in combination with the churn, substantially in the manuer and for the purpose described.

4. A churn, consisting of inuer and outer cases A B, lid D, tubes M M aud E, and dasher F, all combined, arranged, and operating substantially as set forth.

94,436.—L. F. Parker, Davenport, Iowa.—*Grain-Binder.*—August 31, 1869.

Claim.—1. The irregular spur-wheel B, constructed and operating substantially as and for the purposes described.

2. Spur-wheel S, constructed substantially as described, in combination with spur-wheel B, for purposes set forth.

3. Hollow rolliug-shaft X, of spur-wheel S, when used for passage of vibrating shaft of grain-holding concave E.

4. The shaft C, provided with arms *a* and *b*, operating substantially as and for the purposes described.

5. The vibrating concaves E and F, substantially as and for the purposes described.

6. Support T, for vibrating concave E, operating substantially as and for the purpose set forth.

7. Shaft C, arm *b*, rod *y*, crank *e*, pitman *h*, cranks *s*, *f*, and *q*, ou shaft *g*, pitman *i*, crank *f*, and spring Q, or their equivalents, arranged substantially as aud for the purposes described,

8. Arm K, revolving around coucave E, substantially as aud for the purposes described.

9. Spring P and strap I, wheu attached permauently to revolving arm K, or their equivalent, when used for clamping grain for binding, substantially as described.

10. Stop N and spring *s*, or their equivaleut, when used to sustain arm on binder, substantially as described.

11. Guard 12, or its equivaleut, over knot-tyer, to protect it from the coucave F, and grain.

12. The twine-holding nipple I, spool 10, and tension-spring 11, against its end, when arranged substantially as shown and described.

13. The looper 2, constructed substantially as and for the purposes described.

14. The spring 16, on face of hook on looper 2, or its equivalent, to hold ends of twine while loop is being drawn over them into kuot, substantially as described.

15. The circle 1, with outward and forward projecting points 7, to receive and conduct twine-slot 8, for looper 2, shaft 4, vertical groove on its periphery, and slot through projecting points 7, in which to receive cutter 14, and to assist in cutting off twine, substantially as described.

16. The looper 2 rolling shaft 4, and circle 1, rolling-shaft 3, arranged and operating substantially as described.

17. Stationary cutter 14, when operating in groove of circle 1, substantially as described.

18. The sliding rack P, when used to actuate knot-tying apparatus by cogs meshing into top and bottom of pinions 5 and 6, and the rod *d*, rock-lever C, and rock-lever O, used to slide rack P forward and back, when combined substantially as described.

94,437.—Ziba Parkhurst, Milford, Mass.—*Machine for Burring and Cleaning Wool.*—August 31, 1869.

Claim.—1. The arrangement of the rotary transferrer C with the burr-box *c*, the feed-rollers *b b*, and the receiving-cylinder B.

2. The arrangement of the beater D, the receiving-cylinder B, the feed-rollers *b b*, the burr-box *c*, and the transferrer C.

3. The combination and arrangement of a series of oblique ribs, (as shown at *h* or *h*′, and as above described,) with the receiving-cylinder B and the tumbler F, or with the card-cylinder H aud doffer K, the whole beiug substantially as and to operate as specified.

4. The combiuation and arrangement, as described, of either or both the rotary drums L M, with the card-cylinders F I H, and the two series of oblique ribs, the feed-rollers, burr-box *c*, and receiving-eard cylinder B, substantially as specified.

94,438.—Cyrus Phelon, East Granville, Mass.—*Ox-Yoke.*—August 31, 1869.

Claim.—The combination of the blocks D aud D′, with ledges *a* and *a*′, and the levers or cross-arms H and H′, and links I, the parts all being arranged and constructed as herein set forth, and for the purpose shown.

94,439.—David R. Quick, New York, N. Y.—*Journal.*—August 31, 1869.

Claim.—The arrangement of the journal-box and shaft herein described, consisting of the sections *a* and *c*, openings *s* and *v*, rings *y*, washer *h*, and nut *n*, with referenee to the shaft, substantially as specified.

94,440.—George H. Reister, Washington, Iowa.—*Rake for Harvesters.*—August 31, 1869.

Claim.—The combination and arrangement of the raker-bar *c*, spring *e*, cord *h*, and lever *g*, as and for the purposes herein recited.

94,441.—Henry Reynolds, Aurora, N. Y.—*Apparatus for Welding Chain-Links.*—August 31, 1869.

Claim.—The combination of the hammer J and its dies *a*, with the anvil P and its dies *c*, when op-

erating together, substantially as herein described, for welding and finishing welded links, as set forth.

94,442.—Alexander K. Rider, Elizabeth, N. J., assignor to C. H. De Lamater, New York City.—*Molding Screw-Propellers.*—August 31, 1869.

Claim.—1. Forming the parts E and G in sections or steps, adjustable one upon the other, so as to vary the length and pitch of the screw within wide limits, in the manner herein set forth.

2. In such adjustable frames E and G, making each lowermost step broader than those above it, so as to make the frame self-supporting, as set forth.

3. The self-supporting frames E, with their broad bases, as specified, formed separately, and applied together, to complete the mold, in combination with the supporting-ring *a* and hub *a'*, adapted to support the section, both vertically and radially, as and for the purposes herein set forth.

4. In combination with the provisions for molding screw-blades on frames E and G, as specified, the small striker C^2, serving, in combination with the main striker C, to produce the surfaces for molding the hub with spiral joints, as and for the purposes herein set forth.

94,443.—Thomas Robjohn, New York, N. Y.—*Pavers' Rammer.*—August 31, 1869.

Claim.—1. The adjustable or sliding frame G, in combination with the frame A, the lifting-arms D, and the rammers C, substantially as and for the purpose herein set forth.

2. The combination, with the frame A, of the platform *f*, having a hinged leaf, *f'*, substantially as and for the purpose herein specified.

3. The combination, with the frame A and the rammers C, of the pivoted support I and the studs *d*, substantially as and for the purpose herein set forth.

4. The supporting-tumblers *p p*, pivoted locking-hooks *q q*, and tripping-rods *r r*, combined for operation in connection with the notches *o o* and projections *d d* of the rammers, substantially as and for the purpose herein specified.

94,444.—Samuel P. Ross, Pittsburgh, and Niklaus Haller, Allegheny City, Pa.—*Corn-Sheller.*—August 31, 1869.

Claim.—1. The "curved spring" C C.

2. The slot C^1 in the stems *g* and *g'*, through which the pin C^4 passes.

3. The serrating of the oblique flanges in the "cob-jaws," that is, serrating one or more of the flanges with one or more teeth.

4. We do not claim the interlocking of the shelling-fingers, but we do claim terminating them in a pointed hooked form.

94,445.—Clinton H. Sage, Fulton, N. Y.—*Dumping-Car.*—August 31, 1869.

Claim.—1. The combined construction and arrangement of the revolving balanced frame B, covering and shielding the curved track A, on the car-truck, and the two counterbalancing car-boxes F F, substantially as herein specified.

2. The inclined journals on the axles D D, arranged, in relation to the conical friction-wheels C C and level track A, substantially as and for the purpose specified.

3. The fixed supporting-standards H H, arranged in combination with the car-boxes F F and brace-irons K K, on which the tail-boards M M are mounted, so as to raise said tail-boards as the car-boxes are tilted, and *vice versa*, substantially as set forth.

4. The employment of the pivot-shaft I, around which the car-frame B turns, for the additional purpose of a brake-rod or shaft, as specified.

94,446.—J. W. Sharrard, Samuel Bryan, and Howard Hunt, Janesville, Wis.—*Corn-Harvester.*—August 31, 1869.

Claim.—1. The arrangement of the guard F, attached, at its front end, to the thills, in the manner shown and described.

2. The knife-holders *o*, provided with a series of slots, for adjusting the knives at different heights, substantially as described.

3. The spring-guards G, having their free arm provided with a knife-edge, and arranged at a reverse angle to the knives E, as set forth.

4. In combination with the frame A of a corn-stalk harvester, the crane J, when arranged substantially as shown and described.

5. The combination of the adjustable knives E, spring-guards G, stationary guards F, and inclined reels H, all constructed and arranged to operate substantially as described.

94,447.—Joseph Sherman, Burlington, N. J.—*Extension-Table.*—August 31, 1869.

Claim.—1. An extension-table, in which adjustable leaves are hinged together, and are arranged to slide over guides, and assume either a horizontal or a vertical position, substantially as described.

2. The leaves *k*, hinged together and to opposite sides of the central portion B, and independent of the adjustable ends, substantially as specified.

3. The rounded surfaces *p* of the frame of the table, arranged, with respect to the extension-leaves *k*, substantially as specified.

4. The leaves *i i*, with their notches *x*, arranged with respect to the extension-leaves and to the guiding-surfaces *p*, substantially as herein set forth.

94,448.—Sigmund Simonson, Bridgeport, Conn.—*Pocket for Railway-Car Seats.*—August 31, 1869.

Claim.—1. The combination, with the back of a railway-car seat, of a pocket, which may be inverted when the back of the seat is reversed, substantially as herein described.

2. The combination, with the frame C, and with the back of the seat, of hinges *g g* and spring-latches *f f*, whereby provision is made for the inversion of the pocket when the back has been reversed, substantially as herein described.

3. The combination, with the pocket, of a spring-clamp or clamps D, for holding the traveling-ticket, substantially as specified.

94,449.—Samuel Strong, Washington, D. C.—*Letter-Box.*—August 31, 1869.

Claim.—The shaft C, with the blades E and F, cover G and handle D, all attached to said shaft, in combination with the aperture H, and a weight or weights to turn the said blades and cover back to their places automatically, as described, all being constructed, arranged, and operating substantially as set forth.

94,450.—A. H. Tait, New York, N. Y.—*Mode of Cooling and Freezing Liquids and other Substances.*—August 31, 1869; antedated August 24, 1869.

Claim.—The within-described process of cooling by the action of sulphurous acid, which is successively compressed into a liquid state, cooled, and then allowed to expand into a gaseous state, substantially in the manner set forth.

94,451.—Alvin Taplin and H. D. Bradley, Forestville, assignors to "The Bristol Brass and Clock Company," Bristol, Conn.—*Lamp-Burner.*—August 31, 1869.

Claim.—1. The wick-tubes A and B, constructed and arranged to overlap each other, at their edges, on opposite sides of the burner, for a portion of their length from the bottom of the latter, and shaped or bent above to form an annular wick-course, substantially as specified.

2. The combination, with the wick-tubes A and B, constructed substantially as described, and arranged to overlap each other on opposite sides of the burner, with an opening, *f*, in between them, of the single lifter E, set obliquely, as specified, in relation to said wick-tubes, and provided with feeders *g g* and *h*, for direct hold on the wicks at or near their edges, and for steadying grip or hold on the same in between such portions, essentially as herein set forth.

94,452.—William S. Thompson, Rochester, N. Y.—*Fruit-Jar.*—August 31, 1869.

Claim.—The combination, with the flanged glass top B C, of the threaded metal lining D, applied to the internal face of the flange C, and adapted to operate substantially as and for the purpose described.

94,453.—William T. Tibbals and Lyman B.

TIBBALS, Cobalt, Conn.—*Manufacture of Cow-Bell.*—August 31, 1869.

Claim.—The process of uniting or soldering the joints, while in the act of coating or galvanizing the bell, substantially as and for the purpose described.

94,454.—E. B. TYLER, Baltimore, Md.—*Marine Safe.*—August 31, 1869.

Claim.—The safe A, constructed as described, and provided at its upper end with the pins or projections H H, in combination with the buoy F and chain G, substantially as described.

94,455.—AMBROSE I. UPSON, New York, N. Y., assignor to WATERBURY BRASS COMPANY, Waterbury, Conn.—*Tin-Coated Eyelet.*—August 31, 1869.

Claim.—As an improved article of manufacture, tinned non-corrosive eyelets, substantially as herein specified.

94,456.—ELISHA WALKER and JOSIAH J. PIATT, La Porte, Ind.—*Cultivator.*—August 31, 1869.

Claim.—1. The mode of elevating and lowering the plows by the self-acting double eccentric M, substantially as set forth.

2. The mode of turning the shovels e^4 in or out by the double adjusters N N and single adjusters O O, substantially as set forth.

3. The combination of the tongue D, posts L L, braces *a a*, knuckle-joints J J, hinges E E, bars *b b*, self-acting double eccentric M, double adjusters N N, and single adjusters O O, respectively, constructed and arranged substantially as set forth.

94,457.—EDEMON WARD, Urbana, Ohio.—*Fruit-Picker.*—August 31, 1869.

Claim.—In a fruit-picker, constructed substantially as shown and described, the combination of the frames A B, spring *c*, stop C′, and socket D, all arranged to operate as set forth.

94,458.—W. G. WARD, New York, N. Y.—*Breech-Loading Fire-Arm.*—August 31, 1869.

Claim.—1. The stops *b b′* on the breech-pin, when constructed and operated substantially as and for the purpose shown and described.

2. The combination of the recoil-block and fluted trigger-bolt, substantially as shown and described.

94,459.—WILLIAM H. WELCH, Bloomington, Ill.—*Rotary Washing-Machine.*—August 31, 1869.

Claim.—1. A cylinder for washing-machines, constructed, as herein described, of the heads *a a*, troughs *d d*, and perforated tubes *e e* and *f f*, all substantially as and for the purposes herein set forth.

2. In combination with a wash-boiler, a revolving cylinder, when constructed substantially in the manner described, and for the purposes set forth.

94,460.—DENNISON WILLARD, Jr., Pittsford, N. Y.—*Mode of Cleaning Musty Beer and other Casks.*—August 31, 1869.

Claim.—As an improvement in the process of cleansing musty beer and other casks, the employment of the material herein set forth.

94,461.—JOSEPH PAGE WOODBURY, Boston, Mass.—*Railway Freight-Car.*—August 31, 1869.

Claim.—1. The cab N, when used in connection with the car A B and dray C D for the transportation of freight, substantially as set forth.

2. The flanged wheels K K, &c., in connection with the car-platform, substantially as described and for the purpose set forth.

3. The flanged wheels K K, &c., in connection with the dray-platform, substantially as described, and for the purpose set forth.

4. The combination of the windlass P and its rope with the sheave R, for the purpose of drawing the cab on to the dray, substantially as set forth.

5. The combination of the windlass P with the sheave R^2, for the purpose of drawing the cab from the dray to the car, substantially as set forth.

6. The combination of the dogs M M M, &c., or their mechanical equivalents, with the platform of the dray or car, substantially as described and for the purpose set forth.

7. The combination of the hooks L L′, or their mechanical equivalents, with the platform, substantially as described and for the purpose set forth.

94,462.—WILLIAM H. COWL, Brooklyn, N. Y.—*Ventilator for Windows.*—August 31, 1869.

Claim.—1. An improved ventilator for windows, formed by the combination of the metallic frame B, constructed as described, the glass panes C, stationary perforated plate D, and sliding perforated plate E, with each other, said parts being constructed and connected with the window-sash, substantially as herein shown and described, and for the purpose set forth.

2. Projecting one end of a glass window-pane outward or inward from the plane of the sash, for the purpose of obtaining an upward draught, substantially as herein shown and described.

94,463.—ADOLPHE AUBERT, Nogent-Le-Rotrou, France.—*Propeller for Vessels.*—September 7, 1869.

Claim.—The combination and arrangement, with relation to each other, of the propeller-shaft, the helix or blade arranged thereon, and constructed in the manner specified, and the cylinder, with a diameter equal to its length, fixed to and incasing the blade, as and for the purposes shown and set forth.

94,464.—FRANKLIN P. BAKER, Boston, Mass., assignor to himself and JAMES R. LOWE, same place.—*Animal-Trap.*—September 7, 1869; antedated September 4, 1869.

Claim.—An animal-trap, formed by the combination of boards A and D, constructed as shown, opening B, spits *a a a*, frame *m*, spring E, and bait and trip hook *g*, substantially as set forth and described.

94,465.—JAMES BAKER, Ijamsville, Md.—*Composition for Whitewashing.*—September 7, 1869.

Claim.—The combination of the within-named ingredients for the purpose specified.

94,466.—MOSES BECKER, Philadelphia, Pa.—*Stomach-Bitters.*—September 7, 1869.

Claim.—The within-described, my stomach-bitters, compounded of the ingredients, and in about the proportions, as described.

94,467.—N. P. BRADISH, Jerseyville, Ill.—*Sewing-Machine.*—September 7, 1869.

Claim.—1. The pitman D, with stud *d*, in combination with the slotted bar *f′* of the bar F, substantially as described.

2. The sewing-machine described, consisting of the table A, standard A′, arm B, needle-bar C, pitman D, shaft E, bar F, needle-bar I, adjustable fork J, and slotted arm K, when connected and combined as described, and operated in the manner and for the purpose set forth.

94,468.—FREDERICK H. BRINKKOTTER, Callahan's Ranch, Cal.—*Spoke-Tenoning Machine.*—September 7, 1869.

Claim.—1. The arrangement, between the sides A, of the blocks B B′ and *d*, provided with spaces to receive the spokes, and with set-screws *e′* and bolts *a*, to operate them, substantially as described.

2. In combination with the above-claimed device, the bar D, operated by the screws *g*, substantially as and for the purpose specified.

3. The combination and arrangement of the ring E, block F, wedges *h*, and screws *i*, substantially as and for the purpose set forth.

4. The arrangement of the block K, provided with axles *p*, bearing in the screw-plates *s*, and traversing in the slot *z*, substantially as and for the purpose set forth.

5. The combination and arrangement of the sliding block L, clamps *u*, and spring *w*, substantially as and for the purposes described.

6. The cap P, attached to the end of the spoke to guide the auger, substantially as described.

94,469.—HENRY L. BROWN, Adrian, Mich.—*Hand-Car for Railroads.*—September 7, 1869.

Claim.—The arrangement of the double clutch W, pinions U and V, crank-shaft R, and pinions S and T, substantially as and for the purpose set forth.

94,470.—ELISHA S. BURLINGAME, Uxbridge, Mass.—*Mechanism for Holding Bolsters in Spinning-Machines.*—September 7, 1869.

Claim.—The combination, with the bolster-rail, of the grooved bolster A and spring-collar B, when both are constructed and applied substantially as and for the purpose herein described.

94,471.—JOHN BURT, Detroit, Mich.—*Manufacture of Pig-Iron.*—September 7, 1869.

Claim.—1. The method of lining or spreading over the pig-bed or mold with oxidizing or carbonizing-agents, or a mixture of both, substantially as and for the purposes set forth.

2. The employment, with a series of non-communicating pig-molds, of a trough, whether movable or not, arranged to communicate with and conduct the molten metal to each mold separately, substantially as and for the purposes set forth.

3. The arrangement of the pig-molds in a vertical or inclined position, the same being filled by means of the trough, which is located above, and communicates with them, substantially as and for the purposes set forth.

4. The mixture, with the molten metal, of cast or wrought iron scrap, borings, or turnings, placed in or spread over the bottom of the mold, substantially as and for the purposes described.

5. The mode of cooling the iron and preventing the molds from burning, by passing water or other suitable liquid through one or more pipes inserted in or extending through the pig-bed or molds, from end to end, or by surrounding the molds wholly or partly with water, substantially as herein set forth.

94,472.—HENRY W. CAREW, Norwich, Conn.—*Weather-Strip.*—September 7, 1869.

Claim.—The elevator *d*, and the groove *g*, in combination with the plate *c*, the molding *e*, with its recess *e'*, and the door *a*, all constructed, arranged, and operated substantially as and for the purpose specified.

94,473.—AARON CHANDLER, Davenport, Iowa.—*School-Desk and Seat.*—September 7, 1869.

Claim.—1. The standards S S, provided with the slotted or wedge-shaped lugs C, in combination with the arms B of the seat H, constructed as herein described, for the purposes specified.

2. The automatic locking-device N, when used in combination with the book-box A and slotted standard S, constructed and arranged to operate as herein described, for the purposes specified.

94,474.—E. C. CHAPMAN, Lacon, Ill.—*Stove-Pipe Thimble.*—September 7, 1869.

Claim.—1. The cylinder A, provided with springs *c c* to receive the stove-pipe in place, substantially in the manner described.

2. A stove-pipe thimble, consisting of cylinder A, springs *c c*, caps D D', and levers *e*, all combined, arranged, and operating substantially in the manner and for the purpose described.

94,475.—CHARLES H. COLLINS and W. B. MCCLURE, Alexandria, Va.—*Apparatus for Emptying Sugar-Kettles.*—September 7, 1869.

Claim.—A dipping-kettle, provided with a valve, operated by a lever, when used in connection with a boiling-kettle, substantially as and for the purpose described.

94,476.—JOSEPH W. CREMIN, New York, N. Y.—*Gas-Burner.*—September 7, 1869.

Claim.—As a new article of manufacture, the burner A, provided with horizontal slots *a b c d*, as and for the purpose described.

94,477.—LUTHER C. CROWELL, West Dennis, Mass.—*Stove-Polishing Brush.*—September 7, 1869; antedated August 25, 1869.

Claim.—As an article of manufacture, a stove-polishing brush, composed of one or more body-pieces 1 2, in combination with polishing-surface P P or its equivalent, covering A, and sleeve B, substantially as described, for the purposes specified.

94,478.—N. C. DAWSON, Steele's Post-Office, Ind.—*Seeding-Machine.*—September 7, 1869.

Claim.—The hinged beams C C, furnished with standards G, in combination with seed-boxes H, bar F, slides *m*, lever *j*, rod *k*, and springs *s*, the whole constructed, arranged, and operated substantially as described.

94,479.—FRANK W. DE SPESSBOURG, Province of Normandy, France.—*Process of Preparing Grain for Mashing.*—September 7, 1869.

Claim.—The use of chlorine-gas, or any of its equivalents, the hypochlorites (commercially called chlorides) of lime, soda, potash, and magnesia, in whatever way produced, for the purpose of preparing (disintegrating) corn (maize) meal, or the meal of any other grain, by soaking it in an aqueous solution of any one of the above-said substances, preparatory to boiling it in the mash-tub; or, without previously soaking it, by treating the grain with any one of the said substances at a higher temperature in the mash-tub, while heating and boiling it, as above specified.

94,480.—NORMAN EATON, Woburn, Mass.—*Hay-Spreaders.*—September 7, 1869; antedated April 14, 1869.

Claim.—1. The combination, in a hay-tedder, of the following parts, viz: a stripper, revolving on a fixed center, the forks, when projected and retracted through said stripper, and springs so arranged as to allow the forks to yield when they come in contact with obstacles, operating substantially as described, and for the purpose set forth.

2. The fork-bar *f*, when arranged to turn in bearings near its ends, and held in position by a spring, connected to it in such a manner as to allow the bar to turn to its bearings, but tending to bring it back to its working position, substantially as described, and for the purpose set forth.

3. The combination, in a hay-tedder, of a revolving head or arms, to carry the fork-bars, the fork-bars *f*, for supporting the forks *i i*, and a spring, so arranged as to hold the bar in proper working-position, allowing it to yield or turn, to prevent the forks from breaking when they come in contact with rigid obstacles, and returning the arm from any angle to which it would be bent by the obstacle to its proper working position, substantially as described, and for the purpose set forth.

4. The bars *f f*, when arranged to approach and recede from the circumference of the head D, in combination with the forks *i i*, and springs, arranged to allow the teeth to yield, substantially as and for the purpose set forth.

5. The forks *i i*, so arranged as to yield when they come in contact with rigid obstacles, in combination with the revolving stripper-bars E, through which the forks operate, the fork-bars *f*, arranged to play in slots *u u*, the connecting-arms *k k*, and the eccentric-shaft *e*, operating substantially as described, and for the purpose set forth.

6. The combination, in a hay-tedder, of the forks *i' i'* with a coil-spring at or near their base, the coil and forks being constructed of separate pieces of wire, so that the forks may be readily removed, substantially as described.

7. The coil-springs on the bars *f*, so arranged that a single spring may hold several forks in position, substantially as described, and for the purpose set forth.

94,481.—EMILE ENETE, Catahoula Parish, La.—*Cotton-Cultivator.*—September 7, 1869.

Claim.—The combination of the barring-off plows F F', and the cutter or knife K, with the covering-plows Y Y', when these parts are constructed, arranged, and operate substantially as described, for the purpose set forth.

94,482.—WILLIAM A. ESTES, South China, Me.—*Revolving Cultivator.*—September 7, 1869.

Claim.—The larger cultivator herein described, in combination with the smaller cultivators, placed entirely within the larger one, all arranged substantially as described.

94,483.—JACOB S. EVANS, Berkeley, Mass.—*Dumping-Tub.*—September 7, 1869.

Claim.—1. The combination and arrangement of

the bolt S with its tail R, rod C, and link T, constructed and arranged to operate substantially as described, for the purpose set forth.

2. The unlocking or releasing the dumping-pan or tub, by means of the rope or guy used to steady the pan or tub out or in, substantially as described.

94,484.—James A. Fleming, Shamberg, Pa.—*Wrenches for Elevating Pump-Tubes.*—September 7, 1869.

Claim.—A swinging-wrench head, having a slotted aperture for the reception of a coupling-rod or tube, in combination with a lug, *e*, for closing such aperture and holding the rod in place while being raised or unjointed, substantially as above set forth.

94,485.—David S. Gardner, Bristol, Md.—*Dumping-Wagon.*—September 7, 1869.

Claim.—1. The construction of the rails G, of wood, for dumping-wagons, with sides partially covered with sheet-metal, as described above, for the purpose of affording channels for friction-rollers, as above set forth.

2. The arrangement of the friction-rollers P, as constructed, and operating in channels in the rails G, and in the slots O, for the purpose above mentioned.

3. The arrangement of the friction-rollers R, as constructed, upon shaft Q, and operating in channels at the rear end of the rails G, for the purpose aforesaid.

4. The arrangement of the hooks E, as constructed, and for the purpose before named.

5. The arrangement of the shaft L, the lever M, and tripping-lugs N, as for the purpose aforesaid.

6. The arrangement of the metallic straps I, constructed and operating as above described.

7. The arrangement of the upper rails A, the guides C, and the ears F, as and for the purpose aforesaid.

8. The combination of the upper frame A B, provided with the guides C, hooks E, and ears F, with the lower frame G H, provided with the friction-rollers P and R, shaft Q, metallic straps I, shaft L, lever M, and tripping-lugs N, in combination with suitable running-gear of a wagon, and operating as before mentioned.

94,486.—S. J. Genung, Waterloo, N. Y.—*Extension-Table Slide.*—September 7, 1869.

Claim.—1. The construction of the slides B B′, with the central tongues *f*, or equivalent, for separating the bars, and the dovetailed or wedging lugs *g*, for attaching the slides to the wood, substantially as described.

2. In combination with the outside slides B B′ the central connection *a b*, substantially as described.

94,487.—Edward H. Graves, Chicago, Ill.—*Folding Baggage-Check.*—September 7, 1869.

Claim.—The folding check-case A A, arranged to swing open parallel with its flat sides, on the pivot F, and provided with grooves for the opposite edges of the slides to shut into, with a chamber inside for receiving a check, and openings for showing the letters marked on the check, and with an opening through which a strap, fastened by the pivot F, is put to hold the check in the case, as set forth.

94,488.—Benjamin D. Gullett, Amite City, La.—*Cotton-Gin.*—September 7, 1869.

Claim.—1. Combining, with a cotton-gin, a drawer hinged and secured as shown, for the purposes herein fully set forth.

2. In combination with the shaft supporting the same, the boxes, sliding plates, provided with the wedges, set-screws, and plates of metal, constructed and operating substantially as and for the purposes set forth.

94,489.—Lewis Guthrie, Waterloo, Ind.—*Corn-Plow.*—September 7, 1869.

Claim.—The curved supports C C, provided with slots G G, in combination with the handles B B, the beam A, the sheath D, and the brace J, when the said sheath D is so constructed as to carry and operate plows or moles of different forms of construction, substantially in the manner and for the purposes herein set forth.

94,490.—Lewis Guthrie, Waterloo, Ind.—*Double Corn-Plow.*—September 7, 1869.

Claim.—1. The head-block H, as and for the purposes set forth.

2. The combination of the head-block H, the sub-beams D D, and the posts C C, with the sheaths I I, the reversible plows E E, and guards G G, in the manner and for the purposes herein specified.

3. The combination of the posts C C, sub-beams D D, and handles B B, substantially as set forth.

94,491.—Frank A. Hill, Marysville, Cal.—*Gang-Plow.*—September 7, 1869.

Claim.—1. In combination with the extended arms D of the crank, and connecting-bars I, the bent shaft G, turning in boxes F F, said shaft being rotated by a sweep, K, substantially as and for the purpose above described.

2. The wrought-iron vertical standard *b*, dovetailed into the landside of the plow, substantially as and for the purpose above described.

3. Securing the timbers E and pole P to the cross-bar C, by means of the iron bar *g* and bolts *i*, so that they may be adjustable, substantially as set forth.

94,492.—George James Hinde, Wolverhampton, England.—*Coating Iron or Steel with Copper or Brass, or other Alloys of Copper.*—September 7, 1869; patented in England, February 26, 1869.

Claim.—1. The improvements hereinbefore described in coating iron or steel with copper or brass or other alloys of copper, that is to say, coating iron or steel with copper or brass, by giving to the said iron or steel a coating of an alloy of copper and zinc, the proportion of zinc in the said alloy being so great that the said alloy differs but little in fusibility and other physical characteristics from zinc, and afterward volatilizing, by heat, the zinc of the said alloy, either wholly or in part, and thereby leaving upon the said iron or steel a coating of copper or brass, substantially as described.

2. The modifications described with reference to the coating of iron or steel, previously coated with tin or terne metal, and the modifications described, when it is wished that the final coating shall contain, in addition to copper or copper and zinc, tin or terne metal.

3. The use of a film of powdered calcined flint or other finely-divided substance, for protecting the alloy-coated iron or steel from injury and oxidation during the volatilization of the zinc or other volatile metal contained in the coating.

94,493.—Benjamin Hinkley, Troy, N. Y.—*Roofing-Material.*—September 7, 1869.

Claim.—The improved roofing-material, made and applied as herein described.

94,494.—Robert Hitchcock, Springfield, Mass.—*Car-Ventilator.*—September 7, 1869.

Claim.—1. The ventilator-case A, formed with opening D, communicating with the car, center-piece F, and eduction-openings E and E, and with or without the curved piece G, the parts being constructed and arranged together substantially as herein set forth, and for the purpose described.

2. A car-ventilator for the sides of a car or raised roof, in which the only eduction-ports are placed at the bottom of the case, substantially as shown.

94,495.—George Edward Hopkins, Harwich, Mass.—*Plastic Cement.*—September 7, 1869.

Claim.—The cement or compound formed by the combination of the several ingredients herein specified, substantially in the manner and for the purpose herein described.

94,496.—John Hughson, Buffalo, N. Y.—*Animal-Trap.*—September 7, 1869.

Claim.—The combination of the perpendicularly-suspended trap-door or doors A A, horizontal trap-doors B B, and letting-out and killing arrangement D, the same to be constructed and to operate as and for purpose set forth.

94,497.—John Lueth.—Kankakee, Ill.—*Cultivator.*—September 7, 1869.

Claim.—1. The wedge-shaped plate I, provided

with grooves *h h*, in combination with the grooved back-plate *n*, shovel H, bolt *m*, and standard G′, as set forth.

2. The reversible stirrups F, provided with pivots *b b′*, placed at one side of their center, in combination with the beams G, standards G′, shovels H, depending standards B, and vertical parts B′ of the elevated axle, as and for the purpose set forth.

94,498.—ADIN T. MANLY, Buffalo, N. Y.—*Steamer for Agricultural and other Purposes.*—September 7, 1869.

Claim.—The construction and combination of the corrugated fire-box H with the filling-tube E and conducting-pipe D, arranged substantially as herein described.

94,499.—MOSES S. MARSHALL, Somerville, assignor to JOHN T. and JOHN S. FOLSOM, Boston, Mass.—*Washing-Machine.*—September 7, 1869.

Claim 1.—The construction of the hollow journal, with its aperture *x*, and cap or valve N, in combination with the angular pipe I, and the operating-cylinder A, as shown, and for the purpose specified.

2. The combination of the pipe I, box K, collar M, and nut N, with the heads H and O, as shown and for the purpose set forth.

3. The general construction and arrangement of the hereinbefore-described device, consisting of the cylinder A, provided with the opening B, the slide C, the heads D and H, the journals E, the boxes F and K, the pipe I, the false and perforated heads L and O, the collar M, the valve N, the corrugated ribs P, and the crank R, substantially as and for the purpose specified.

94,500.—DANIEL MOORE and EDWIN MOORE, Brooklyn, E. D., N. Y.—*Saw-Frame.*—September 7, 1869.

Claim.—The stretcher *f*, formed as an arch, and united to the inverted arched stretcher *g*, in combination with the frames *a b*, and tightener *d*, as and for the purposes set forth.

94,501.—BERNARD MORAHAN, Brooklyn, N.Y.—*Wash-Tub.*—September 7, 1869.

Claim.—The ceramic wash-tub herein described, having the front side inclined and ridged, and adapted to serve as a wash-board, as set forth.

94,502.—DANIEL NEWTON.—Southington, Conn.—*Animal-Tedder.*—September 7, 1869.

Claim.—The combination of the cylinder A, arm B, box D, and grooved collar E, all constructed and arranged to operate in the manner shown, and for the purpose set forth.

94,503.—WILLIAM T. NICHOLSON, Providence, R. I., assignor to the NICHOLSON FILE COMPANY, same place.—*Rasp.*—September 7, 1869.

Claim.—The improvement in rasps, which consists in making the cutting-edges of the several teeth thereof in the form and of the character substantially as herein described, for the purpose of enabling each of such teeth to exert a shearing-cut, when applied to use as set forth.

94,504.—ARTHUR F. NOYES and N. D. BEECROFT, Bangor, Me.—*Hand-Weeder.*—September 7, 1869.

Claim.—The hand-weeder, when constructed and arranged to operate substantially as described and shown.

94,505.—HENRY C. OVERMAN, Chicago, Ill., assignor to himself and JOHN Q. A. CROSSBY, same place.—*Sleigh-Shoe.*—September 7, 1869.

Claim.—A sleigh-shoe, constructed with the recess A, for the purpose of fastening the same to the sleigh-runner, substantially as specified and shown.

94,506.—ROBERT D. OZBURN, Lena, Ill.—*Churn.*—September 7, 1869.

Claim.—1. The arrangement, as set forth, of the concentric dasher-shafts, the casing, the driving-pinions, and the interposed driving-wheel mounted on an arm projecting from the casing.

2. The arrangement of the concentric dasher-shafts, their pinions, and the open-sided pinion-boxes, all constructed as set forth, for joint operation.

3. The combination of the concentric dasher-shafts rotating in opposite directions, the casing and the pinion E, from which both shafts are suspended, all these parts being constructed as set forth for joint operation.

94,507.—JOEL PATRICK, Pitt County, N. C.—*Pump.*—September 7, 1869.

Claim.—The square piston C, (having a tapering seat for valve *g*,) when made adjustable expansively by means of pieces *i*, their slots and set-screws, as shown and described, and for the purpose set forth.

94,508.—JOSIAH S. PHILLIPS, San Francisco, Cal.—*Apparatus for Assaying and Testing Ores and Metals.*—September 7, 1869.

Claim.—1. The stand, consisting of the pedestal A, hollow connecting-vessel D, box C, and plate E, substantially as above described.

2. The boxes B B, secured in the pedestal A, for the purpose of containing the various fluxes required during the assay, substantially as herein described.

3. The diagonal pipe I, with its valve J, in combination with the tube K, for introducing air into the water in the chamber D, substantially as and for the purpose above described.

4. The flat spring L′, in combination with the pointed ridge L, for compressing the tube, and preventing the return of the air or water, substantially as herein set forth.

5. The conical cup X, with its inverted siphon X′, when placed in the chamber D, substantially as and for the purpose herein set forth.

6. The column or cylinder F, when used either with the bottom G, with its upward-lifting valve H, as a receiver of the water when it is forced upward by the air introduced in the chamber, and the small hole *a′*, for permitting it to flow back more equally to produce a pressure, or when used in combination with the sieve *m*, for mixing and sizing the pulverized ore, substantially as herein set forth.

7. The metal plate N, with its three or more upward-projecting wick-holders *a a a*, said plate being movable by means of a lever, O, by which the wicks are shifted so as to produce a reducing or oxidizing-flame at pleasure, substantially as herein described.

8. The three or more tuyeres or nozzles P P P, communicating with the interior of the chamber D, and through which the air is forced against the flames for the purpose of propelling them against and upon the assay, substantially as described.

9. The assaying-cup Q, with its long stem Q′, the lower end of said stem being formed into a screw, substantially as and for the purpose herein described.

10. The upper and lower sets of universal joints, consisting of the arms R, circular plate S, gimbals T, or other equivalent joint-rings U, and elevating and depressing springs V, the whole constructed and arranged substantially as and for the purpose herein described.

11. The fingers *b b*, attached to the end of the band Z, for suspending a piece or pieces of charcoal or other required material, above the assay, substantially as and for the purpose herein described.

12. Suspending a piece or pieces of charcoal, *d*, above the assay, for the purpose of intensifying and equalizing the heat on the assay, substantially as described.

13. The weighing-device, consisting of the long scoop-shaped lever *f*, balanced by means of weights, upon sharp bearings, for the purpose of weighing the ore, and the button after the assay, substantially as set forth.

14. In combination with the beam *f* of a weighing-device, a scale or series of scales, each scale corresponding with weights *h*, whereby the number of dollars per ton the ore from which the button was taken will yield, can be read from the scale by merely balancing the button on the beam, substantially as herein described.

15. In combination with the apparatus hereinbefore claimed, for producing a blast, the bellows *i*, operated either by the foot or hand, substantially as and for the purpose herein described.

16. The expelling-tube *n*, with its recessed rims, said tube being filled with bone-ash concaved at both ends, substantially as and for the purpose described.

17. The metal plate *p*, having the graduated holes *r*, each hole being marked to represent the ounces or money-value, per ton, the ore will yield, said value being found by passing the button through the hole, substantially as described.

18. The diverging strips of metal *v*, placed on a bed-plate, *y*, and graduated to the dollar or ounce value per ton, or other coin-value, substantially as herein described.

19. A portable automatic assaying-apparatus, constructed and arranged to fold within the space herein specified.

94,509.—JOHN PICKLES, Wigan, England.—*Process of Concentrating and Granulating Saccharine Liquids.*—September 7, 1869.

Claim.—The process of placing saccharine liquids in the proper position, and then allowing them to fall through a strainer, &c., through the proper height, wherein the atmosphere has been previously properly heated, substantially as and for the purposes set forth.

94,510.—DAVID PIERCE, Woodstock, Vt.—*Construction of Ships.*—September 7, 1869.

Claim.—The construction of an air-tight apartment, one or more, next above the water, in place of what is commonly called the hold in ships, to be so made as to admit or exclude water and air, either or both, and control them by means of divisions in the air-tight apartment, so constructed as to admit of being wholly or partially filled with air, by a forcing-air-pump, through stop-cocks inserted through the deck.

94,511.—J. P. PULTZ, Plantsville, Conn.—*Paper-Bag Machine.*—September 7, 1869; antedated September 1, 1869.

Claim.—1. The combination of the former A, guides *a a*, paste-dish *b*, former B, inclined plane C, guides *c c*, float D, guides *h*, weight E, feed-rollers F F, float G, shear-blades K^1 K^2, fingers *v v v*, conveyor *w*, table V, pasting-trough O, plate U, recess W, and folder A′, substantially as described, and for the purposes set forth.

2. The combination of the former A, guides *a a*, paste-dish *b*, former B, guides *e e*, inclined plane C, float D, guides *h*, weight E, feed-rollers F F, float G, and shear-blades K^1 K^2, substantially as described and for the purposes set forth.

3. The combination of the conveyor *w*, table V, pasting-trough O, plate U, recess W, and folder A′, substantially as and for the purpose described.

4. The combination of the float G and a cutting-off device, substantially as described, and for the purposes set forth.

5. The combination of the pasting-trough O, plate U, table V, and recess W, all arranged and operating substantially as and for the purposes described.

94,512.—GEORGE W. RAWSON, Cambridgeport, assignor to himself and MICHAEL HITTINGER, Somerville, Mass.—*Device for Aiding Combustion in Steam-Generators.*—September 7, 1869.

Claim.—The air-blast wheel and its case, *d*, as arranged outside of and separate from the furnace, and connected therewith by means of a conduit, *f*, opening into the ash-chamber *g*, and also by a conduit, *c*, opening out of the chimney or discharge-flue of the furnace, as set forth.

94,513.—JAMES V. B. REMSEN, New York, N. Y.—*Brick-Kiln.*—September 7, 1869; antedated August 27, 1869.

Claim.—The arrangement, herein described, of a series of chambers around a central fire, so that the operation of charging, burning, and removing the bricks or other articles can be performed successively, substantially as specified.

94,514.—WILLIAM RICHARD, Clyde, Ohio.—*Pruning-Shears.*—September 7, 1869.

Claim.—The slotted blade A, pivoted to the blade B, and provided with hook E, in combination with lever D and handles P and F, substantially in the manner and for the purpose described.

94,515.—M. A. RICHARDSON, Sherman, N. Y.—*Washing-Machine.*—September 7, 1869.

Claim.—The combination of the frame B, standards B^1 B^2, rollers C and E, springs D D^1, facing b^4, knob *d*, journal *c*, slots b^1 b^2, staple b^3, and cleats F G, substantially as and for the purpose set forth.

94,516.—BENJAMIN ROBINSON, Boston, Mass.—*Railway-Rail Splice.*—September 7, 1869; antedated August 21, 1869.

Claim.—1. The railroad-rail, formed at the end with a lateral bevel, as shown *x y y′ x′*, with mortises and tenons on the beveled side, when arranged to keep the inclined planes *y y′* in contact with each other, by means of compensating inclined planes *g h*, substantially as described.

2. The railroad-rail, formed at the end with a lateral bevel, when a mortise or tenon, or both, are arranged upon the beveled side, to lock with a corresponding mortise or tenon, or both, in the abutting rail, substantially as described.

94,517.—LYMAN M. SEVERANCE, Dixon, Ill.—*Platform-Scale.*—September 7, 1869.

Claim.—The combination of the connecting-pieces C, levers A and B, and rod E, when constructed and arranged substantially as and for the purposes described and set forth.

94,518.—JASPER HAMET SINGER, New York, N. Y.—*Treadles for Machinery.*—September 7, 1869.

Claim.—The combination of the stand, rotating cranked treadle-shaft, and belt-pulley, the whole constructed to operate substantially as before set forth.

94,519.—JOEL E. SLEGEL and ELI SLEGEL, Reading, assignors to themselves and JOHN K. HERTS, Lancaster County, Pa.—*Stay and Guide-Bar for Elliptic Springs for Vehicles.*—September 7, 1869.

Claim.—A stay and guide-bar, G, disconnected from the head-block E, and provided with open foot-clamps *g* of one piece, substantially in the manner and for the purpose shown and set forth.

94,520.—CHARLES E. SMITH, Columbus, Ohio.—*Brad-Setter.*—September 7, 1869.

Claim.—1. A case for carrying a stock of glaziers' "brads" or "points," constructed so as to be attachable and removable from the brad-driving apparatus, substantially as and for the purpose set forth.

2. The combination of the removable case P, the tube M and its pressing-devices, and the locking-piece R, substantially as shown and set forth.

94,521.—TIMOTHY R. SMITH, San Francisco, Cal.—*Carriage-Wheel.*—September 7, 1869.

Claim.—1. The construction and arrangement of the parts forming the hub, namely, the flanged side B, cap D, segments *g′*, and the flanged segments *g*, provided with recesses to form openings for the spokes, all secured together by the bolts K, substantially as described.

2. In combination with the above-claimed hub, the packing-rings *i* and *i′*, arranged substantially as described.

3. The elastic washer formed of the ring G, having projections *n*, the elastic ring *i″*, and the cap I, arranged and applied substantially as described.

94,522.—HENRY SPILLMANN, New Orleans, La.—*Truss.*—September 7, 1869.

Claim.—The metallic frame A, when provided with the notched levers C C′, and otherwise fitted and constructed as herein described, in combination with an elastic body-band or belt, to which the plates D D′ are secured, when these plates are provided with the pins *b b′* and the elongated apertures *c c′* substantially as herein described, for the purpose set forth.

94,523.—PETER A. STEWART, Lucesco, Pa.—*Governing-Device for Steam-Engines.*—September 7, 1869.

Claim.—The steam-chamber B and piston C, in

combination with the steam-chest A, for operating a governor-valve in the steam-supply pipe, as herein described.

94,524.—W. H. SULLENBERGER, Harrisburgh, Pa.—*Combined Knob-Latch and Lock.*—September 7, 1869; antedated August 25, 1869.

Claim.—1. The escutcheon lever C H E E′, when pivoted at D and made to vibrate between the projections *a a′*, substantially as and for the purpose herein set forth.

2. The latch V, provided with recesses 3 4, notches 1 2, and tooth *p*, in combination with lug F, pin *m*, and guard *o*, all arranged to operate substantially as and for the purpose set forth.

3. The escutcheon E E′ *n* of the lever C H, in combination with key-bit L, arranged to operate substantially as and for the purpose set forth.

94,525.—JOHN W. SWALES, San Francisco, Cal.—*Railway-Car Brake.*—September 7, 1869.

Claim.—1. The sliding frame D, operated by the lever E, and spring *g*, and carrying the pulley *a* and pinion *d* upon the shaft *b*, substantially as and for the purpose above described.

2. In combination with the sliding frame D, carrying the pulley *a* and pinion *d*, the arrangement of the endless chain *f*, upon the pulleys *a* and *e*, whereby said chain is tightened at the same time that the pinion *d* is thrown into gear, substantially as described.

94,526.—ZARA TOUSEY SWEET, Davisville, Cal.—*Mail-Bag.*—September 7, 1869.

Claim.—The combination and arrangement of the cover B, encircling-wire *a*, and lock D, substantially as and for the purpose set forth and described.

94,527.—ALBERT L. TAYLOR, Springfield, Vt.—*Clothes-Drier.*—September 7, 1869.

Claim.—A clothes-horse or frame, with the movable sides or wings A A, uprights B B, and end-braces *f f*, when arranged to operate as and in the manner described.

94,528.—A. B. THOMPSON, Owego, N. Y.—*Railway-Rail Chair.*—September 7, 1869.

Claim.—The combination of the hook-key A and the pin D, arranged, in relation to the chair and rails, in the manner and for the purpose herein specified.

94,529.—WILLIAM P. TROWBRIDGE, Newtown, N. Y.—*Bridge.*—September 7, 1869.

Claim.—The construction of bridges substantially in the manner and for the purposes herein shown and specified.

94,530.—INGLIS WALKER, Lynn, Mass., assignor to himself and WILLIAM R. BARNARD, same place.—*Railway-Car Brake.*—September 7, 1869.

Claim.—1. The bar D, in combination with shaft R, having drum H, toothed gears *g* and *o*, and wheel *h*, and spring E, as means of setting the brakes of a car, operating substantially as set forth.

2. The combination of the above devices with cord S, pulley *t*, and the brakes of a car, substantially as described.

94,531.—ADDISON G. WATERHOUSE, San Francisco, Cal.—*Overshoe.*—September 7, 1869.

Claim.—The elastic opening in the heel of the overshoe, and the flange, made for the purpose of clasping tightly around the heel of the boot or shoe upon which the overshoe is worn, for the purposes and in the manner substantially as above set forth.

94,532.—JAMES WEBSTER, Birmingham, Great Britain.—*Metallic Alloy for Filtering Oils, and for the Manufacture of Paints, Cements, &c.*—September 7, 1869.

Claim.—1. The mode of producing the improved metallic alloy.

2. Its application, in a solid or pulverized form, as a filtering-medium, for refining oils and spirits.

3. Its use and application as a cement or coating, for preserving wood, stone, and other materials.

4. Its application for preventing the oxidation of iron surfaces, when ground and mixed with oleaginous matter, as herein described.

94,533.—JOHN HUBBARD WEEDEN, Waterbury, Conn., assignor to SCOVILLE MANUFACTURING COMPANY.—*Lamp-Burner.*—September 7, 1869.

Claim.—1. The employment, in a lamp-burner of otherwise ordinary or suitable construction, of a series of chimney-holding hooks, with a stiffening-ring united with and connecting said hooks, substantially as and for the purposes described.

2. The combination, with the deflector, and the air-distributor supporting said deflector, and fitting upon the base of the burner, of a series of chimney-holding spring hooks, attached to and hanging from said deflector, and a ring encircling the burner and united with said hooks, substantially as shown and described.

94,534.—ALEXANDER WEIDE, Chicago, Ill.—*Bridge-Gate.*—September 7, 1869.

Claim.—1. The combination of the grooved angular bar E with a vertically-reciprocating gate C D, arranged and operating substantially as and for the purposes herein set forth.

2. In combination with said gate C D and angular grooved bar E, the shaft J, pinions *m m*, and racks *n n*, arranged to operate substantially in the manner and for the purposes set forth and shown.

3. In combination with the gate C D, the lever I, with its latch *i*, the spring H, and a suitable socket, *x*, for the purpose of securing the gate in position when elevated until the bridge closes, substantially in the manner and for the purposes specified.

4. Providing the ends of the bridge with removable pins or projections *d*, to operate the gate, as and for the purposes set forth.

94,535.—WILLIAM WESTLAKE, Chicago, Ill.—*Lantern.*—September 7, 1869.

Claim.—The loose band E, provided with the supporting-ledge or shoulder *c*, in combination with the band D, substantially as and for the purposes specified.

94,536.—WILLIAM WESTLAKE, Chicago, Ill.—*Lantern.*—September 7, 1869.

Claim.—1. The air-chamber formed by the plates or disks D and D′, and located between the dome and base of the lantern, in relation to the globe, substantially as and for the purposes specified.

2. The combination of the band F and disk D, with the band P and disk D′, when constructed and operating substantially as described.

3. The deflector D′, forming the lower disk of the air-chamber D′, in combination with the open base A′, when so arranged as to concentrate the light directly beneath the base of the lantern, substantially as specified.

4. The permanent wick-ratchet support *d*, when attached to the oil-pot, and so located as to cover or stop the opening in the band A, substantially as specified.

5. The combination and arrangement of the bands F and P, disks D and D′, with the tubes C and base A, substantially as described.

94,537.—D. N. ALLARD, Chester Hill, Ohio.—*Attachment for Cooking-Stoves.*—September 7, 1869.

Claim.—Uniting cooking-vessels or other implements to cooking-stoves, by means of a headed pin, and an elongated dovetail or guiding slot or recess, so that said vessel may be moved backward or forward from or over the pot-hole, or be swung around the pin as a center, substantially as described.

94,538.—BOYD ALLEN, Boston, Mass., assignor to himself and S. C. PRATT, same place.—*Gas-Heater.*—September 7, 1869.

Claim.—A gas-heater tube or burner, having the air-chamber *e*, chimney *h*, and orifices *f*, all arranged, relatively to the jet-tube, substantially as shown and described.

94,539.—JAMES S. ANDERSON and JAMES B. COOLEY, Clark's Hill, Ind.—*Ditching-Machine.*—September 7, 1869.

Claim.—1. An improved ditching-machine, formed

by the combination of the beams or sills A, adjustably connected by the screw-rods and nuts B, lifter or plow C, adjustable cutters E, guard-plates F, mold-board G, guard H, and apron I, whether provided with the guard-runner J or not, with each other, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the axle K, wheels L, bars or rods M, and cross-head lever N n', with the rear parts of the sills or beams A, substantially as herein shown and described, and for the purposes set forth.

94,540.—Charles S. Bailey, New York, N. Y.—*Hulling-Mill.*—September 7, 1869.

Claim.—The end plates A, slotted radially in continuation of the slots in the concave E, whereby the knives are enabled to be removed singly through the end plates, said knives being held in place by the removable annular plates J, all arranged as shown and described, and for the purpose specified.

94,541.—Hugh Baines, Manchester, England.—*Railway-Crossing for Cone-Wheels.*—September 7, 1869.

Claim.—A railway-crossing, adapted to the use of cone-wheels, for tracks of different gauges, arranged and operating substantially as and for the purpose set forth.

94,542.—Job McNamee Baker, Fayetteville, Texas.—*Cultivator.*—September 7, 1869.

Claim.—1. The blades or plows E, F, and G, arranged and operated substantially as and for the purposes herein shown and described.

2. A combined cultivating, ridging, planting, and rolling machine, arranged and operating substantially as described.

3. In combination with a cultivator, the stalk-cutter S, substantially as described.

4. The method of adjusting the beams H, with the blades, substantially as described.

5. The method of operating the slide of the planter, in combination with the rollers R, substantially as described.

94,543.—J. W. Barron, Hillsborough, Ill.—*Tuyere.*—September 7, 1869.

Claim.—The combination of the poker with the weighted valve I, each serving as a guide for the other, and co-acting to relieve the fire and air chamber of refuse-matter, in the manner set forth.

94,544.—John W. Bartlett and David P. Bosworth, Harmar, Ohio.—*Machine for Making Railroad-Spikes.*—September 7, 1869.

Claim.—1. The combination of the swaging-dies D D^1, and reciprocating pawl E^2, with the discharging-wheel E, respectively constructed and arranged in relation to each other substantially as set forth.

2. The combination of mechanism for operating the movable swage D, constructed and operating substantially as described, so as to operate the movable die, first by percussion, and then by compression.

3. The combination of the dies D D^1, with the reciprocating header F^1, and gauge F^3, substantially as and for the purpose set forth.

4. The combination of the reciprocating plunger C^5, elbow-lever F, and heading-roll F^1, constructed and arranged, in relation to the dies, substantially as described, with mechanism which shall cause such heading-roll, F^1, in its reciprocations, to bear upon and traverse twice along the head of the spike, substantially as and for the purpose set forth.

5. The combination of the roller F^1, oscillating arm F, eccentric-rod C^2, and reciprocating track C^1, so arranged in relation to each other as to operate substantially as and for the purpose set forth.

6. The combination, substantially as described, of the following elements, viz, dies to form the shank of the spike, a header reciprocating in a line perpendicular to the axis of the spike, and a discharging-wheel, all operated by eccentrics or cams, substantially as set forth.

7. The combination of the lever H, rod C, and eccentric B^3, arranged to operate substantially as and for the purpose set forth.

94,545.—William W. Batchelder, Boston, Mass.—*Apparatus for Lighting Gas by Electricity*—September 7, 1869.

Claim.—1. The combination of the friction electrical generator, current-devices M O, and insulators E N, substantially as described, with the lever I, the gas-burner H, gas-cock X, and conduit K, as set forth.

2. The combination of a flexible gas-conduit, or hose, L, with the gas-burner H, gas-cock friction electrical machine, or generator, and broken circuit, as explained.

3. The combination of the gas-cock, gas-burner H, and conduit L, and broken electrical circuit, with the electrical exciter or bell C, so as to be movable with it from and to the vulcanite frustum A, or its equivalent, when the latter is stationary in position.

94,546.—Henry Baughman, Columbus, Ohio.—*Corn-Planter.*—September 7, 1869.

Claim.—The construction and arrangement of the handles A A, beam B, wheel C, cross-bars D E, drag-bars F F, scrapers F′ F′, standards G G, and springs H H, in connection with a seed-box, I, slide n, and plow R, substantially as shown and described.

94,547.—R. W. Baylor, Norfolk, Va.—*Railway-Car Coupling.*—September 7, 1869.

Claim.—1. The draw-head A, when the same is provided with a hinged bottom, A′, plate D, and rod E, when the whole is so combined and arranged as to operate substantially as described.

2. The bottom A′, having a recess, B, and pivoted catch or pin C, when the same are so formed, combined, and arranged that they will operate substantially as described, as and for the purpose specified.

3. The rod E, ratchet E′, having pins $f f'$, spring-pawl e, and beveled plate e', when the same are so combined and arranged that they can be operated by a key, F, substantially as described.

4. The compound link G, when the same is constructed substantially as described.

94,548.—A. Belchambers, Ripley, Ohio.—*Table Leaf Support.*—September 7, 1869.

Claim.—In combination with a table, the bracket D and spring J, constructed, arranged, and operating substantially as and for the purposes shown and described.

94,549.—G. W. S. Bell, Tallula, Ill., assignor to himself and H. C. Bell, same place.—*Corn-Harvester.*—September 7, 1869.

Claim.—1. The armed belts or chains Q R, connected with and driven from the drive-wheels A, by suitable gearing, in combination with the cutting-device and tilting platform, substantially as herein shown and described, and for the purpose set forth.

2. The rotating knives I, connected with and driven from the drive-wheels A, by suitable gearing, in combination with the pointed or inclined guides K, armed belts or chains Q R, and tilting platform S T, substantially as herein shown and described, and for the purpose set forth.

3. The pivoted armed shafts S T, in combination with the cutting-device I J K and endless armed belts or chains Q R, substantially as herein shown and described, for the purpose of holding the cut corn-stalks and dropping them in bundles upon the ground.

4. The combination of the cranks V, slotted bar Z, connecting-bar W, bent lever X, connecting-bar A′, and lever B′, with each other and with the armed shafts S T, substantially as herein shown and described, for the purpose of holding and revolving the armed shafts S T, to hold and drop the bundles of stalks upon the ground.

5. The combination of the pivoted posts G′, wheels H′, cross-heads I′, and connecting-bar J′, with each other and with the frames E′ Y, substantially as herein shown and described, and for the purpose set forth.

94,550.—William Bellamy, Newark, N. J.—*Ice-Pitcher.*—September 7, 1869.

Claim.—In combination with an ice-pitcher, a suspended porous receptacle, of felt or other fibrous material, through which fluids will percolate, for the purpose herein specified.

94,551.—William Bellus and C. Bowers, Fredonia, Ohio.—*Wash-Board.*—September 7, 1869.

Claim.—The wash-board, constructed with a wood base, A, and a sheet-metal plate, B, riveted by tacks C, having large round or oval heads, and arranged as specified.

94,552.—H. H. Bigelow, Worcester, Mass.—*Blank Boot-Heels.*—September 7, 1869.

Claim.—1. A compressed blank heel for boots and shoes, composed of pieces of leather laid up in layers, and then subjected to compression on all sides, substantially as and for the purposes described.

2. A compressed blank heel, the nail-holes of which are punched while the blank heel is subjected to pressure upon all sides, substantially as and for the purpose set forth.

3. A compressed blank heel, in which the nail-holes are punched and the nails partially inserted while the heel is subjected to pressure upon all sides, substantially as and for the purposes set forth.

94,553.—Osmore A. Bingham, Gardner, Mass.—*Chair-Seat.*—September 7, 1869.

Claim.—The combination of the two cushion coverings, *a b*, the grooved frame A, and the strip or frame C, substantially in manner as above specified.

94,554.—Abram Boles, Kinder, Ind.—*Plow.*—September 7, 1869.

Claim.—1. Hinging the beveled forward ends of the plow-beams A to each other by means of the eye or hinge-plates B, and clevis C D, substantially as herein shown and described, and for the purpose set forth.

2. Adjustably connecting the rear parts of the plow-beams A to each other by the adjustable overlapping hinged bars G, uprights H, and overlapping adjustable hinged bars I, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the springs K and projections L, with the plow-beams A and adjustable overlapping hinged bars G, substantially as herein shown and described, and for the purpose set forth.

94,555.—Nicholas H. Borgfeldt, New York, N. Y.—*Machine for Breaking the Leaves and Stems of Tobacco.*—September 7, 1869.

Claim.—The hinged frame F, in combination with the rollers C D, when the bearing-points of the frame are at a greater distance than the bearings of the rollers, substantially as described.

94,556.—W. Clay Bowers, Wheatland, Iowa.—*Self-Closing Telegraph-Keys.*—September 7, 1869.

Claim.—1. Revolving knob D, with pin *d* and lug *e*, in combination with connecting-rod F, spiral spring G, and auxiliary lever E, with platinum nipple *p*, to operate substantially as described and for the purposes set forth.

2. Platinum nipple *n'* on the side of anvil, substantially as and for the purposes set forth.

3. Sliding button I, to operate substantially as described and for the purpose set forth.

94,557.—M. V. Brigham, Mannsville, N. Y.—*Clamp.*—September 7, 1869.

Claim.—The within-described clamp, consisting of the piece A, provided with the pointed screws B, and used either with or without the piece F, the lever C, the pawl D, and the rack E, all constructed and arranged to operate substantially as and for the purpose specified.

94,558.—Morgan W. Brown, New York, N. Y.—*Mode of Closing Paper Bags.*—September 7, 1869.

Claim.—A paper bag, having its top softened, and leaving the body in its original state, substantially as described, as a new article of manufacture.

94,559.—Lewis D. Bunn, Morristown, N. J.—*Floating Velocipede.*—September 7, 1869.

Claim.—The floating velocipede, consisting of the floats A A, platform B, railing *a*, paddle-wheel D, the rudders H H, connected by the bar *c*, the steering-ropes *d d*, steering-lever I, and the seats F G, said parts being combined, constructed, and arranged as and for the purpose shown and described.

94,560.—Sanford S. Burr, Dedham, and Levi Pierce, Charlestown, Mass.—*Wardrobe-Bedstead.*—September 7, 1869.

Claim.—1. The combination, with the bed-bottom and the case, of the springs *g*, and rod or rods upon which the same are mounted, arranged, substantially as described, so as to constitute the hinge around which the bed-bottom moves.

2. The combination and arrangement of the legs *l l'* and the turn-buttons *o o'*, with respect to each other, and to the foot-board *f*, essentially, and in manner, and for the purpose as herein shown and described.

3. As an improvement in secretary-bedsteads, opening from the rear, a case or structure containing the bed-bottom, and provided with apertures or openings at front, for purposes of ventilation and convenience, as described, such apertures being furnished with doors hinged to the structure at their inner edges, whether such doors be provided or not with mirrors, the whole being as before set forth.

94,561.—David Byard, Sharon, Pa.—*Grate-Bar for Boilers.*—September 7, 1869.

Claim.—1. The construction and arrangement of the grate as herein set forth, whereby motion may be given thereto, for the purpose of cleaning and allowing the heated parts of the grate to cool at intervals.

2. The construction and arrangement of the ring or section, Fig. 2, with its lugs *d d d*, opening *n*, and notches *g g g*, substantially as represented.

3. The construction and arrangement of the center-pieces, Fig. 5, with their bearings *k k k*, with reference to the bearing-bars, Fig. 4, and shaft, Fig. 6, and its depressions at *c'*, whereby to be able to remove the sections when broken, substantially as herein set forth.

94,562.—Edward Carter, Rensselaer, N. Y.—*Clothes-Drier.*—September 7, 1869.

Claim.—1. The endless chain E and the sheave-wheel J, as arranged and constructed, for elevating and lowering the inner or non-revolving hub B, as shown and described.

2. The catch-bars M M, secured to the hub B, for operating the lower reel B B, as shown and described.

94,563.—John C. Chapman, Cambridgeport, Mass.—*Stop-Cock.*—September 7, 1869.

Claim.—The tapering plug B, applied to and sliding within the shell A, in combination with the Babbitt or soft metal seats or packing *f*, at the inlet and outlet openings *d e*, substantially as described.

94,564.—Charles Chinnock, Brooklyn, N. Y., assignor to I. Little Hyde, New York City.—*Oil-Can.*—September 7, 1869; antedated August 27, 1869.

Claim.—1. The chamber A, arranged in combination with the tubes B B' nozzle *a*, and reservoir E, of an oil-can, substantially as herein shown and described.

2. The combination of the valve *e* with the reservoir E, tube B B', and chamber A, substantially as and for the purpose specified.

94,565.—William B. Clark, Whitefield, Me.—*Velocipede.*—September 7, 1869.

Claim.—1. The combination of the seat and the foot-brace with the hand-cart, as described, that is, as composed of the frame A, and the two separate axles and their wheels, arranged together and having cranks to the axles, as set forth.

2. The combination and arrangement of the third wheel and its supporters with the seat, the foot-brace, the hand-frame A, and its cranked axles and their wheels, arranged together substantially in manner and so as to operate as set forth.

94,566.—Daniel Collins, Girard, Ala.—*Balanced Valves.*—September 7, 1869.

Claim.—The arrangement, with the lift-valves B C, having longitudinal passages M, of the steam-ways E D, admitting the steam to surround them, and the chambers I, all substantially as specified.

94,567.—T. C. Collins, Little Hocking, Ohio.—*Clothes-Drier.*—September 7, 1869.

Claim.—1. A clothes-drier, formed by connecting with a stand one or more series or sets of adjustable frames G, (with or without the support F,) arranged and operating substantially as and for the purposes set forth.

2. In combination with the stands B B and cap-piece C, the bars C′, (more or less in number,) arranged and operating substantially as and for the purposes described.

3. The combination of the bars C′ and the frames G with the base A A, stands B B, and cap C, substantially as and for the purposes specified.

94,568.—Thomas Cope and George Cope, Liverpool, England.—*Machine for Pressing Tobacco.*—September 7, 1869.

Claim.—1. The employment, in combination, of the reciprocating sliding presser *h*, with the rotating-mold-table *r*, and fixed table *q*, substantially in the manner and for the purpose set forth.

2. The separate discharge-piece *j*, in combination with the rotating mold-table *r*, presser *h*, and fixed table *q*, substantially in the manner and for the purpose set forth.

3. The tooth *k* and trundle-wheel *l*, in combination with the reciprocating presser *h* and mold-table *r*, substantially as set forth.

94,569.—J. J. Craig, Knoxville, Tenn.—*Fly-Trap.*—September 7, 1869.

Claim.—The fly-trap above described, composed of the rods B and D, the brace C, the rings F, and the bag G, in connection with a partially-opened window, when constructed, arranged, and operating as and for the purpose aforesaid.

94,570.—Joseph W. Cremen, New York, N. Y.—*Reflector for Street-Lamps.*—September 7, 1869.

Claim.—The reflector, as herein described and shown, having the form of the inverted frustum of a pyramid, with the draughts at the sides, and the aperture through the center.

94,571.—George Crompton, Worcester, Mass.—*Loom.*—September 7, 1869.

Claim.—1. Lifter, depressor, and evener levers, which are pivoted to reciprocating bars, attached to the slide-rods, and which are brought into alternately angular and horizontal positions, by their connection together and with a working-beam actuated by the crank-shaft, all substantially as described.

2. In combination with the system of lifter, depressor, and evener levers, arranged and operated as above set forth, devices for adjustment of the links connecting the working-beam with said levers, substantially as described.

3. In combination with the shipper-fork, the treadle or treadle-frame, arranged and connected with the shipper-fork, substantially as described, to effect the shifting of the belt in either direction, substantially as described.

4. In combination with the shipper rod, the crank operated so as to shift the fork and retain it in position on or off the fast pulley, substantially as described.

5. The combination of the shipper-rod, crank-wheel, pawl-wheel, and pawl, pawl-lever, and treadle, or their equivalents, connected, combined, and operated together, substantially as described.

94,572.—D. E. Crosby, South Vineland, N. J.—*Ironing-Board.*—September 7, 1869.

Claim.—1. In combination with a table, the board B, attached by the hook D, and adjustable slide E, substantially as shown and described, for the purpose set forth.

2. The combination of the boards B and K, substantially as and for the purpose described.

94,573.—James S. Cunningham, New York, N. Y., assignor to himself and George Le Cronier, same place.—*Propelling-Apparatus.*—September 7, 1869.

Claim.—The combination of the chains A, yokes B C, buckets D, and connecting-rods G, when arranged substantially as specified.

94,574.—Henry Cutler, Ashland, Mass., assignor to S. N. Cutler & Co., same place.—*Meal and Flour Drier.*—September 7, 1869.

Claim.—1. A steam-drier, composed of cylinder A, within which are arranged pipes, *c c c*, between hollow heads E and E′, peripheric floats F, and false heads *a a*, revolving as a cylinder upon hollow journals D D′, substantially as set forth.

2. The hollow head E, constructed with compartments, substantially as set forth.

3. The combination of all the above-named parts in a steam-drier, substantially as specified.

94,575.—Anthony G. Davis and Charles W. Blakeslee, Watertown, and Ebenezer B. Beecher, New Haven, Conn.—*Knitted Stocking.*—September 7, 1869.

Claim.—1. A stocking having a heel knitted in the manner described.

2. A machine-made seamless stocking, fashioned complete for wear, upon the machine, from a continuous yarn, and with a heel made in the manner shown and described.

3. The process herein described of forming the heel of a stocking.

4. The process herein described of knitting a stocking upon a machine employing two straight rows of needles.

94,576.—Daniel R. Day, Rindge, N. H., and John G. Folsom, Winchendon, Mass.—*Jack-Spool.*—September 7, 1869.

Claim.—As an article of manufacture, a jack-spool, constructed as herein described.

94,577.—Faustino Valdes Diaz, New York, N. Y.—*Breech-Loading Fire-Arm.*—September 7, 1869.

Claim.—1. The spring-lever H, carrying the movable recoil-shield and the firing-pin, in combination with the trigger, all constructed and operating substantially as shown and described.

2. The spring-catch *h*, in combination with the lever H and the arm *i*, substantially as described.

3. The detachable magazine I, as arranged with the plunger, the trigger, and the lever H, all constructed and operating substantially as shown and described.

4. The bolt *k*, in combination with the catch *h*, lever H, and arm *i*, substantially as set forth.

5. The combination and arrangement of supplementary magazine J, main magazine I, the plunger, the trigger, and the lever H, all constructed and operating substantially as set forth.

94,578.—Loyal M. Doddridge, New Mount Pleasant, Ind.—*Weed-Gatherer for Plows.*—September 7, 1869.

Claim.—In combination with a plow, a device for turning down and burying weeds, &c., consisting of the hinged frame A, sliding-bar B, and clevis C, substantially as shown and described.

94,579.—Thomas B. Dora, Mattoon, Ill.—*Railway-Car Coupling.*—September 7, 1869.

Claim.—1. The combination of the levers *h h′*, caps *a a′*, tumbling-blocks *d d′*, constructed and operated in the manner and for the purpose herein set forth.

2. The quadrangular or other formed clasp-ring *f*, constructed in the manner and for the purpose as described.

94,580.—Helmuth Dueberg, Baltimore, Md.—*Progressive Kiln.*—September 7, 1869.

Claim.—1. In an open-top progressive kiln, the arrangement of bridges B, provided with feed-holes *a*, substantially as described.

2. The tubular furnaces C, in combination with the burning-chambers A, substantially as set forth.

3. The tubular furnaces C, in combination with the bridges B, extending across the open-top kiln, substantially as described.

94,581.—F. S. Dumont, New York, N. Y.—

Compound to be Used as a Mordant in Dyeing and Printing.—September 7, 1869.

Claim.—1. The method herein described of producing mordant from blood, as set forth.

2. The composition herein specified, consisting of the ingredients set forth, and to be used for the purposes described.

94,582.—D. A. DUNHAM, Pilatka, Fla.—*Water-Elevator.*—September 7, 1869.

Claim.—The improved "water-elevator" herein described, consisting of a single pipe or tube, A, provided on its under side with a transverse incision, to allow the shell of the same to be bent inward at that point to form a steam-passage, D, and also a water-passage, C, as and for the purpose specified.

94,583.—HOMER M. DUNHAM and BISHOP ADDINGTON, Centreville, Ind.—*Bee-Hive.*—September 7, 1869.

Claim.—1. The truncated box D, when constructed and arranged as and for the purpose set forth.

2. The combination of the upper chamber B, cover C′, main chamber C, and truncated box D, all arranged as and for the purpose set forth.

3. In combination with a bee-hive constructed substantially as shown and described, the frame A, when constructed substantially as set forth.

94,584.—CHARLES K. DUTTON, New Berne, N. C.—*Still.*—September 7, 1869.

Claim.—1, Passing steam, or its equivalent, through one or more series of perpendicular pipes inside of a still, substantially as and for the purposes herein set forth.

2. Providing a still with hollow drums connected by perpendicular pipes, for the purpose of applying the heat internally, substantially as herein set forth.

3. The combination of the hollow drum C, perpendicular pipes *a a* and *b b*, and drums D and E, all substantially as and for the purposes herein set forth.

4. In combination with the outer casing A, the drum C D E, perpendicular pipes *a a* and *b b*, inlet-pipe *c*, and exhaust-pipe *d*, all constructed and arranged to operate substantially as and for the purposes herein set forth.

94,585.—W. P. EWING and ISAAC S. DE FORD, Elkton, Md.—*Lock-Nut.*—September 7, 1869.

Claim.—The spanner G, with jaws *e* and *g*, having beveled edges, in combination with screw-nuts E and F, having similar edges, substantially as described.

94,586.—MILES FISK, Adrian, Mich.—*Churn-Dasher.*—September 7, 1869.

Claim.—The improved dasher above described, its radial wings being shaped and arranged with respect to each other in the manner specified.

94,587.—JOHN FOGARTY, Brooklyn, N. Y.—*Safety-Attachment for Street-Railway Cars.*—September 7, 1869.

Claim.—1. The guards F, hinged to the shoes or bar of an ordinary brake, and resting, when in working-position, against the lower parts of the brake-shoes, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the cross-bar G, connecting-bar H, bent lever I, connecting-bar J, bent lever K, rod L, and stop or catch M with each other and with the guards F, hinged to the brake D E, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the hooked rod N with the cross-bar G and guards F, substantially as herein shown and described, and for the purpose set forth.

94,588.—WILLIAM FRANKEL, Springfield, Ohio.—*Floating Velocipede.*—September 7, 1869.

Claim.—1. The propelling-wheel W, with treadle-pins, or projections *n n*, in combination with the oscillating-seat movement, as shown and described.

2. The arrangement of the seat-pieces *b b* and *b′ b′*, with pivots *e e*, in the oscillating-seat movement, in combination with the propelling-wheel W, and treadle-pins, or projections *n n*, as shown and described.

94,589.—W. H. H. FRYE, North Fryeburg, Me.—*Sulky-Harrow.*—September 7, 1869.

Claim.—The sulky-harrow herein described, having sulky A, harrow B, wheel D, lever N, pitman *h*, chain *c*, and *c′*, and *r*, block P, brace S, staple *e*, spring V, keeper Z, and adjustable seat K, arranged to operate substantially as set forth and described.

94,590.—JOHN GAGE, Henniker, N. H.—*Cutter-Head.*—September 7, 1869.

Claim.—The cutter-head, as made with the series of annular projections arranged on its face, and with reference to the cutting-edges of its knives, in manner substantially as specified.

94,591.—JOHN GAGE, Henniker, N. H.—*Machine for Forming Shells for Dry Measures.*—September 7, 1869.

Claim.—1. The combination and arrangement of the clamp I and the wedge D with the body-parts A B, constructed, arranged, and hinged together, substantially as described.

2. The combination of the guard E and its screws *r u*, arranged at each end of the machine, with the body-parts A B, the clamp I, and wedge D, applied and arranged together, substantially in the manner and so as to operate as and for the purpose explained.

3. The combination of the clamp-adjusting screws *k l* with such clamp, the body-parts A B, and the wedge D, arranged together, as set forth.

4. The combination and arrangement of the springs *p* with the wedge, the clamp, and the body-parts A B, arranged and applied together, substantially in manner and so as to operate as set forth.

5. The arrangement of the shoulder *o* with the clamp I and the periphery of the machine or parts A thereof.

94,592.—PETER GEISER, Waynesborough, Pa.—*Sawing-Machine.*—September 7, 1869.

Claim.—1. The combination of the hinged leaf A′, rack-bar E, pinions E^1, shaft E^4, notched plate E^2, and spring-lever E^3, arranged to operate substantially as set forth.

2. In combination with the top A, frame C, and crank D, for elevating one end of the top, the hinged leaf A′, and the mechanism for adjusting it, substantially as set forth.

3. The frame F, for supporting the gauge, when constructed in the form of a triangle, and used in combination with a hinged leaf, substantially as set forth.

4. The combination of the oscillating arm G, brace G^1, extension-arm G^3, and hinged stops *g*, with the slotted frame F, substantially as set forth.

5. The frame F, constructed with concentric segmental slots H, in combination with elastic spring prick-points H^1, arranged to operate substantially as set forth.

6. In combination with the oscillating arm G, the arched guide I, constructed and arranged substantially as set forth.

7. In combination with the frame K, the oscillating slotted arm L and slotted brace L^1, arranged substantially as and for the purpose set forth.

8. The last above-recited parts K, L, and L^1, in combination with the adjustable extension-arm L^2 and stop L^3, substantially as set forth.

94,593.—JOHN H. GOODFELLOW, Troy, N. Y.—*Parlor-Stove.*—September 7, 1869.

Claim.—1. The fire-pot, having a grate in its bottom, through which air is admitted to support the combustion in the lower part of the fire-pot, and with lateral openings through the fire-pot, just above the grate, and in communication with the smoke or draught pipe, (for burning and discharging the gases at the lower part of the fire-pot,) in combination with the chamber arranged above the fire-pot, supplied with air, and in communication with the smoke or draught pipe for burning and discharging the otherwise accumulating gases from the top of the fire-pot, all substantially as shown.

2. In combination with the above, the damper, for regulating and controlling the supply of air to the

chamber or ash-pit under the grate in the bottom of the fire-box.

3. In combination with the subject of the first claim, the damper in the passage leading from the combustion-chamber, over the fire-pot, into the draught-pipe, which receives the products of combustion that escape through the lower part of the fire-pot.

4. In combination with the subject of the first claim, that damper in the smoke-pipe which regulates and controls the escape of the gases of combustion from the lower part of the fire-pot, without altering or controlling the discharge of the gases from the combustion-chamber above the fire-pot.

5. The upper and lower hollow rings and intermediate perforated standards, which together form the lower part of the fire-pot, and which have communication with the air outside of the stove, and with the lower part of interior of the fire-pot, or the passages through which the burning gases escape laterally from the lower part of the fire-pot.

6. The dampered aperture, by which the admission of air to the hollow rings and perforated standards of the lower part of the fire-pot is controlled and regulated, in combination with the grate in the bottom of the fire-pot, and the air-chamber under the grate, to which the admission of air is regulated and controlled by a separate dampered aperture, all substantially as shown.

7. In combination with the perforated door or illuminating-casing, the fire-chamber over the fire-pot, having passages for the gases to burn along or opposite to the perforations in the casing.

8. The plate *e*, provided with the notches *h*, as and for the purpose specified.

94,594.—EDWIN H. GRANT, Washington, D. C.—*Compressed Air Engine.*—September 7, 1869.

Claim.—1. An engine, combining in its construction the following elements, namely, a cylinder in which compressed air is used as a motive-agent, a reservoir for such air, and a galvanic or electric battery or batteries for producing a current of electricity to be conducted to said cylinder, substantially in the manner set forth.

2. The combination of the cylinder B, air-pump A′, reservoir C′, connecting-pipes B^1 B^2, batteries D^1, and conducting-wires or connections, substantially as set forth and shown.

3. The combination of an air-receiver, a working-cylinder, and a galvanic or electric battery, substantially as shown and described.

94,595.—ANDREW HARBISON, Newcastle, Pa., assignor to himself and ESLI N. HOUK, same place.—*Clothes-Drier.*—September 7, 1869.

Claim.—1. The extending and contracting lengthwise, by means of metallic clasps *a*, or their equivalent, on each separate slat A or B, so constructed as to make a sliding or extension-joint, when the slats are in two or more sections each.

2. The opening sidewise, from either end, by means of double-acting pivot-hinges E, so constructed that the pivots *e e* turn when the rack is opened for common use, and then by removing the pin at either end and hooking in hasp F into a staple at the opposite end, the rack opens sidewise and turns on hinges E and hasps F, which form complete hinges for the purposes specified.

3. The attachment of the wings No. 3 and No. 4, by means of plates *c′ d′*, loosely articulated at each end, the lever working on the pivots in combination with the foot-rests *o o o*, which admit of the wings being raised or lowered, or adjusted to any desired angle.

94,596.—GEORGE W. HARRIS, Elizabeth, N. J., and HENRY HOLDREDGE, New York, N. Y.—*Manufacture of Illuminating-Gas.*—September 7, 1869.

Claim.—1. The use and application of a clay retort for decomposing superheated steam, for the purposes set forth, in combination with a steam-receiving and distributing tile D, substantially as described.

2. The steam-receiving and distributing tile D, constructed with steam-passages between its top and bottom surfaces, and having its upper surface perforated, substantially as and for the purposes set forth.

3. The combination of a clay decomposing-retort A, fitted with a steam-receiving and distributing tile or bottom, with one or more bituminous-coal retorts, for the purposes set forth.

4. The combination of the decomposing-retort A, fitted with a suitable steam-receiving and distributing tile or bottom, and steam-superheater E, and steam-drier F, substantially as and for the purposes set forth.

5. Connecting the decomposing-retort with the several bituminous-coal retorts by means of separate pipes *h h*, fitted with valves or cocks 3 3, substantially as and for the purposes set forth.

6. The combination and arrangement, for the purpose of producing illuminating-gas, or gas for heating-purposes, of the mechanism or apparatus described, its several parts combined and operating substantially as set forth.

7. The mode or process of making illuminating-gas, by first depriving steam of its superabundant moisture by means of a drier, and then highly superheating such dried steam, and afterward decomposing such steam by means of incandescent authracite coal or other suitable material; the steam being distributed in fine jets or currents through such decomposing-material, and then mixing or uniting the gases produced from such decomposition of the superheated steam with the gases or vapors eliminated in separate retorts from bituminous coal or other suitable gas-yielding substance.

94,597.—WILLIAM B. HAYDEN, Columbus, Ohio.—*Breast-Loop for Hames.*—September 7, 1869.

Claim.—A quadrangular breast-loop for hames, constructed and applied to an eye, D, as herein set forth.

94,598.—V. M. HEATH, Morristown, Vt.—*Clothes-Rack.*—September 7, 1869.

Claim.—The combination of the slotted supports A, bars C and H, arms D, G, and K, and braces *a*, when arranged to operate as herein described, and for the purposes specified.

94,599.—STEPHEN HEBRON, Buffalo, N. Y.—*Window-Blind.*—September 7, 1869.

Claim.—1. Outside blinds, having the slats journaled therein, as herein described, for the purpose specified.

2. The combination, with window-blinds, constructed as herein specified, of mosquito-bars, detachably connected thereto, as described.

94,600.—R. HEMENWAY, New Cassel, Wis.—*Vegetable-Cutter.*—September 7, 1869.

Claim.—The combination, with the bench A and hopper C, of the sliding cutters D E, fixed cutters F, and stops G, all substantially as specified.

94,601.—C. L. HEYWOOD, Boston, Mass.—*Railway Spike.*—September 7, 1869.

Claim.—1. A screw-spike, having a lip or flange cut away on one side, and having an inclined-under or bearing surface, when such lip or flange gradually increases in width, substantially as shown and described.

2. A screw-spike, having all the features specified in the preceding claim, and having, also, a wrench-applying head, substantially as shown and described.

94,602.—J. J. HINES, Evergreen, Ala.—*Cotton and Hay Press.*—September 7, 1869.

Claim.—1. In a toggle-joint lever-press, the employment of the levers bent at *e*, in connection with the friction-rollers *r r*, the concave track *a a a a*, and the curved track *m m*, for the journals *i i*, substantially as described, and for the purpose specified.

2. The arrangement of the shaft G so as to come opposite the joints *c c*, when the levers are drawn together, in connection with the cords F F, bent arms *e′ e′*, rollers *r r*, guide *m m*, stop *u u*, and concave track *a a a*, substantially as described, and for the purposes specified.

94,603.—GEORGE HOPSON and JOSEPH H. MASON, Bridgeport, Conn.—*Spring.*—September 7, 1869.

Claim.—The within-described improvements in leaf-springs, having the beads on the distended side,

and the depressions on the compressed side of each eaf, all as and for the purposes herein set forth.

94,604.—James J. Jackson, Curwinsville, Pa.—*Burglar-Alarm.*—September 7, 1869.

Claim.—The bolt A, having notch *p*, in combination with the bar B, having step *h*, working on pin *z*, and pivoted to pawl E, controlling, through ratchet-wheel *m*, the elock-work of the alarm G.

94,605.—Jacob Jameson, Philadelphia, Pa.—*Composition-Flux for Manufacture of Iron and Steel.*—September 7, 1869.

Claim.—The herein-described composition, as a flux for the manufacture of iron and steel.

94,606.—William Johnston, Cincinnati, Ohio.—*Hinge.*—September 7, 1869.

Claim.—1. A hinge, one plate of which is extended beyond the joint, and in the plane thereof, as shown at 1 3, and so as to lap upon the other plate, and adapted to be clamped thereto, substantially as shown and described.

2. In eombination with a hinge, having sueh an extension, a spring-bolt, as shown in Figs. 3 and 4, or equivalent locking-device.

3. The combination, with the spring-bolt and its thumb-piece, of the handle F, these parts being arranged and operating, in connection with a hinge, substantially as shown and described.

4. The combination of the plate D, having ears for securing the bolt, with the bolt C, shouldered as deseribed, when used for loeking a hinge.

94,607.—William Johnston, Havclock, Pa.—*Railway-Rail Joint.*—September 7, 1869.

Claim.—The steel cap B, in eombination with the rails A A′, when constructed and arranged as herein shown and deseribed.

94,608.—J. Herva Jones and Miles S. Prentice, Roekford, Ill.—*Harvester-Guard:*—September 7, 1869.

Claim.—1. The guards, secured to the finger-beam by bending the shanks of the guards downward, at an angle of about ten degrees, and driving them into holes bored into the finger-beam, at an angle of corresponding inclination, as set forth.

2. The sway-bar, eonstructed with a split head and an expansible plug, as set forth, to seeure an accurate fit of the sway-bar head in the loop of the cntter-bar, as described.

94,609.—A. C. Judson, Grand Rapids, Ohio, assignor to himself and E. O. Judson, same place.—*Plow.*—September 7, 1869.

Claim.—The arrangement of the beam in two parts D, stock E, bolt F, block G, wheel H, draw-plates K, clevis L, and bearing-plates I, all substantially as specified.

94,610.—Peter M. Kafer, Trenton, N. J.—*Force-Pump having Concentric Pistons.* — September 7, 1869.

Claim.—1. Two or more concentric pistons, when operated throughout the length of the cylinder, as herein described.

2. The arrangement and eombination of the valve-chambers *i i*, with relation to the supply and exhanst, substantially as speeified and set forth.

94,611.—Gottlob Kaiser, New York, N. Y.—*Apparatus for Distilling and Rectifying Spirits.*—September 7, 1869.

Claim.—1. The washing-eells or compartments B C D, &c., arranged in series side by side, one series above another, in any desired number, substantially as and for the purpose herein specified.

2. The perforations *z* in the wash-partitions a^2 a^4 a^6, &c., substantially in the manner and for the purpose herein set forth.

3. The construction of a dephlegmator of straight tubes, all as and for the purpose as herein set forth.

4. The peculiar construction and arrangement of back-fall tubes *l m n*, substantially as and for the purpose specified.

94,612. — Isaiah Kingman, Waltham, Me.—*Joint Standard-Sled.*—September 7, 1869.

Claim.—The sled herein deseribed, having runners A and B, knees *a*, rods *c*, arms *e* and *n*, braces *i*, staples *h*, and blocks *o*, eonstructed and arranged substantially as speeified.

94,613.—W. F. Kistler, Cincinnati, Ohio, assignor to himself and Joseph L. Hall, same plaee.—*Permutation-Lock.*—September 7, 1869.

Claim.—1. Mounting the tumblers I on the stationary annular disks or washers J, constructed substantially as herein deseribed, and then arranging them on the spindle K, as and for the purpose set forth.

2. The anchor M, consisting of the arms 1, 2, 3, and 4, construeted and arranged to operate substantially as herein described, and for the purposes set forth.

3. The arm F, with its point *c* and its pin *b*, in combination with the anchor M, consisting of arms 1, 2, 3, and 4, when constructed and arranged to operate substantially as herein deseribed, and for the purposes set forth.

4. The pendent cheek-bar U, in combination with the anchor M, when eonstructed and arranged to operate substantially as and for the purpose set forth.

5. The arm F, anchor M, tumblers I, arm P, lever S, block *t*, and lock-bolt T, when constructed and arranged to operate substantially as and for the purpose speeified.

94,614.—P. H. Lamey and A. J. Beachell, Port Treverton, Pa.; P. H. Lamey assigns to George Kuhn and P. K. Knights.—*Turbine Water-Wheel.*—September 7, 1869.

Claim.—1. The hinged part *a′*, in combination with the rigid part *a* of the bueket, substantially as described.

2. The horizontal triangular surfaec *b*, in combination with the part *a′*, substantially as deseribed.

94,615.—Frederick William Lange, Chicago, Ill.—*Extension-Chair.*—September 7, 1869.

Claim.—The sliding frame D, jointed at its sides, with the hinged foot-rest E, provided with the hinged supports *f*, all constructed and arranged to operate in connection with the sliding bottom and back, as set forth.

94,616.—David Langell, Apple Creek, Ohio.—*Medical Compound.*—September 7, 1869.

Claim.—The herein-named article, or its equivalent, in combination with the two ingredients as herein specified.

94,617.—Charles Ph. Lenz, Poughkeepsie, N. Y.—*Extension-Table.*—September 7, 1869.

Claim.—The combination of rails A A, metallic grooves B B, and tongue, with sliding extension-frame, hinged detachable leaves, and the receptaele for said leaves, all of said parts being arranged, with respect to eaeh other, in the manner speeified.

94,618.—E. J. Leyburn, Lexington, Va.—*Apparatus for Propelling Machinery.* — September 7, 1869.

Claim.—1. A table for supporting the machine to be operated, and an operator's seat or support, both mounted upon a vibrating frame, B, or its eqnivalent, and provided with such means as will transmit motion from said frame to said machine, snbstantially as described.

2. The adjustable seat F, on roeking frame B, substantially as described.

3. Spring or springs applied between the frames A B, substantially as described.

4. The foot-stand *c′*, applied to the frame B, substantially as described.

5. The toe-rest *c*, applied to frame A, substantially as deseribed.

94,619.—A. Lloyd, Millersburgh, Ill.—*Churn.*—September 7, 1869.

Claim.—The adjustable plate J, interloeking the plate S, in combination with pinion D, drive-wheel C, box A B, and dasher F H, the latter being held

in the box by means of the thumb-screw *b*, as and for the purpose set forth.

94,620.—H. D. Lockwood, Charlestown, Mass.—*Syringe.*—September 7, 1869.

Claim.—In combination with an elastic syringe-bulb, having an orifice at each end, pieces *c* and *b*, provided each with screw and nut-threads adapted to receive the coupling-pieces *d* and *e*, the plug *i*, and the pipe *j*, substantially as described.

2. The combination, with the valves and valve-boxes of a syringe, of the wires *o*, applied within the screw-thread, substantially as and for the purpose specified.

94,621.—Augustus Lodeman and Meyer Desenberg, Kalamazoo, Mich.—*Fire-Kindler.*—September 7, 1869.

Claim.—1. The frame A B C L Z, in combination with the ring D, provided with two flaps E F, for the purpose of receiving the cranked axle G, one extremity of which is bent into a right angle, to serve as a lever at which the hour-hand of a clock may work, while a connecting-rod, I, connects the crank with the thread K, for the purpose above explained.

2. The curved rod O N Q, with a weight S, and the friction-plate P, attached to the part A of the frame, all for the purpose set forth in the above description.

94,622.—John Ludeke, Griffin's Corners, N. Y., assignor to himself and Jacob Biehler, same place.—*Wagon-Brake.*—September 7, 1869.

Claim.—The combination of the worm-shaft *a*, sector-rack *b*, and pitman *f*, all arranged in the same vertical plane, on the side of the wagon, with the vibrating shaft B, and rubbers C C, arranged and operating as shown and described.

94,623.—Edward P. Lynch and Henry R. Raff, Davenport, Iowa.—*Walking-Cultivator.*—September 7, 1869.

Claim.—1. The curved frame A and the adjustable axles B, constructed and arranged as herein described.

2. The curved cast-iron frame A, with the forked or V-shaped tongue H secured thereto, by means of the flanges or lugs thereon, substantially as described.

3. The pieces C, formed with the grooves in their sides, and the series of holes for receiving, holding, and permitting the adjustment of the beams D, substantially as described.

4. The combination of the piece C, boxes *a* and *c*, and clip-bolt *b*, with the axle B, all arranged as described.

5. The shoulder-piece or block I, secured to the axle B, substantially as described.

6. The shovels F, provided with the grooves and recessed block *h*, and secured to the beam by the T-headed bolts *u* and strap *v*, as set forth.

7. The piece *n*, in combination with the grooved block *h*, for the purpose of adjusting the inclination of the shovels, substantially as described.

8. The piece C, cast with its arms *w* at the front, said arms having holes therein to receive and hold the journals of the boxes *a* and *c*, as herein described.

94,624.—Ambrose I. Maxwell, Morrison, Ill.—*Wind-Wheel.*—September 7, 1869.

Claim.—The disk D, provided with radial slots *d d*, lever D′, cranks c^2 c^2, and doors or chutes C C, in combination with the wind-wheel B, when the doors or chutes are pivoted at their inner edges, and when the parts are constructed and arranged substantially as and for the purpose set forth.

94,625.—Horatio D. McGeorge, Rochester, N. Y.—*Coal-Stove.*—September 7, 1869.

Claim.—1. In combination with the hot-air chamber C and flue F, the damper P, arranged and operating substantially as and for the purposes shown and described.

2. The compound annular rotary grate G, constructed and operating substantially in the manner and for the purposes shown and described.

94,626.—Antoine R. McNair, New York, N. Y.—*Preserving Wood from Decay and Mildew.*—September 7, 1869.

Claim.—Conducting the process in two or more cylinders or vessels, so constructed and arranged that the antiseptic and preservative materials are transferred from the containing to the treating cylinder or vessel, and the surplus returned to the containing-cylinder or vessel, without exposure to the atmosphere, substantially as herein specified.

2. A containing-vessel or vessels, in which the antiseptic material, to be applied in the form of vapor, is kept separate from the preservative material, to be applied in the liquid form, and from the steam employed, as herein set forth.

3. Applying the antiseptic vapors free, as far as practicable, from steam, and the vapor of naphtha, and of other substances which vaporize at a much lower temperature than the antiseptic used for the purpose herein set forth.

4. The process herein described, as a whole, for treating wood and timber, to preserve the same from mold and decay, when conducted in transferring-vessels, without exposure to the atmosphere, and in the order as specified, namely, first, coagulating the vegetable albumen of the wood, and extracting the deleterious substances therefrom by steam, and the subsequent condensation of the steam to produce a vacuum, and the removal of the extracted and condensed substances from the vessel; second, impregnating the wood with the simple antiseptic vapors of creosote or carbolic acid, and the subsequent lowering of the temperature of the same, to produce a partial condensation thereof in the wood; third, sealing the pores of the wood by a resinous preservative substance while in a liquid state, and while retained at a high temperature, substantially as set forth.

94,627.—John Moran, Washington, D. C.—*Stove-Grate.*—September 7, 1869.

Claim.—The jacket b^3, arranged upon the shaft B, and surrounding the rack-bar a^2, in the manner and for the purpose described.

94,628.—Aaron Morehouse and Alfred R. Heath, Danbury, Conn.—*Plaiting-Attachment for Sewing-Machines.*—September 7, 1869.

Claim.—1. The spring *c′*, having the arms c^3 and ears *c″* thereon, constructed and operating substantially as and for the purposes specified.

2. An elevator, constructed substantially as described, and arranged with the cloth-plate of a sewing-machine, so as to be always in a horizontal position, and adjustable to any desirable height from said cloth-plate, substantially as herein described and set forth.

3. The combination of the bar *m*, having the sharp edge *o* thereon, with the spring-presser *d g*, operating substantially as herein described and specified.

4. The combination of the elevator *n*, with the spring *c′* and bent arm *a*, having the guide or shoulder *i* thereon, all operating substantially as herein described and set forth.

5. The combination of the adjustable horizontal elevator *n* and bent arm *a*, all constructed and operating substantially as and for the purposes herein specified and described.

94,629.—O. William Morley, Tarrytown, N. Y.—*Edging-Tool for Harness-Makers.*—September 7, 1869.

Claim.—1. In combination with an edging-tool for harness-makers, and for "edging" leather generally, making the cutting-knife removable, substantially as and for the purposes described.

2. The adjustable guides *i* and C, for gauging the width and depth of the cut of the knife, when arranged and operating substantially as described, and for the purposes set forth.

3. In combination with an edging-tool, one or two adjustable guides or gauges, for governing either the depth or width of the cut of the knife, substantially as described.

94,630.—F. B. Morse, Plantsville, Conn.—*Die*

for Forging French Clips for Carriages.—September 7, 1869.

Claim.—The die for forging "French carriage-clips," constructed substantially as described, so as to forge the clip without bending.

94,631.—STEPHEN MOULTON, Bradford-on-Avon, England.—*Printers' Inking-Roller from Rubber Sponge.*—September 7, 1869; patented in England May 9, 1868.

Claim.—1. Treating vulcanized or cured India rubber substantially in the manner hereinbefore described, in order to obtain a substance of a mossy nature suitable for the purposes aforesaid.

2. The application of India rubber, in a mossy or spongy form, to the manufacture of printers' inking-rollers, as set forth.

3. An inking-roller, the body of which is composed of India rubber in the form of a mossy or spongy substance, and the external surface of a coating or skin of solid rubber, either vulcanized or not, substantially as set forth.

4. Also, the combination of India rubber of a spongy or mossy nature, with a surface or filament of ordinary sheet-rubber, either vulcanized or not, or of fibrous or textile material alone, or combined with rubber, substantially as set forth.

94,632.—ALBERT A. MURFEY, Montville, assignor to himself and NATHAN D. MORGAN, Norwich, Conn.—*Picture-Frame.*—September 7, 1869.

Claim.—1. The combination of the star with thread wound on its points, so as to form a polygonal opening, with a polygonal and star-pointed border encompassing such opening, as set forth, the said opening being for the reception of a picture.

2. The combination of a pane of glass, or the same and a picture-mat, with the star and thread wound and arranged thereon, substantially as described.

3. The combination of the thread-guides or bridges *b b* with the opening or mouth *a* of the star A, or with it and thread wound on such star, and against the said guides, in manner and for the purpose of making a border on the star, as set forth.

4. The combination of the edge-coverings *s* with the star and the thread wound thereon, as set forth.

94,633.—O. R. NITSCH, New York, N. Y.—*Fan.*—September 7, 1869.

Claim.—As a new article of manufacture, a fan, whose leaves are attached to one another, and pivoted at their inner ends, the outer leaves being rigidly attached to the said pivot, and operated to spread the fan by means of a pulley and cord, substantially as described.

94,634.—HENRY NOLTE, Lincoln, Ill.—*Plow.*—September 7, 1869.

Claim.—The arrangement, with reference to the beam A and mold-boards C, of the pivoted rods F, and screw-rod E, provided with the crank G, all combined and operating as and for the purpose set forth.

94,635.—JAMES NORMAN, New Orleans, La.—*Grain-Mill.*—September 7, 1869.

Claim.—1. Attaching inclined planes, or supporting arms with inclined bearing-faces to the upper or non-revolving stone of grain-grinding mills, or to the casing thereof, substantially as herein described, for the purpose set forth.

2. Mounting the upper stones of grain-grinding mills on friction-rollers *a a'*, that are sustained in adjustable journal-boxes *b b'*, which are secured to inclined standards H, when the same is done by means of supporting-arms I I', that have reversed inclinations to the inclinations of said standards, substantially as herein described, for the purpose set forth.

3. Attaching the enveloping casing of the lower or revolving stone to the upper stone or its casing, so as to give the same an undulatory motion, substantially as herein described, for the purpose set forth.

94,636.—O. OSBORN, Trumansburg, N. Y.—*Plow.*—September 7, 1869.

Claim.—1. The rack-bar G, in combination with the slotted guide B and cam H, when used to raise and lower the plow, substantially as set forth and described.

2. The spring M, when used to hold the bar G down, substantially as shown.

3. The plow D, rack-bar G, guide B, cam H, handle K, stop L, and spring M, when used and combined substantially as set forth.

94,637.—WASHINGTON F. PAGETT, Springfield, Ohio.—*Plow.*—September 7, 1869.

Claim.—1. The manner of attaching the mold-board to the beam, by means of the plate D, substantially as shown and described.

2. The combined bolt, key, washer, and tap or nut, in all applications of the device, substantially the same as the present, not only as a means of bringing and holding the parts together firmly, but as a provision against lateral strains, the head of the bolt on one side, and the washer on the other, overlapping the joint or point of contact of the parts, substantially as described.

3. The scroll or internal spiral recess washer, in any or all different combinations, and in all cases where it may be used individually.

94,638.—FRANCIS PARKER, Cato, N. Y.—*Circular-Saw Mill.*—September 7, 1869.

Claim.—The belt K, pulley L, shaft M, pinion N, rack O, and slide Q, constructed and arranged to operate substantially as described, and for the purpose specified.

94,639.—N. PETRÉ, New York, N. Y.—*Door-Lock.*—September 7, 1869.

Claim.—In combination with a lock-bolt, the eccentric and hub therein, for operating in connection with a pin-key and spring-pin, substantially as and for the purpose described.

94,640.—JEAN JOSEPH JULES PIERRARD, Reims, France.—*Spindle and Flier.*—September 7, 1869.

Claim.—Spindles and fliers constructed and operating substantially as shown and described.

94,641.—WILLIAM M. PIPER, Blue Earth City, Minn.—*Wind-Wheel.*—September 7, 1869.

Claim.—The blades A^2 A^2, gates B B, plates C C, rods *b' b'*, segmental rack *c*, and pinion-wheel c^1, when the same are so connected with the governor by a system of leverage as to be rendered self-adjusting, and thus be enabled, through its own operating mechanism, to regulate the amount of wind that is to be admitted to the wheel, the whole being so combined and arranged as to operate substantially as described, as and for the purpose specified.

94,642.—CLARK POLLEY, Shelbyville, Tenn.—*Animal-Trap.*—September 7, 1869.

Claim.—The animal-trap above described, consisting of the standard A, curved arm B, spur C, lever N, shoulders *m n*, and spring *e*, all constructed, arranged, and combined to operate together, substantially as and for the purposes set forth.

94,643.—CLARISSA PRESTON, Wheeling, W. Va.—*Oven.*—September 7, 1869.

Claim.—The grate D, having its side edges bent to hook over the flanges F, and furnish bearings for the same to move on the rollers G, all arranged substantially as herein shown and described.

94,644.—EMANUEL RABER, Roanoke, Ind.—*Horse Hay-Fork.*—September 7, 1869.

Claim.—Pivoting the tines to the head A, to which the lock-lever is also pivoted, the tines and lever being operated by cords, substantially as described.

94,645.—JOHN L. RESSLER, Ramsburgh, Pa.—*Churn.*—September 7, 1869.

Claim.—The combination of the box A, cover B, tube C, cleats D D, reels E E', crank F, slide G, perforated fans H H, and fingers I I, all constructed, arranged, and combined to operate substantially in the manner and for the purposes herein set forth.

94,646.—EDWARD REYNOLDS, Omro, Wis.—*Churn.*—September 7, 1869.

Claim.—1. The scraper D, arranged to operate in connection with a churn, substantially as described.

2. The combination of the scraper D and ring G, attached to the lid by an arm, *i*, constructed and arranged substantially as and for the purpose set forth.

3. The scraper E, when constructed and arranged to operate in connection with a churn, substantially as herein described.

94,647.—JOHN D. RICHARDS, Muscatine, Iowa.—*Projectile.*—September 7, 1869.

Claim.—A projectile, having cylinder A, cap B, rod C, and cap H, constructed and arranged substantially as specified.

94,648.—EVERETT P. RICHARDSON, Lawrence, Mass.—*Manufacture of Boots and Shoes.*—September 7, 1869.

Claim.—1. The notched, grooved, or channeled welt B, employed in the manner and for the purpose substantially as herein set forth.

2. The combination of the welt B, applied to the front portion of the sole A, with the channel *a* in the rear portion thereof, substantially as described.

94,649.—WILLIAM I. RISEDORPH, Albany, N. Y.—*Clutch.*—September 7, 1869.

Claim.—A clutch, consisting of a disk A, provided with locking-bolts *e*, working in the chambers *a*, in combination with the ratchet-wheel D, substantially as and for the purpose set forth.

94,650.—D. B. RITTER, Glasgow, Ky.—*Millstone-Driver.*—September 7, 1869.

Claim.—The combination, with the rigid drivers A and the spindle, of the pivoted arms D and sliding block C, substantially as set forth.

94,651.—DANIEL T. ROBINSON, Boston, Mass.—*Ash-Sifter.*—September 7, 1869.

Claim.—An ash-sifter, composed of the disk *a*, with its apertures *b* and *c*, hopper *d*, in combination with the sieve *e*, the shaft *i*, and its wipers *j j*, the levers *k k*, and projections *m m* and *n n*, or their equivalents, the whole being and operating as described.

94,652.—ALEXANDER F. B. ROCKE and WILLIAM H. MCLEOD, Jersey City, N. J.—*Railway-Signal.*—September 7, 1869.

Claim.—The semi-elliptical springs D E, levers G R, rods I L, arms K R, and stop S, all arranged and operating substantially as and for the purposes described and set forth.

94,653.—JOSEPH F. SARGENT, Melrose, assignor to ELMER TOWNSEND, Boston, Mass.—*Machine for Nailing the Soles to the Uppers of Boots and Shoes.*—September 7, 1869; patented in England, November 5, 1868.

Claim.—1. In combination with the vertically-moving shoe-supporting horn or arm, and the shoe-feeding and wire-cutting, and nail-carrying and nail-driving mechanism herein described, the mechanism by which the vertical movements of the horn (produced by the varying thickness of the shoe-sole) operate to change the extent of rotative movement of the wire-feed ratchet-wheel, so as to cause each nail to be automatically cut to a length corresponding to the thickness of that part of the sole held between the nail-tube foot and the top of the work-supporting arm.

2. So combining the work-supporting horn or arm with the mechanism for ganging the length of the wire, that the depression of the arm, to enable the shoe to be placed upon the arm or removed therefrom, can be in excess of the movement of the mechanism which connects the arm with the wire-feed mechanism, substantially as described.

3. In combination with the wire-feeding wheels, cutters which sever the nail previously to its transfer to the nail-driving point, when these cutters are so formed as to cut the point of each nail to a V-shape, and the head of each nail flat, substantially as described.

4 In combination with feed-wheels, a movable cutter and a stationary cutter, arranged to cut the wire prior to its transfer, to be driven substantially as described.

5. In combination with the cutters *y z*, the reciprocating sliding carrier d^3, operating to transfer the nail received from the cutters, substantially as described.

6. The combination of the awl, the laterally-moving feed and nail-tube foot, and the vertically-moving detainer-foot, by which, after each nail is driven, the feed-foot first moves forward with the shoe; the detainer then descends, and moves the shoe away from the feed-foot, the awl then descending at the side of the feed-foot, piercing the hole for the reception of the nail, and rising from the shoe; the feed-foot next moves back over the sole, bringing the nail-driver tube over the hole pierced by the awl, and the driver then descends and drives the nail, simultaneous to which movement of the driver, or just previous thereto, the detainer rises to let the sole up against the nail-tube foot.

94,654.—JOSEPH F. SARGENT, Melrose, assignor to ELMER TOWNSEND, Boston, Mass.—*Machine for Nailing and Pegging Boots and Shoes.*—September 7, 1869; patented in England, November 5, 1868.

Claim.—1. In combination with the wire-feeding and nail-driving mechanism, a cutter having a rotative movement to sever the nail, substantially as described, when the cutter is a separate instrument from the wire-feeding and nail-driving mechanism, and acts to sever the nail before it is driven.

2. In combination with such cutter, an independent vibrating or reciprocating carrier, which receives the end of the wire and transfers it, when cut, from its inclined position to vertical position over the peg-driver tube, substantially as described.

3. In combination with the wire-feed mechanism, a mechanism for enabling the extent of feed of the wire to be varied by the foot of the operator, substantially as described, such mechanism being independent of the shoe-supporting mechanism.

4. In combination with the feed-ratchet, the mechanism for limiting and adjusting the extent of feed-movement of the ratchet, substantially as described.

5. In combination with the shoe-feed foot, having up and down, forward, and back movements, as described, the stationary driver-tube or detainer-foot, substantially as described.

6. The construction and arrangement of the jack-supporting mechanism, by which the shoe may not only be tipped freely by the operator in all directions necessary for its proper presentation, but is held by the stress of the lever-weight toward its proper position, substantially as described.

94,655.—FRITZ SCHALLER, Mattoon, Ill.—*Milk-House.*—September 7, 1869.

Claim.—The arrangement of the double-walled sides B, ends E, frame D, weights and cords, and posts H, all substantially as specified.

94,656.—ADAM SCHWAAB, New York, N. Y.—*Sofa-Bedstead.*—September 7, 1869.

Claim.—1. The sofa-back A, fitted to the frame B, and jointed upon arms D, arranged for folding it into the said frame or down in front of the seat, and relatively thereto, substantially as specified.

2. The arrangement, with the arms D, of the shaft E and back-rail L, substantially as specified.

3. The arrangement, with the back A, of the hinged legs G and the arms D, when the said arms rest on the rail O, to support the inner part of the bottom, all substantially as specified.

94,657.—ROBERT SCOTT, La Porte, Ind.—*Garden-Plow.*—September 7, 1869.

Claim.—1. The arrangement, herein described, of the handles A A, the head-block C, or the substitution therefor of the bent handles above described, the post F with its braces K K, and the regulating slot H, or the substitution therefor of the holes N N N, or the slot indicated by the dotted line in Fig. 3.

2. The wheel D, with a single shovel following after it, and the general wheelbarrow-like arrangement, whereby the plow is made easy to handle and push in a straight line, and whereby it may be raised or lowered by the handles so as to plow deep or light as occasion requires.

94,658.—JACOB H. SHEAR, Albany, N. Y.—*Cooking-Stove.*—September 7, 1869.

Claim.—In a cooking-stove, of the general construction and arrangement described, the chambered door, grate, flues, dampers *e* and *f*, and exit-pipe, under the combination substantially as represented.

94,659.—JOHN W. SMITH and HEINRICH GRIESA, North Cohocton, N. Y.—*Grain-Measurer.*—September 7, 1869.

Claim.—1. The strike H, with sides *f f* and buttons or stops *g g*, in combination with the box or measure, constructed substantially as described.

2. The box A, with opening B, and hooks *b*, to hold the bag, slide G, and lever *d*, sockets *c c c*, with legs F F F, constructed and arranged substantially as described.

94,660.—ROBERT R. SPEDDEN and E. CLIFFORD SPEDDEN, Astoria, Oregon.—*Device for Pumping by the Motion of the Oars.*—September 7, 1869.

Claim.—1. A sliding row-lock, connected with a pumping-apparatus, so that it may, during the operation of rowing, serve to operate the pumping-apparatus, substantially as herein shown and described.

2. The row-lock C, when fastened to a sliding plate, D, which is, by a pin *a*, connected with the piston-rod of a pump, substantially as herein shown and described, to operate as set forth.

3. The spring *e*, when connected with the sliding row-lock, for the purpose of partly counteracting the forward motion of the row-lock, and for returning the pump-piston, substantially as herein shown and described.

4. The hinged plate *f*, or its equivalent, when arranged to lock the sliding row-lock, substantially as herein shown and described, for the purpose of arresting the pumping operation, as specified.

94,661.—JAMES L. SPRAGUE, Hermon, N. Y.—*Cheese-Hoop.*—September 7, 1869.

Claim.—As a new article of manufacture, a cast-iron cheese-hoop, enameled upon the inner surface, as herein described, for the purpose specified.

94,662.—LUCAS STADLER, Bowensburgh, Ill.—*Corn-Harvester.*—September 7, 1869.

Claim.—1. The combination and arrangement of the wheel *o*, shafts *s* and *v*, pinions *m*, *t*, and *u*, hook *r*, arm *k*, knives *w*, rollers *g* and *l*, and belts *n*, constructed and operating substantially as and for the purposes specified.

2. A corn-stalk cutter, having wheel *o*, shafts *s* and *v*, pinions *m*, *t*, and *u*, hook *r*, rollers *g* and *l*, and belts *n*, in combination with the derrick E, and cord and hook therewith connected, all constructed, arranged, and operating substantially as specified.

94,663.—JAMES STEPHENS, Agency City, Iowa.—*Plow.*—September 7, 1869.

Claim.—In combination with the frame, constructed as described, two shovels, arranged as specified, the right-hand one being removable, and so twisted as to throw all the dirt to the right or left, as may be desired.

94,664.—E. C. STONE, Galesburgh, Ill.—*Mode of Fastening Artificial Teeth.*—September 7, 1869.

Claim.—The staples B for attaching the teeth D to the metal plate A, when said staples are constructed as described, by passing the wire through the plate from the inner side, and bending its ends over in opposite directions, to form eyes upon the outer side of said plate, as herein set forth and shown.

94,665.—JOHN STORER, New York, N. Y.—*Direct-Acting Engine.*—September 7, 1869.

Claim.—1. The slide *f* and lever *b*, in combination with the tappet-rod *c*, and with the slide-valve of an auxiliary cylinder J, controlling the valve-motion of a direct-acting engine, substantially as shown and described.

2. The friction-disks *h j*, in combination with the slide *f*, lever *b*, tappet-rod *c*, and slide-valve K, substantially in the manner set forth.

3. The arrangement of a double exhaust in the auxiliary cylinder J, controlling the valve-motion of a direct-acting engine, substantially as described.

4. The arrangement of the air-cushion cylinder N, with reference to the valves F, rod H, and valve K, substantially as described.

5. The gauge, in combination with the cylinder-head and piston, substantially as described.

94,666.—JAMES STUART, San Francisco, Cal.—*Steam-Generator.*—September 7, 1869.

Claim.—The fire-spaces A, arranged centrally, and extending the whole length of the boiler, the lateral tubes B, the spaces C, and return-tubes D, leading into the space E, all arranged substantially as specified.

94,667.—MOSES TESSIER, Cairo, Ill.—*Plow.*—September 7, 1869.

Claim.—1. Securing the frame A to the beam B by means of the lugs a^1 a^2, bolts C D, clevis and bar E F, and slotted wedge G, substantially as herein shown and described, and for the purpose set forth.

2. The double and double-pointed mold-board I, constructed substantially as herein shown and described, and secured in place by means of the pointed forward end of the frame A and arm K, to which it is bolted, as and for the purpose set forth.

94,668.—HIRAM THOMPSON, Worcester, Mass., assignor to RICHARD BALL and E. P. HALSTED, same place.—*Sawing-Machine.*—September 7, 1869.

Claim.—1. The combination, with the feed-rolls C C C C and roll-shafts L, of the gear-shafts K and pins *n*, passing through both said shafts, substantially as shown in the drawings, and herein described.

2. The combination, with the upper ends of the feed-rolls C C, of the roll-supporting adjustable frame H, forked so as to hold each pair of rolls, substantially as and for the purposes set forth.

3. The combination of the slotted forked frame H with the flanged standard E, provided with the projection 1, substantially as and for the purposes set forth.

4. The combination, with the adjustable roll-supporting frame H, of a scale and index, substantially as and for the purposes set forth.

5. The combination, with the slotted forked frame H and flanged standard E, of the adjusting-screw *g*, substantially as shown and described.

6. The combination, with the sliding frame-plates D D, of the rack-bars W X, cog-wheel V, and shaft T, the parts being constructed and arranged in relation to each other, substantially as shown and described.

7. The combination, with the rack W and slide-plate D, of the screw 4, substantially as and for the purposes set forth.

8. The combination, with the adjustable carriage B, of the sliding frame-plates D D, connected with and held upon said carriage, substantially as shown and described.

9. The combination, with the adjustable carriage B, of the clamping-screws *c c* and adjusting-screw *b*, substantially as and for the purposes set forth.

10. The combination, with the sliding frame-plate D, of a swinging top device, A^1, *v*, as shown and described.

11. The combination, with the saw D′, of the divided shield M′ and dust-pipe N′, when constructed substantially as and for the purposes set forth.

12. The combination, with the main frame A and laterally-moving frame G′, pivoted and adjusted as described, of the grooved bearing O^2, bearing O^1, and elevated ways F′, said bearings being capable of longitudinal adjustment, as shown and described.

13. A machine for resawing lumber, the parts of which are constructed, arranged, and combined together, substantially as shown and described.

94,669.—DENISON TISDALE, Des Moines, Iowa.—*Gold-Digging Apparatus.*—September 7, 1869.

Claim.—The arrangement, with the cylindrical frame A, of the valves E, and two or more reservoirs, as described, riffles H, cutters D C, and curb B, all operated by the shaft F, with its collar N, and rings O, substantially as specified.

94,670.—E. W. TUCKER, Lowell, Mich.—*Spring for Upholstery, Chair, Car, and other Seats.*—September 7, 1869.

Claim.—The arrangement, under the fabric B, of the spring D, with end-loops *a a*, coiled around the circular bars C C, and the intervening loops *b*, all as herein set forth.

94,671.—W. F. TUNNARD, East Baton Rouge Parish, La., assignor to FRED. D. TUNNARD, same place.—*Cotton-Seed Planter.*—September 7, 1869.

Claim.—1. The connecting-rods D D′, when both are secured to the crank *d*, the double-slotted standard E, pins *i i* in the connecting-rods D D′, in combination with the discharging-wheel B and stirrer 3, when all are connected and arranged as specified.

2. In combination with the elements of the foregoing claim, the fluke G, as set forth.

94,672.—A. E. TURNBULL, Upper Sandusky, Ohio.—*Camera-Stand.*—September 7, 1869.

Claim.—The slides C C, F F, and R, the sliding brace G G and its connections, the screws V V V, and extension-leg H, connected as described, or the whole of the devices explained, to operate separately or in connection with each other, for producing the results, in the manner and for the purpose herein described, the whole to operate substantially in the manner and for the purpose set forth.

94,673.—B. W. TUTHILL, Oregon City, Oregon.—*Hand-Truck.*—September 7, 1869.

Claim.—Constructing the framing of hand-trucks of metallic tubes, A B, substantially as herein described.

94,674.—D. C. VAN BRUNT, G. W. VAN BRUNT, and HIRAM BARBER, Horicon, Wis.—*Seeding-Machine.*—September 7, 1869.

Claim.—1. In a seeding-machine, the construction and arrangement of the tongue M and brace-beams N N, in connection with the two parallel cross-beams A A′, substantially as and for the purposes set forth.

2. In connection with the described arrangement of tongue, cross-beams, and braces N N, in a seeding-machine, the arrangement of the standards O O, which support the lifting-chains and lever, upon the rear end of the braces, substantially as and for the purposes specified.

3. The means herein described for fastening the teeth G, viz, the wedge *w*, operating between the front edge of the forward shank of the tooth and the front end of the slot in the drag-bar, substantially as and for the purposes indicated.

94,675.—NICHOLAS S. VEDDER, Troy, N. Y.—*Cooking-Stove.*—September 7, 1869.

Claim.—1. The heating-chamber or chambers against the front side of the reservoir, above the top-plate of the stove, in combination with a heating-chamber or chambers, between the front side of the reservoir, below the top-plate of the stove and the back-plate of the stove, substantially as and for the purpose hereinbefore set forth.

2. The heating-chamber or chambers against the front side of the upper portion of the reservoir, in communication with the descending oven-heating flue or flues, in combination with the chamber or chambers along the front side of the lower portion of the reservoir, and in communication with rear ascending or exit flue.

3. In combination with the above, the dampers, arranged and operating as and for the purpose hereinbefore set forth.

94,676.—NATHAN S. WARNER, Bridgeport, Conn.—*Toy-Velocipede.*—September 7, 1869.

Claim.—The universal joint *a b*, constructed as shown, when forming a part of a toy-velocipede.

94,677.—ALBIN WARTH, Stapleton, N. Y., assignor to himself and EBERHARD FABER, New York City.—*Sewing-Machine.*—September 7, 1869.

Claim.—1. The raised eye *f* on the shuttle S, in combination with the raised rim *g*, so as to bring the shuttle-thread in the proper position for the cast-off hooks *r r*, substantially as shown and described.

2. The shoulders *o*, on the shuttle, being situated on a level with the middle line of the height of the spool, secured in the shuttle substantially as described.

3. The projecting rims *g* and *i*, on the back of the shuttle, in combination with a circular groove in the vertical shuttle-race, and, with the noses of the shuttle-driver, serving to support the weight of the shuttle, so as to allow the needle-thread to pass freely through between the shuttle and the noses of the shuttle-driver, substantially as set forth.

4. A sewing-mechanism, composed of an eye-pointed needle, receiving its motion from a smooth eccentric, and a shuttle traveling in a circular race, when constructed substantially as described, to operate together in the manner set forth.

5. The shoulders *l l* on the circular rim in the shuttle-race R, in combination with a shuttle traveling in a circular race, and provided with depressions *k* in its rim, substantially as set forth.

6. The annular depression *j*, in the shuttle-race R, in combination with hooks *p p* of the shuttle-driver, as described.

7. The cast-off hooks *r r*, in the shuttle-race, in combination with the noses *p p* of the shuttle-driver, substantially as set forth.

8. The radial depression *t*, in the circular shuttle-race R, substantially as described.

9. The double cam *x x* on the shuttle-driver, in combination with the feed-mechanism, substantially as set forth.

10. The self-adjusting cams o^1 and a^1, in combination with the reciprocating needle *n*, the lever *z*, rising and falling throat-plate *y*, and with the double-pointed shuttle, moving in a circular race in either direction, substantially as set forth.

11. The slotted hub of the cam u^1, which actuates the take-up, in combination with the stop t^1, on the slotted hub o^1, of the eccentric l^1, and with the stop q^1, substantially as described.

12. The brake y^1, in combination with the slotted hub of the cam u^1, and with the spring w^1, substantially as set forth.

13. The combination of a cam-wheel, L, with the presser-foot and cloth-plate e^3, substantially as set forth.

14. The swivel-plate z^2, under the presser-foot y^2, in combination with the guide-rod c^3, substantially as set forth.

15. The combination of the additional throat-plate e^3 with the presser-foot and cam-wheel L, substantially as described.

16. The flange f^3, on the throat-plate e^3, in combination with the feed-dog e^1, substantially as set forth.

17. The double edge-gauge r^3, on the throat-plate o^3, in combination with the oscillating presser-foot y^2 z^2, substantially as described.

18. The guiding-screw q^3, secured in the presser-foot, in combination with the lip r^3 of the throat-plate o^3, substantially as set forth.

19. The arrangement of the hinged spring lever t^2, provided with a set-screw, and with a projection, which acts on the cam-wheel L, in combination with the rod u^2, and presser-foot E, substantially as described.

20. The center-point m^3, in combination with the additional throat-plate e^3 and oscillating presser-foot y^2 z^2, substantially as set forth.

21. The embroidery-attachment, consisting of a cam-wheel, K, operated by a pawl from the needle-bar or needle-lever, and actuating the rods h^2, having oblique thread-guides k^2, all constructed substantially as set forth.

22. The adjustable edge-gauge n^3, in combination with the additional plate e^3 and movable presser-foot y^2 z^2 substantially as described.

94,678.—R. M. WASHBURN, Burlington, Iowa.—*Scroll-Sawing Machine.*—September 7, 1869.

Claim.—The arrangement of the hinged top B, shaft H, wheel I, crank *c*, pitman *d*, bar *e*, and saw *f*, all being constructed to operate substantially as and for the purposes herein set forth.

94,679.—William B. Watkins, Jersey City, N. J.—*Boiler or Stew-Pan.*—September 7, 1869.

Claim.—The combination of the hangers D with a boiler-cover of less area than the area of the boiler, for the purpose of suspending the cover loosely within the boiler, that the overflowing water through the vent-holes E may readily find its way back to the body of water in the boiler, and thus prevent the water running over the edges of the boiler.

94,680.—Reuben Wells, Jeffersonville, Ind.—*Railway Car-Body Elevator.*—September 7, 1869.

Claim.—1. The combination, with a railroad-track, of vertically-moving elevators, levers, and hydraulic elevator, when arranged for elevating car-bodies from the trucks, for the removal of the latter and substitution of others, and lowering the bodies again, substantially as specified.

2. The elevators B, combined with the track, and provided with jacks, adjustable, substantially as specified.

3. The arrangement of the tracks, centrally, between the elevators B, substantially as specified.

94,681.—M. F. Wickersham, Springfield, Ill., assignor to himself, Thomas Eckardt, H. F. Eldred, J. G. Law, T. Hutchinson, C. B. Hurd, C. Dresser, and D. Sherman.—*Dumping-Cart.*—September 7, 1869.

Claim.—A dumping-cart, having its body hung upon the axle, as described, and adapted to be dumped forward by the gravity of the load, substantially as herein set forth, for the purpose specified.

94,682.—Charles G. Wilson, Brooklyn, N. Y.—*Furniture-Caster.*—September 7, 1869.

Claim.—The improved furniture-caster, above described, formed by the combination of a solid sphere, rolling freely in its socket, a caster-body, provided with a hemispherical concavity and suitable cap, and a series of frictional balls arranged around the surface of the said sphere, and freely moving over the entire upper surface of the caster-ball, when brought in frictional contact with the same, all substantially as shown and described.

94,683.—R. F. Wolcott, Claremont, N. H.—*Muley-Saw Mill.*—September 7, 1869.

Claim.—1. The arrangement of the guides A A, as herein shown and described, for the purpose specified.

2. The sliding bar C, provided with the rack E and the cross-head F, supporting the adjustable bars G, carrying the adjustable guides H, all arranged to operate as and for the purpose specified.

3. The concave rag-wheel I, friction-wheels M M′, springing-shaft K, and shifting-lever P, all arranged substantially as specified.

94,684.—John F. Woolley, Pleasant Ridge, Ohio.—*Rotary Clod-Fender.*—September 7, 1869.

Claim.—1. The combination and arrangement, in a rotary clod-fender for plows, of two or more annular plates L, arranged in the same plane, and straight radial arms K *k*, substantially as described.

2. The adjustable frame B C D E F *f* G, substantially as and for the purpose stated.

94,685.—John P. Zeller, South Bend, Ind.—*Hub for Vehicles.*—September 7, 1869.

Claim.—The combination of hub A, provided with an annular recess on each side, with the circumferentially-flanged thimbles C C which are fitted into said recesses, and secured by the bolts *i i*, as shown and described.

94,686.—John P. Zeller, South Bend, Ind.—*Forced Feed-Gearing in Seed-Drills.*—September 7, 1869.

Claim.—1. The seed-box O, constructed as described, with its bottom made in sections, each alternate section containing a shoe and seed-agitator, substantially as herein set forth.

2. The arrangement of the seed-box O, constructed as described, with the movable perforated board N, through which the flexible conducting-tubes pass, and the holes or drills R R, all substantially as and for the purposes herein set forth.

3. The arrangement of the seed-box O, perforated board N, hoes R R, and bar T, when all are constructed as described, and placed on an adjustable carriage, substantially as and for the purposes herein set forth.

94,687.—John P. Zeller, South Bend, Ind.—*Device for Marking and Planting Corn.*—September 7, 1869.

Claim.—1. The arrangement of the bar A, blocks B B, and movable buttons C C, substantially as and for the purposes herein set forth.

2. The arrangement of the bar *a*, ears *b b*, connecting-bar F, marking-plow G, and plow-beam H, all substantially as shown and described.

3. The combination and arrangement of the bars D D, roller E, connecting-bar F, marking-plow G, and plow-beam H, all constructed as described, and connected to the bar A, substantially in the manner and for the purpose herein set forth.

4. The arrangement, upon the movable frame I, of the grain-boxes J J, agitators *e e*, tubes K K, slides L L, springs *f f*, and shafts *c* and *h*, said shafts being provided with suitable gearing for operating the agitators and slides, substantially as and for the purposes herein set forth.

5. The arrangement of the cogged wheels *g* and *i*, shaft *h*, three-armed levers *m m*, projections *n n*, slides L L, and springs *p p*, all substantially as and for the purposes herein set forth.

6. The combination of the bars D D, roller E, marking-plow G, grain-boxes J J, tubes K K, and slides L L, all constructed and arranged as described, on an adjustable carriage, substantially as and for the purposes herein set forth.

94,688.—Edward Gray, Oldtown, Me.—*Implement for Carpenters' Use.*—September 7, 1869.

Claim.—1. The implement constructed as herein represented and described, and made capable of being used either as an adze or a plane.

2. The double-branched opening or socket C, formed in the head B of the cutting-blade A, for the reception of handles D E, inclining in opposite directions, to adapt the tool to use either as an adze or a plane, substantially as before described.

94,689.—Robert K. Kille, Mount Holly, N. J.—*Slate-Roofing.*—September 7, 1869.

Claim.—The arrangement of the metal strips and projections with a water-proof cement covering, substantially in the manner and for the purpose set forth.

94,690.—Oscar I. Harrington and Elijah Weaver, Wood's Run, Pa.—*Leather Cord or Rope.*—September 7, 1869.

Claim.—1. Leather or skin cording, the strands of which are provided with cotton or hemp filling, as herein described, and for the purpose set forth.

2. Leather or skin cording, the strands of which are provided with cotton or hemp filling, and interwoven with wire, in the manner herein described and for the purpose set forth.

94,691.—Thomas H. Bradley, Saint Louis, Mo.—*Shutter-Worker.*—September 7, 1869.

Claim.—1. The grooved disk, furnished with a flange or base for fastening it at a right angle to the plane of the shutter, and independent of the hinges, as and for the purpose described.

2. In combination with the above, the operating-lever, furnished with the spring-catch, that fastens in the holes in the interior plate, all as and for the purpose described.

94,692.—Jules Roch, Rochester, N. Y.—*Brace for Covers of Trunks, Pianos, &c.*—September 7, 1869.

Claim.—The arrangement of the shield and guiding-case B, having a stop-lip, the segmental-notched supporting-plate A, having a stop-pin, *h*, the horizontal sliding-bolt *a*, with its spring *e* and guides *b*, so that the several parts will be located and concealed within the trunk, and thus protected from being broken off, or otherwise rendered inoperative, as described.

94,693.—G. W. Adams and John R. Hopper.

Rochester, N. Y.—*Potato-Digger.*— September 14, 1869.

Claim.—1. The laterally-tilting bottom *i*, of the box I, whereby the potatoes may be delivered upon either side of the machine, as set forth.

2. The adjustable dividing-plows J, in combination with the shovel E and frame D.

3. The adjustable gauge-wheels K, in combination with the auxiliary frame D and shovel E, for the purposes specified.

4. The obliquely bent sides *d* of the shovel E, as and for the purpose set forth.

5. The riddle G, provided with the discharge-spout I, and having a parallel lateral shake, for the purposes set forth.

6. In combination with the revolving endless apron *b*, the vibrating cutter *p*, for the purposes set forth.

94,694.—Xavier Amoun, Sidney, Ohio.—*Rain-Water Cut-Offs for Cisterns.*—September 14, 1869.

Claim.—The combination of the spout B, float G, rod F, valve E, and spout D, when arranged and applied in connection with a cistern or other water-receptacle, substantially as specified.

94,695.—François Aroud, Lyons, France.—*Sweetmeat.*—September 14, 1869.

Claim.—The incorporation of extract of meat in a sweetmeat, substantially as herein set forth.

94,696.—Caleb Bartholomew, Ætna, N. Y.—*Ditching-Machine.*—September 14, 1869.

Claim.—1. The peculiar arrangement of the five teeth, when formed as described, that is, the three forward teeth of the one form, and the two rear teeth of the other, for the purpose of cutting the sides of the ditch and breaking up the earth within it.

2. The pivoted handles *f*, pivoted standard *i*, adjustable bearing-wheels *d*, in combination with the frame A and teeth *c*, when arranged as and for the purpose described.

94,697.—Christian Bates, Conestoga, Pa.—*Leather-Holder.*—September 14, 1869.

Claim.—The combination and arrangement of a leather-holder, when constructed with a horizontal-sliding block, E D, and vertically-sliding piece F, provided with a set-screw, K, guides *g*, and the hinged holder C *c*, together with the grooved support B, all operating substantially in the manner and for the purpose specified.

94,698.—Joseph Bearden, Bath, Ill.—*Corn-Marker.*—September 14, 1869.

Claim.—The arrangement of the central wheel E, pivoted upon the frame D, and adjustable vertically by means of the standard *f*, the lever F, and the chain *d*, and secured in an elevated position by the hook *a*, in combination with the arrangement of the wheels B, the axle A, the hounds C, and the driver's seat, when constructed and operating as aforesaid.

94,699.—William N. Berkeley, Cedar Rapids, Iowa.—*Sled-Runner.*—September 14, 1869.

Claim.—1. The brace-rod E, when passing through a hole in the runner, substantially as described, and fastened at each end to the sled-beam, so as to be tightened or loosened, and brace the sled-runner and beam, substantially as specified and shown.

2. The combination of the cast-iron runner and post, in combination with the braces F and H, when arranged and operating substantially as specified.

3. The combination of the roller I, ferrule J, screw L, washer V, and runners, when arranged and operating substantially as and for the purposes herein set forth.

94,700.—Bentley C. Bibb, Baltimore, Md.—*Base-Burning Fire-Place Heater.*— September 14, 1869.

Claim.—1. The double-inclined fuel-magazine G, applied to a fire-place heater, substantially as described.

2. The discharge-opening *g'*, entering the fire-chamber C, through the wall inclosing this chamber, in combination with an inclined fuel-magazine, substantially as described.

3. The dust-valve *h*, applied to the wall which incloses the ash-pit *a*, substantially as described.

4. The vertical passage P, formed as described, in combination with air-inlets and outlets *o*, substantially as described.

94,701.—Henri E. Bissell, Hartford, Conn.—*Spring-Bed Bottom.*—September 14, 1869.

Claim.—The webbing-bottom, made in sections, laced together as described, in combination with the strainers *k k k*, the movable head-piece *b*, with its sockets, springs, and bars, and the cam *i*, the whole arranged and constructed as described, for the purpose set forth.

94,702.—B. Blackstone, Warren, Ill.—*Saw-Clamp.*— September 14, 1869.

Claim.—The combination of the fixed standards A, jaws I J, elbow-arms C F G, and cross-trees E H, said arms being pivoted to the inside of the standards, all constructed and arranged and operating as described.

94,703.—Joseph M. Blake, Buffalo, N. Y.—*Clothes-Drier.*—September 14, 1869.

Claim.—1. The detachable or independent brackets B B′, in combination with bars A A, axis D, and adjusting stay-pin *c*, arranged and operating in the manner herein set forth.

2. Adjustable stay-pin *c*, operating against the lower or upper bar, in combination with the hole or holes *d d* in the brackets B B′, arranged and operating as and for the purpose herein set forth.

3. The bars A A, when provided with the slots or holes *a a* and pins *b b b*, arranged and operated in the manner and for the purpose specified.

4. A clothes-drier, consisting of the brackets B B′, bars A A, with pins *b b b*, slots *a a*, and axis D, when combined and operating as herein specified.

94,704.—Virgil W. Blanchard, Bridport, Vt.—*Mode of Preserving Wood.*—September 14, 1869.

Claim.—1. The perforations of the wood, for the purpose set forth.

2. The incorporation of coal-tar and pulverized stone, or any suitable granular or mineral substance, into and beneath the surface of the wood, substantially as and for the purpose set forth.

3. The arrangement of the series of holes punctured in the surface of the wood, substantially as and for the purpose set forth.

94,705.—Henry Bonholtzer and Jacob S. Shopp, Cumberland County, Pa.—*Harvester-Cutter.*—September 14, 1869.

Claim.—The construction and mode of applying the cutters A, with beveled narrower ends *a*, notch *j*, and holes *i*, in combination with the recess *b* and spring-plate D, and cells formed in the cutter-bar B, in the manner and for the purpose shown and specified.

94,706.—James Boyce, Wooster, Ohio.—*Flax-Brake.*—September 14, 1869.

Claim. — The combination with the breaking-rollers, having an intermittent forward and back movement, of a feeding-table, inclining downward toward them, and feeding-rollers at the higher end of the said table, substantially as specified.

94,707. — Edward D. Boyd, Helena, Ark.—*Lamp-Wick.*—September 14, 1869.

Claim.—A perpetual wick or burner, consisting essentially of the tube A, having a strainer, B, and an opening or openings, *a a*, and partially or wholly filled with ground or pulverized mineral substance, G, substantially as and for the purposes herein set forth.

94,708. — Julius Branch, Mooers, N. Y.—*Animal-Trap.*—September 14, 1869.

Claim.—A trap, consisting of the box A, with the spout or passage-way B, having the drop C, trigger *g*, rock-shaft *k*, with its arm *d*, and gate D, with its arm *e*, all constructed and arranged to operate substantially as described.

94,709.—David Campbell, Joseph Campbell

and SEYMOUR RAYMOND, Middletown, Pa.—*Hot-Blast Oven.*—September 14, 1869.

Claim.—1. In connection with the pipes A A′ and conductors B, arranged as shown, the arrangement and combination of the longitudinal partitions *b* and transverse partitions *e*, when constructed and employed as and for the purposes herein set forth.

2. The pipes A A, formed of two parallel branches, connected at one end and open at the other, and having a cross-section in the form of the numeral 8, substantially as and for the purposes set forth.

94,710.—LUKE CHAPMAN, Collinsville, Conn., assignor to the COLLINS COMPANY, same place.—*Wrench.*—September 14, 1869.

Claim.—The movable jaw *e*, provided with the parts *e′ e′*, in combination with the bar *b* and nut *g*, when constructed as described, for the purpose set forth.

94,711.—GEORGE H. CHINNOCK, New York, N. Y.—*Toilet-Mirror.*—September 14, 1869.

Claim.—A toilet-mirror, adjustable by means of the projecting arm *a* of the cap A, having a swivel-motion on the post of the stand, in combination with projections *d d* of plate C and spring E, substantially as described.

94,712.—GEORGE H. CHINNOCK, New York, N. Y.—*Toilet-Mirror.*—September 14, 1869.

Claim.—The toilet-mirror, adjustable by means of springs C C, in combination with the projecting arm of the cap A, having a swivel-motion on the post of the stand, substantially as described.

94,713.—J. R. CLUXTON, Russellville, assignor to himself and THOMAS W. GORDON, Georgetown, Ohio.—*Melodeon.*—September 14, 1869.

Claim.—1. The key K, provided with the elongation K′, in combination with the key W, provided with the recess *w*, as and for the purpose described.

2. The combination of keys K W with levers L L, and valves J J, when the parts are constructed to operate in the manner and for the purpose set forth.

3. The stop H, when operating in connection with the valve F that admits the air to the reeds, substantially in the manner and for the purpose set forth.

4. The combination and arrangement of the valve F, guides *c e*, spring *s*, stop H, and actuating-rod G, when operating in the manner and for the purpose described.

94,714.—JOHN COCHRANE, New York, N. Y.—*Composite Gas-Retort.*—September 14, 1869.

Claim.—1. A retort, for the production of coal-gas, or other purpose, having its interior portion of iron, and its exterior portion of fire-clay or fire-brick, or other refractory substance of analogous character, in which the iron lining and fire-clay covering are combined with each other, in the manner and by the means substantially as described.

2. The hemispherical bosses, or their equivalents, in combination with the anchors or clamps and the interior casting, constructed in the manner and for the purpose substantially as described.

94,715.—M. R. COLVIN, Worcester, Mass.—*Globe-Valve.*—September 14, 1869.

Claim.—The construction and arrangement, in the bridge or separating-piece *d*, of the notched auxiliary metal valve-seat E, substantially as herein described.

94,716.—ISAAC COOK, Saint Louis, Mo., assignor to himself and HENRY S. HALL, same place.—*Vapor-Burner.*—September 14, 1869.

Claim.—1. The stem E and adjustable nipple *f′*, when combined with the plates *f* and *g*, substantially as set forth.

2. The cover-plate *g*, when perforated at *g′*, substantially as set forth.

94,717.—ALFRED B. COUCH, Worcester, Mass.—*Clutch for Hydraulic Wheel-Presses.*—September 14, 1869.

Claim.—1. The combination, with the projecting end of the top rod E, of the wheels G and F, substantially as and for the purposes stated.

2. The combination, with pulley or wheel G, of the clutch-wheel F and tubular bearing-part *f*, substantially as and for the purposes set forth.

94,718.—GILES CRAMTON, Marshall, Mich.—*Three-Horse Equalizer.*—September 14, 1869.

Claim.—1. A draught-chain sheave, A, made in the form of a seroll, with an equalizing-groove for the chains, extending from the point of greatest radius, in one unbroken diminishing curve, around the eye of the scroll, whereby the whole of a much-increased extent of chain-bearing is utilized, giving much larger vibrations, and allowing the team free play to come and go without "fetching up" or shirking duty, substantially as herein described.

2. In combination with the scroll-sheave A, constructed substantially as described, the clevis D, with guards *a b*, to keep the chains in place, substantially as set forth.

3. The equalizer herein described, composed essentially of the seroll-sheave A, draught-chains C C′, and clevis D, with guards *a b*, all constructed and arranged substantially as set forth.

94,719.—JOHN E. CRYER, Green Point, N. Y.—*Blind-Fastening.*—September 14, 1869.

Claim.—1. A fastening-latch, passed through from the rear of the hinge, and secured thereto by a head, to form a joint.

2. In combination with a latch, arranged as described, the offset or shoulder c^2, to resist any backward motion of the latch.

3. In combination with the above, the notch c^1 in the latch, to hold the blind in a partially closed position.

94,720.—GEORGE DAYSPRING and EDWARD FITZKI, Washington, D. C.—*Cloth-Sponging Machine.*—September 14, 1869.

Claim.—In cloth-sponging machines, the combination and arrangement of the supporting-stand A, perforated cylinder *e*, boiler C, and connecting steam-pipe *p*, as and for the purpose set forth.

94,721.—E. MORTIMER DEEY, New York, N. Y.—*Mode of Transporting Ships over Land.*—September 14, 1869.

Claim.—1. Supporting the ship or vessel in the tank K, by the sustaining ropes or chains S S, attached to stretchers T T, or their equivalent, and acting together with the elastic braces P P, in connection with the water in the tank, or in its stead, in case of its leakage or evaporation therefrom, substantially as herein specified.

2. The spring-seats O O, on which the keel of the ship or vessel rests in the tank, for the purpose specified.

94,722.—JOSEPH R. DE MAHY, New Orleans, La.—*Vapor-Burner.*—September 14, 1869.

Claim.—A gas-burner, in which the sections A and B are made in a single piece, by one casting, and which is provided with an aperture, *a*, for the admission of atmospheric air, and a regulating key, C, in combination with a removable tip, D, when each part is constructed as herein described, for the purpose set forth.

94,723.—LYMAN R. DEXTER, Lancaster, N. H.—*Sled-Clamp.*—September 14, 1869.

Claim.—The clamping together of the runners and frames of sleds, by means of the braces B, uprights *j j*, in combination with the sole-plate *a* and cap or plate *k*, all as and for the purpose hereinbefore described.

94,724.—J. J. DOEPKEN, Lima, Ohio.—*Refrigerator.*—September 14, 1869.

Claim.—The case A B, provided with provision-chamber C, ice-boxes D, compartment E, having inclined frames G and water-drawer H, when constructed and arranged as herein described, for the purpose specified.

94,725.—WILLIAM A. DRYDEN and J. M. TURNBULL, Monmouth, Ill.—*Cultivator.*—September 14, 1869.

Claim.—1. The combination and arrangement of

the shovel B, plate C, and cutter E, substantially as described, and for the purpose set forth.

2. The combination of the shovel B, and the cutter E, in its rear, as and for the purpose described.

94,726.—A. K. Eaton, Piermont, N. Y.—*Manufacture of Crucibles.*—September 14, 1869.

Claim.—Manufacturing crucibles, chemical porcelain ware, bricks, tiles, and other refractory articles which are to be subjected to a high heat in melting, smelting, or reducing ores or metals, or for other purposes, in whole or in part of pure alumina, substantially as described.

94,727.—Jacob Edson, Boston, Mass.—*Tubular Well.*—September 14, 1869.

Claim.—1. A strainer, when made by winding wire around a channeled or corrugated supporting-core, said wire being nicked, as herein described and shown.

2. The core N of the strainer, when the core has a central chamber, and is provided with alternating pyramidal recesses, communicating with said chamber, in the manner arranged and described.

3. The point K′, projecting upward from the lower box, when said point acts, in conjunction with the countersink K, for adjusting and forcing the lower box into place, as herein described and shown.

4. Constructing the upper box of two parts, G and H, when said parts are arranged in the manner herein described, and for the purpose set forth.

94,728.—D. Elliot, New York, N. Y., assignor to himself, E. Seely, and John A. Holmes, same place.—*Broom and Scraper.*—September 14, 1869.

Claim.—The combined broom and scraper, formed with the scraper attached to the head of the broom, combined with the handle inserted into the head, as set forth.

94,729.—Michel G. Fagan, Troy, N. Y.—*Lunch-Box.*—September 14, 1869; antedated September 4, 1869.

Claim.—The perforated cases I and H, in connection with the openings *s s* and *d d d* and partition-openings P, or their equivalent, for the purposes set forth in this specification.

94,730.—Loyal C. Field, Galesburgh, Ill.—*Mashing-Machine.*—September 14, 1869.

Claim.—The tub A, shaft C, arms D D″, jets J J″, pulley H, pipe F, and chamber P, combined and arranged as described, and for the purpose set forth.

94,731.—Luther W. Field, Camden, Ill., assignor to himself and David H. Dinsmore, Potter, N. Y.—*Chair-Seat.*—September 14, 1869.

Claim.—The construction of a chair-seat, herein described, with slats D, transverse wires E, loop F, and washers *a*, in connection with the rounds A and B, and legs C, of a chair, arranged and operating substantially as and for the purpose herein set forth.

94,732.—Henry Flad, Saint Louis, Mo.—*Hydraulic Elevator.*—September 14, 1869.

Claim.—The force-pump D, when arranged to receive water under pressure and be actuated thereby, and by any auxiliary power, and re-enforcing the pressure in the cylinder A, substantially as set forth.

94,733.—Ludwig Ottmar Franke, Baltimore, Md.—*Spinning-Top.*—September 14, 1869.

Claim.—1. The sliding spindle B, in combination with the interior disks or wheels S, as and for the purpose described.

2. The arrangement of spindle B, disks and wheels S, cup-shaped top A, and spinning-device E F D, substantially as and for the purpose described.

94,734.—Henry L. Franklin and Eugene Clark, Nashua, N. H.—*Broom or Mop-Holder.*—September 14, 1869.

Claim.—The combination of arms B B, constructed substantially as shown, and bracket A A′, slotted at *d e*, the whole forming a universal broom or mop-holder, substantially as herein set forth.

94,735.—Owen Gallagher, Boston, Mass., assignor to himself and Andrew Bell, same place.—*Door-Bolt for Safes, &c.*—September 14, 1869.

Claim.—1. The combination of the arm K^2, slide H, flanges or washers C^2 C^3, with the bolts C C^1, and bar M, substantially as herein shown and described.

2. The combination of the segment spur-wheel K with the spur-gear L′, bar M, wheels M^1M^2, and bolts C C^1, substantially as described, and for the purpose set forth.

94,736.—Henry A. Garvey, Memphis, Tenn.—*Artificial Marble or Plastic Material.*—September 14, 1869.

Claim.—The within-described method of making artificial marble, hardening and causing it to be delivered from the molds with polished surface, for the objects described, and for the purposes specified.

94,737.—John T. Gathright and John C. Freeman, Louisville, Ky., assignors to John T. Gathright.—*Side-Saddle.*—September 14, 1869.

Claim.—The combination, with the side-bars A, of a seat, B C D F G, pressed into the form shown and described.

94,738.—Daniel Haldeman, Mahanoy City, Pa.—*Railway-Switch.*—September 14, 1869.

Claim.—The combination and arrangement of the plate P, standards S and S′, segmental gear S G, pinion N, rod D, provided with a rack, strap T, spring G, and lever A, so as to operate substantially in the manner and for the purpose specified.

94,739.—Edward S. Hardy, Buffalo, N. Y., assignor to himself and John L. Lay, same place.—*Material for Covering Steam-Boilers, Pipes, &c.*—September 14, 1869.

Claim.—The manufacture or preparation of a compound of the ingredients, in the proportions and for the purposes substantially as set forth.

94,740.—Luke Heery, Hinsdale, Mass.—*Sewing-Machine.*—September 14, 1869.

Claim.—1. One or more supplementary bars *a′ a″*, in combination with the primary bar *a*, supports *c c′*, and hooks *t t′*, substantially as specified.

2. The supports *c c′*, and connections *m m′*, *n n′*, arranged and combined with the bars *a′ a″* and hooks *t t′*, substantially as specified.

3. In combination with driver 15 and shaft 21, the parts 22, 23, 24, 25, and 26, constructed, arranged, and operating substantially as specified.

4. The spring 31, in combination with one or more parts *n n′*, connections *m m′*, bars *a′ a″*, and hooks *t t′*, substantially as specified.

5. The disk 27, provided with one or more series of cams *u u′*, &c., in combination with one or more bars *a′ a″*, hooks *t t′*, and with parts 26, 28, 29, 30, 34, and 41, all arranged and operating substantially as specified.

94,741.—John Heuermann, Davenport, Iowa.—*Tumbling-Rod Cover.*—September 14, 1869.

Claim.—The arrangement and combination of tumbling-rod cover, as shown on drawings, and described in specifications.

94,742.—Henry F. Hildebrand, Baltimore, Md.—*Air-Escape Funnel.*—September 14, 1869.

Claim.—The attachment B, with external supports C C C C, and internal wires or ridges D, all substantially as shown and described.

94,743.—A. C. Hobbs, Bridgeport, Conn.—*Percussion-Cap.*—September 14, 1869.

Claim.—A percussion-cap for guns, having its fulminate inclosed between varnished surfaces, substantially as described.

94,744.—A. C. Hobbs, Bridgeport, Conn.—*Machine for Forming External Recesses in the Heads of Cartridge-Shells.*—September 14, 1869.

Claim.—The sliding plate C, arranged to move with the bunter, in combination with the stop-pins D, or their equivalents, substantially as described.

94,745.—A. C. Hobbs and Thomas V. Boyden,

Bridgeport, Conn., assignors to the UNION METALLIC-CARTRIDGE COMPANY, same place.—*Machine for Forming Cartridge-Shells.*—September 14, 1869.

Claim.—1. The spring-arms B, or their equivalents, for holding the shells securely in an upright position, substantially as described, and for the purpose set forth.

2. The spring-washer C, when arranged in combination with rotating disk A, for the purpose of regulating the friction or pressure thereon, substantially as described.

94,746.—BIRDSILL HOLLY, Lockport, N. Y.—*System of Water-Supplies for Cities.*—September 14, 1869.

Claim.—1. The described system, which, while it will supply a city with water, distributed for ordinary purposes, without the use of a reservoir or stand-pipe, or enlarged container of any kind, will, by the concentration of its currents, serve as an apparatus for extinguishing fires, substantially in the manner herein described.

2. In the above-described apparatus, the combination of the force-pumps A A′ and connecting-pipe D^2, with engines applied so as to operate either one or both of said pumps, at pleasure, substantially as described.

94,747.—BIRDSILL HOLLY, Lockport, N. Y.—*Safety-Valve for Water-Pipes.*—September 14, 1869.

Claim.—A water-chamber B, having a piston, G, working therein, combined with a safety-valve, so as to operate substantially as and for the purpose described.

94,748.—BIRDSILL HOLLY, Lockport, N. Y.—*Automatic Regulating-Valve.*—September 14, 1869.

Claim.—1. The shell or case A, constructed with a diaphragm, P, and provided with a spring-box, B, in combination with the flexible diaphragm J, a valve, G, and a connecting stem *g*, substantially as described.

2. The diaphragm J and valve G, connected together by a stem *g*, and joint *i*, substantially as and for the purposes described.

3. The adjusting-screw *c*, spring C, diaphragm J, partition P, and valve G, constructed and combined substantially as described.

94,749.—BIRDSILL HOLLY, Lockport, N. Y.—*Hydrant.*—September 14, 1869.

Claim.—1. The lining *t*, to the seat of the main valve, adapted to serve the double purpose of a seat, and also a packing at the joint between the pipe E and the foot D, in combination with the external casing A, substantially as described.

2. The arrangement of the leather ring *t*, between the valve *g* and the lower end of the valve-box G, in combination with the pipe E and external casing A, substantially as described.

3. The combination of the parts A B D E, substantially as set forth.

4. The cap C, applied on top of the hydrant, and supported upon posts *c*, in combination with key-rod F and central orifice *l*, substantially as and for the purpose described.

94,750.—JOSEPH W. HOPKINS, Brooklyn, E. D., N. Y., assignor to himself and WILLIAM H. M. PYE, same place.—*Valve for Steam-Engines.*—September 14, 1869.

Claim.—The secondary valve *i*, actuated by the rock-shaft *l*, in combination with the cylinder *p*, piston *o*, rod *q*, and arm *r*, for operating the valve of the main engine in the manner specified.

94,751.—WILLIAM HUNTER and DANIEL M. HUNTER, Meadville, Pa.—*Soil-Tiller.*—September 14, 1869.

Claim.—The construction of the head-piece C, with the beveled edge at *s*, in combination with the tines or teeth, constructed as described, for the purposes set forth.

94,752.—OLIVER P. HUSSEY, Nashua, N. H.—*Drawing-Frame.*—September 14, 1869.

Claim.—1. In combination with the yarn-guides, the draught-rollers, and the weight or device for pressing down the upper of such rollers at its middle, mechanism, substantially such as described, for moving the yarn-guides with equal velocities and simultaneously, first toward, and next away from each other, and the center of the upper or top roller of the draught-rollers, the whole being substantially in manner and for the purpose as set forth.

2. For effecting the movements of the yarn-guides, the combination of the slides H I, the two sets of studs *a b*, the lever U, the arms K N, the slide-rod L, the studs *k l*, and the eccentric or cam P, the whole being arranged and applied to the guides F G and the frame of the rollers, substantially in manner and so as to operate as explained.

94,753.—WILLIAM C. KEMP, Palmyra, Mo.—*Churn.*—September 14, 1869.

Claim.—1. The wings *a′*, hung upon pivots at the sides of the dasher, so as to whirl to and fro, substantially as and for the purpose described.

2. The block E, combined with the windlass D, in the manner and for the purpose set forth.

94,754.—WILEY KENYON, Crawfordsville, Ind.—*Photographic Head-Rest.*—September 14, 1869.

Claim.—The rod-guide represented in Fig. 1 by E′, and the parts as represented in Fig. 2 by A, and also the slide represented in Fig. 3 by E and D, arranged and operating substantially as and for the purpose specified, not limiting myself to any definite size of same.

94,755.—RODNEY G. KIMBALL, Albany, N. Y.—*Bent-Lever Balance.*—September 14, 1869.

Claim.—The levers D and F, in combination with the shaft C, quadrants A A and H, and hook R′, substantially as and for the purpose set forth.

94,756.—JEFFERSON KINDLEBERGER and WILLIAM AUGUSTUS ARNOLD, San Francisco, assignors to "THE INVENTORS' ASSOCIATION OF SAN FRANCISCO, CAL."—*Reversible But.*—September 14, 1869.

Claim.—1. The elliptic washer D, with its semi-circular projection *f*, and supplemental pintle *e*, substantially as and for the purpose herein described.

2. Reversing a door-but or hinge so that it will open from either side, by means of a stationary and a movable pintle entering two holes in an elliptical lug on the reversing-leaf, substantially as above specified.

94,757.—CHESTER KING and S. P. JOHNSON, Cleveland, Ohio; said JOHNSON assigns his right to said KING.—*Flat Chain.*—September 14, 1869.

Claim.—The herein-described chain, the links of which are provided with lugs *a*, and form the hooks for connecting the links together, in the manner substantially as described, and for the purpose set forth.

94,758.—JOHN H. KINGSLAND, New York, N. Y., assignor to JAMES O. KINGSLAND and JOHN W. KELSEY, same place.—*Automatic Boat-Detaching Apparatus.*—September 14, 1869.

Claim.—1. The combination of the curved metallic hooks *a a*, loosely pivoted to the post A, at the point *b*, with the balanced weight-rod *c*, working in a slot of said post, in the manner described.

2. The combination, with a post, and the hooks thereto pivoted, of the sliding sleeve D, serving to lock the link and hooks together, as and for the purpose specified.

94,759.—ALFRED S. LINEBACK, Stockton, Utah Territory.—*Water-Power.*—September 14, 1869.

Claim.—1. The combination of the buckets J M, oscillating frame H I, apron L, and a regulator-valve, *i*, all operating substantially as and for the purpose herein set forth.

2. In combination with the above, the lever P, piece O, and link *j*, substantially as and for the purpose described.

94,760.—OLIVER D. LOMBARD, Lowell, Mass.—*Picking-Mechanism for Looms.*—September 14, 1869.

Claim.—The combination, with the picking-lever and staff, of the cord *k*, cap *p*, slide *l*, toothed cap *m*, and eye-bolt *j*, all constructed, arranged, and operating as described.

94,761.—William McFarland, Brooklyn, E. D., N. Y.—*Burglar-Proof Safe.*—September 14, 1869.

Claim.—1. The hardened-steel triangular bars or ribs *a a a*, in combination with the outer shell or case A and the inner shell B, as herein described.

2. The serrated rings or flanges D D, so arranged and secured within the outer and inner plates or cases to overlap other ribs and the joints of safes, as herein set forth.

94,762.—Robert McMurray, Washington, D. C.—*Bolt for Trunk-Trays.*—September 14, 1869.

Claim.—1. The box C, with bands D D, formed from one piece of sheet-metal for inclosing spiral spring *d*, and for fastening bolt B to plate A, substantially as described.

2. The plate A, with button or headed pin F, and bolt, with fastener E and lip *a*, formed at the upper end of slot, in combination with box C, constructed substantially as described.

94,763.—George F. Morse Portland, Me.—*Steam Safety-Valve.*—September 14 1869.

Claim.—The annular safety-valve *d* with annular opening *b*, for steam escape, constructed as herein described.

94,764.—Gershom Mott, Joshua Morris, Jr., and David Lupton, Big Run, Ohio.—*Gate.*—September 14, 1869.

Claim.—The gates B D, plates *b b*, and rods *d d*, all constructed, arranged, and operating substantially as and for the purpose herein described.

94,765.—Moses Nelson, Taunton, Mass.—*Warp-Dressing Machine.*—September 14, 1869.

Claim.—1. The improved arrangement, substantially as hereinbefore described, and as represented in the drawings, of the delivery and receiving rollers and their sets or guides, the sizing-mechanism, and the drying-apparatus, the whole being so that the delivery and receiving rollers, and their guides, may be in close proximity, with the passage O between them, and with the drying-apparatus disposed so as not to come between the said receiving and delivery rollers and their sets of guides, so as to prevent access to either by a person when standing between them.

2. The arrangement and combination of the two steam-pipe-supporting bridges P P, with the two frames A I, the series of guides *a b*, the passage C, and the sizing and drying mechanism, and the series of guide, delivery, and receiving rollers arranged on such frames, substantially as described.

94,766.—William Patton and B. C. English, Springfield, Mass.—*Combined Watch-Key and Key-Ring.*—September 14, 1869.

Claim.—As a new article of manufacture, a combined watch-key and key-ring, formed of one piece of metal, substantially as shown and described.

94,767.—Leonard Phleger, Philadelphia, Pa.—*Steam-Generator.*—September 14, 1869.

Claim.—1. The arrangement of the curved tubes A, in combination with horizontal and inclined tubes B B B B, substantially as and for the purpose specified.

2. The construction and arrangement of the caps or water-ways C, C^1, C^2, and C^3, placed over the ends of the tubes A, and secured to the tube-sheets S, S^1, and S^2; also, the arrangement of the plates *p* and *p'* for the purpose of allowing the cap C^3 and tube-sheet S^2 to slide in and out, as and for the purpose specified.

3. The construction and arrangement of the return-bend R P, stand-pipes S P and S P', tube-sheet S^1, with openings O and O^1, steam-drum D, with shelves L and L', and necks P and P', so as to operate substantially as and for the purpose specified.

94,768.—William H. Pilgrim, Allegheny City, Pa.—*Sash-Balance.*—September 14, 1869.

Claim.—Suspending window-sash, through the media of cords D, pulleys *e*, and cams *g*, inserted in the frame, all constructed, arranged, and operating so that the cords are hidden in the frame, substantially as herein described, and for the purpose set forth.

94,769.—William Potter and Leonard J. Labounty, Lowell, Mass.—*Let-Off Mechanism for Looms.*—September 14, 1869.

Claim.—1. The combination of the racks *l'* and *p'*, pinions *n'* and *o'*, and cones *c'* and *d'*, when arranged substantially as herein described, and for the purpose set forth.

2. The combination of the clutches *i* and *k*, and gears *g* and *g'*, with the stop-motion rod *j'*, when used in connection with the cones *c'* and *d'*, for the purposes herein described and specified.

94,770.—Canceled.

94,771.—Joseph W. V. Rawlins and Samuel Stephens, Houghton, Mich.—*Ore-Grinder.*—September 14, 1869.

Claim.—1. The combination, with the mortar A, having the detachable bottom B, of the revolving crushers H I, suspended adjustably from the revolving shaft E, when arranged substantially as specified.

2. The arrangement of the hopper P, spouts S and S', feeding-arms Q, and mortar A, all substantially as specified.

3. The combination, with the mortar and crushers, of the weights M, detachably connected to the plate F, all substantially as specified.

94,772.—John Hermann Rudolph Reffelt, Hoboken, N. J.—*Calculating-Machine.*—September 14, 1869.

Claim.—The turning disk A, arranged between the stationary plates B C, attached to the frame D by means of the cross-bars E, when the same is provided with the dotted outer part, the two adding and subtracting circles on one side, and the multiplying and dividing circles on the other side, as herein shown and described, for the purpose set forth.

94,773.—William S. Reyburn and J. F. Martin, Philadelphia, Pa.—*Lightning-Rod.*—September 14, 1869.

Claim.—As an article of manufacture, a section of lightning-rod, made of one piece of sheet-metal doubled upon itself in ribs, substantially in the manner and for the purpose described.

94,774.—J. Reynolds, Crystal Springs, Miss.—*Combined Plow and Scraper.*—September 14, 1869.

Claim.—1. The concave mold-board scraper D, constructed as described, that is to say, with its landside end projecting substantially as specified, when used in combination with the plow C c^1, for the purpose set forth.

2. The adjustable brace-rod E, in combination with the beam A, standard C c^1, and mold-board scraper D, substantially as herein shown and described, and for the purposes set forth.

94,775.—Hiram Richmond, West Meriden, assignor to Charles Parker, Meriden, Conn.—*Match-Safe.*—September 14, 1869.

Claim.—A match-box, formed of the cast-metal back A, front D, and weighted door K, when all constructed and arranged substantially as specified.

94,776.—William F. Rippon and George A. Johnson, Providence, R. I.—*Lamp-Burner.*—September 14, 1869.

Claim.—The combination, in a wick-tube of a kerosene or other oil lamp, of a spring, A, and friction-roller D, acting in conjunction with the ratchet and the wick-tube below, when the said spring and the part of the tube with which it acts are corrugated, and all constructed and arranged substantially as specified.

94,777.—Reuben R. Royer, Ephrata, Pa.—*Water-Wheel.*—September 14, 1869.

Claim.—The arrangement and construction of the slotted plates E E' on the periphery of a movable ring, C, with intermediate side openings, in combination with the stationary or inner ring or case A, rack and pinion F R, operating in the manner and for the purpose specified.

Bridgeport, Conn., assignors to the UNION METALLIC-CARTRIDGE COMPANY, same place.—*Machine for Forming Cartridge-Shells.*—September 14, 1869.

Claim.—1. The spring-arms B, or their equivalents, for holding the shells securely in an upright position, substantially as described, and for the purpose set forth.

2. The spring-washer C, when arranged in combination with rotating disk A, for the purpose of regulating the friction or pressure thereon, substantially as described.

94,746.—BIRDSILL HOLLY, Lockport, N. Y.—*System of Water-Supplies for Cities.*—September 14, 1869.

Claim.—1. The described system, which, while it will supply a city with water, distributed for ordinary purposes, without the use of a reservoir or stand-pipe, or enlarged container of any kind, will, by the concentration of its currents, serve as an apparatus for extinguishing fires, substantially in the manner herein described.

2. In the above-described apparatus, the combination of the force-pumps A A′ and connecting-pipe D^2, with engines applied so as to operate either one or both of said pumps, at pleasure, substantially as described.

94,747.—BIRDSILL HOLLY, Lockport, N. Y.—*Safety-Valve for Water-Pipes.*—September 14, 1869.

Claim.—A water-chamber B, having a piston, G, working therein, combined with a safety-valve, so as to operate substantially as and for the purpose described.

94,748.—BIRDSILL HOLLY, Lockport, N. Y.—*Automatic Regulating-Valve.*—September 14, 1869.

Claim.—1. The shell or case A, constructed with a diaphragm, P, and provided with a spring-box, B, in combination with the flexible diaphragm J, a valve, G, and a connecting stem *g*, substantially as described.

2. The diaphragm J and valve G, connected together by a stem *g*, and joint *i*, substantially as and for the purposes described.

3. The adjusting-screw *c*, spring C, diaphragm J, partition P, and valve G, constructed and combined substantially as described.

94,749.—BIRDSILL HOLLY, Lockport, N. Y.—*Hydrant.*—September 14, 1869.

Claim.—1. The lining *t*, to the seat of the main valve, adapted to serve the double purpose of a seat, and also a packing at the joint between the pipe E and the foot D, in combination with the external casing A, substantially as described.

2. The arrangement of the leather ring *t*, between the valve *g* and the lower end of the valve-box G, in combination with the pipe E and external casing A, substantially as described.

3. The combination of the parts A B D E, substantially as set forth.

4. The cap C, applied on top of the hydrant, and supported upon posts *c*, in combination with key-rod F and central orifice *l*, substantially as and for the purpose described.

94,750.—JOSEPH W. HOPKINS, Brooklyn, E. D., N. Y., assignor to himself and WILLIAM H. M. PYE, same place.—*Valve for Steam-Engines.*—September 14, 1869.

Claim.—The secondary valve *i*, actuated by the rock-shaft *l*, in combination with the cylinder *p*, piston *o*, rod *q*, and arm *r*, for operating the valve of the main engine in the manner specified.

94,751.—WILLIAM HUNTER and DANIEL M. HUNTER, Meadville, Pa.—*Soil-Tiller.*—September 14, 1869.

Claim.—The construction of the head-piece C, with the beveled edge at *s*, in combination with the tines or teeth, constructed as described, for the purposes set forth.

94,752.—OLIVER P. HUSSEY, Nashua, N. H.—*Drawing-Frame.*—September 14, 1869.

Claim.—1. In combination with the yarn-guides, the draught-rollers, and the weight or device for pressing down the upper of such rollers at its middle, mechanism, substantially such as described, for moving the yarn-guides with equal velocities and simultaneously, first toward, and next away from each other, and the center of the upper or top roller of the draught-rollers, the whole being substantially in manner and for the purpose as set forth.

2. For effecting the movements of the yarn-guides, the combination of the slides H I, the two sets of studs *a b*, the lever U, the arms K N, the slide-rod L, the studs *k l*, and the eccentric or cam P, the whole being arranged and applied to the guides F G and the frame of the rollers, substantially in manner and so as to operate as explained.

94,753.—WILLIAM C. KEMP, Palmyra, Mo.—*Churn.*—September 14, 1869.

Claim.—1. The wings *a′*, hung upon pivots at the sides of the dasher, so as to whirl to and fro, substantially as and for the purpose described.

2. The block E, combined with the windlass D, in the manner and for the purpose set forth.

94,754.—WILEY KENYON, Crawfordsville, Ind.—*Photographic Head-Rest.*—September 14, 1869.

Claim.—The rod-guide represented in Fig. 1 by E′, and the parts as represented in Fig. 2 by A, and also the slide represented in Fig. 3 by E and D, arranged and operating substantially as and for the purpose specified, not limiting myself to any definite size of same.

94,755.—RODNEY G. KIMBALL, Albany, N. Y.—*Bent-Lever Balance.*—September 14, 1869.

Claim.—The levers D and F, in combination with the shaft C, quadrants A A and H, and hook R′, substantially as and for the purpose set forth.

94,756.—JEFFERSON KINDLEBERGER and WILLIAM AUGUSTUS ARNOLD, San Francisco, assignors to "THE INVENTORS' ASSOCIATION OF SAN FRANCISCO, CAL."—*Reversible But.*—September 14, 1869.

Claim.—1. The elliptic washer D, with its semicircular projection *f*, and supplemental pintle *e*, substantially as and for the purpose herein described.

2. Reversing a door-but or hinge so that it will open from either side, by means of a stationary and a movable pintle entering two holes in an elliptical lug on the reversing-leaf, substantially as above specified.

94,757.—CHESTER KING and S. P. JOHNSON, Cleveland, Ohio; said JOHNSON assigns his right to said KING.—*Flat Chain.*—September 14, 1869.

Claim.—The herein-described chain, the links of which are provided with lugs *a*, and form the hooks for connecting the links together, in the manner substantially as described, and for the purpose set forth.

94,758.—JOHN H. KINGSLAND, New York, N. Y., assignor to JAMES O. KINGSLAND and JOHN W. KELSEY, same place.—*Automatic Boat-Detaching Apparatus.*—September 14, 1869.

Claim.—1. The combination of the curved metallic hooks *a a*, loosely pivoted to the post A, at the point *b*, with the balanced weight-rod *c*, working in a slot of said post, in the manner described.

2. The combination, with a post, and the hooks thereto pivoted, of the sliding sleeve D, serving to lock the link and hooks together, as and for the purpose specified.

94,759.—ALFRED S. LINEBACK, Stockton, Utah Territory.—*Water-Power.*—September 14, 1869.

Claim.—1. The combination of the buckets J M, oscillating frame H I, apron L, and a regulator-valve, *i*, all operating substantially as and for the purpose herein set forth.

2. In combination with the above, the lever P, piece O, and link *j*, substantially as and for the purpose described.

94,760.—OLIVER D. LOMBARD, Lowell, Mass.—*Picking-Mechanism for Looms.*—September 14, 1869.

Claim.—The combination, with the picking-lever and staff, of the cord *k*, cap *p*, slide *l*, toothed cap *m*, and eye-bolt *j*, all constructed, arranged, and operating as described.

94,761.—William McFarland, Brooklyn, E. D., N. Y.—*Burglar-Proof Safe.*—September 14, 1869.

Claim.—1. The hardened-steel triangular bars or ribs *a a a*, in combination with the outer shell or case A and the inner shell B, as herein described.

2. The serrated rings or flanges D D, so arranged and secured within the outer and inner plates or cases to overlap other ribs and the joints of safes, as herein set forth.

94,762.—Robert McMurray, Washington, D. C.—*Bolt for Trunk-Trays.*—September 14, 1869.

Claim.—1. The box C, with bands D D, formed from one piece of sheet-metal for inclosing spiral spring *d*, and for fastening bolt B to plate A, substantially as described.

2. The plate A, with button or headed pin F, and bolt, with fastener E and lip *a*, formed at the upper end of slot, in combination with box C, constructed substantially as described.

94,763.—George F. Morse Portland, Me.—*Steam Safety-Valve.*—September 14 1869.

Claim.—The annular safety-valve *a* with annular opening *b*, for steam escape, constructed as herein described.

94,764.—Gershom Mott, Joshua Morris, Jr., and David Lupton, Big Run, Ohio.—*Gate.*—September 14, 1869.

Claim.—The gates B D, plates *b b*, and rods *d d*, all constructed, arranged, and operating substantially as and for the purpose herein described.

94,765.—Moses Nelson, Taunton, Mass.—*Warp-Dressing Machine.*—September 14, 1869.

Claim.—1. The improved arrangement, substantially as hereinbefore described, and as represented in the drawings, of the delivery and receiving rollers and their sets or guides, the sizing-mechanism, and the drying-apparatus, the whole being so that the delivery and receiving rollers, and their guides, may be in close proximity, with the passage O between them, and with the drying-apparatus disposed so as not to come between the said receiving and delivery rollers and their sets of guides, so as to prevent access to either by a person when standing between them.

2. The arrangement and combination of the two steam-pipe-supporting bridges P P, with the two frames A I, the series of guides *a b*, the passage C, and the sizing and drying mechanism, and the series of guide, delivery, and receiving rollers arranged on such frames, substantially as described.

94,766.—William Patton and B. C. English, Springfield, Mass.—*Combined Watch-Key and Key-Ring.*—September 14, 1869.

Claim.—As a new article of manufacture, a combined watch-key and key-ring, formed of one piece of metal, substantially as shown and described.

94,767.—Leonard Phleger, Philadelphia, Pa.—*Steam-Generator.*—September 14, 1869.

Claim.—1. The arrangement of the curved tubes A, in combination with horizontal and inclined tubes B B B B, substantially as and for the purpose specified.

2. The construction and arrangement of the caps or water-ways C, C^1, C^2, and C^3, placed over the ends of the tubes A, and secured to the tube-sheets S, S^1, and S^2; also, the arrangement of the plates *p* and *p'* for the purpose of allowing the cap C^3 and tube-sheet S^2 to slide in and out, as and for the purpose specified.

3. The construction and arrangement of the return-bend R P, stand-pipes S P and S P', tube-sheet S^1, with openings O and O^1, steam-drum D, with shelves L and L', and necks P and P', so as to operate substantially as and for the purpose specified.

94,768.—William H. Pilgrim, Allegheny City, Pa.—*Sash-Balance.*—September 14, 1869.

Claim.—Suspending window-sash, through the media of cords D, pulleys *e*, and cams *g*, inserted in the frame, all constructed, arranged, and operating so that the cords are hidden in the frame, substantially as herein described, and for the purpose set forth.

94,769.—William Potter and Leonard J. Labounty, Lowell, Mass.—*Let-Off Mechanism for Looms.*—September 14, 1869.

Claim.—1. The combination of the racks *l'* and *p'*, pinions *n'* and *o'*, and cones *c'* and *d'*, when arranged substantially as herein described, and for the purpose set forth.

2. The combination of the clutches *i* and *k*, and gears *g* and *g'*, with the stop-motion rod *j'*, when used in connection with the cones *c'* and *d'*, for the purposes herein described and specified.

94,770.—Canceled.

94,771.—Joseph W. V. Rawlins and Samuel Stephens, Houghton, Mich.—*Ore-Grinder.*—September 14, 1869.

Claim.—1. The combination, with the mortar A, having the detachable bottom B, of the revolving crushers H I, suspended adjustably from the revolving shaft E, when arranged substantially as specified.

2. The arrangement of the hopper P, spouts S and S', feeding-arms Q, and mortar A, all substantially as specified.

3. The combination, with the mortar and crushers, of the weights M, detachably connected to the plate F, all substantially as specified.

94,772.—John Hermann Rudolph Reffelt, Hoboken, N. J.—*Calculating-Machine.*—September 14, 1869.

Claim.—The turning disk A, arranged between the stationary plates B C, attached to the frame D by means of the cross-bars E, when the same is provided with the dotted outer part, the two adding and subtracting circles on one side, and the multiplying and dividing circles on the other side, as herein shown and described, for the purpose set forth.

94,773.—William S. Reyburn and J. F. Martin, Philadelphia, Pa.—*Lightning-Rod.*—September 14, 1869.

Claim.—As an article of manufacture, a section of lightning-rod, made of one piece of sheet-metal doubled upon itself in ribs, substantially in the manner and for the purpose described.

94,774.—J. Reynolds, Crystal Springs, Miss.—*Combined Plow and Scraper.*—September 14, 1869.

Claim.—1. The concave mold-board scraper D, constructed as described, that is to say, with its landside end projecting substantially as specified, when used in combination with the plow C c^1, for the purpose set forth.

2. The adjustable brace-rod E, in combination with the beam A, standard C c^1, and mold-board scraper D, substantially as herein shown and described, and for the purposes set forth.

94,775.—Hiram Richmond, West Meriden, assignor to Charles Parker, Meriden, Conn.—*Match-Safe.*—September 14, 1869.

Claim.—A match-box, formed of the cast-metal back A, front D, and weighted door K, when all constructed and arranged substantially as specified.

94,776.—William F. Rippon and George A. Johnson, Providence, R. I.—*Lamp-Burner.*—September 14, 1869.

Claim.—The combination, in a wick-tube of a kerosene or other oil lamp, of a spring, A, and friction-roller D, acting in conjunction with the ratchet and the wick-tube below, when the said spring and the part of the tube with which it acts are corrugated, and all constructed and arranged substantially as specified.

94,777.—Reuben R. Royer, Ephrata, Pa.—*Water-Wheel.*—September 14, 1869.

Claim.—The arrangement and construction of the slotted plates E E' on the periphery of a movable ring, C, with intermediate side openings, in combination with the stationary or inner ring or case A, rack and pinion P R, operating in the manner and for the purpose specified.

permits the said fly-wheel to continue its motion independent of and unretarded by said accelerator, substantially as and for the purposes set forth.

94,810.—ADOLF COHN, Louisville, Ky.—*Coffee-Roaster.*—September 14, 1869.

Claim.—A coffee or malt roaster, consisting of the furnace E, fixed cylinder D, sliding frame C, shaft B, roasting-cylinder A, and doors F, all arranged and operating substantially as herein shown and described, so that the frame C can, with the roasting-cylinder, be drawn out of the cylinder D, when the doors are opened, as set forth.

94,811.—JAMES R. COLE, Demopolis, Ala.—*Lamp-Burner.*—September 14, 1869.

Claim.—A lamp-burner, constructed with the divided wick-tube A A′, the plates B C, the latter being air-tight, the two tubes I J, of different lengths, the foraminated ring G, the cap F, the ratchet-wheel E, the posts D D, the hinge *c*, and the catch *c′*, all arranged and operating in the manner and for the purposes described.

94,812.—FRANCISCO B. CONTESSA, New York, N. Y.—*Presser-Foot for Sewing-Machines.*—September 14, 1869.

Claim.—The combination with the presser-foot of the plate *e*, having the flanged wrist *f* thereon, and the soft revolving band *c*, all arranged and fitted together, as shown and described.

94,813.—JAMES DICKEY, Venango City, Pa.—*Torpedo for Oil-Wells.*—September 14, 1869.

Claim.—A torpedo, having the space between its inner and outer cases charged with compressed oxygen, substantially as described, for the purpose specified.

94,814.—JOEL FALES, Cambridge, Mass.—*Floor-Gauge.*—September 14, 1869.

Claim.—1. A floor-gauge, composed of pieces *d d*, having shoulders or clasps B B, rod A, and try-gauges *c c*, or substitute shown in Fig. 3, and set-screws *a a*, all constructed, arranged, and operating substantially as described and set forth.

2. The combination of rods A′ A′, pieces *d d*, having shoulders or clasps B, supports B′ B′, set-screws *a a*, and try-gauges *c c*, or substitute shown in Fig. 3, the whole making a floor-gauge, constructed, arranged, and operating substantially as shown and described, as and for the purposes set forth.

94,815.—CHARLES H. FRANKLIN, Jersey City, N. J.—*Wrought-Iron Mold for Vulcanizing Rubber Car-Springs.*—September 14, 1869.

Claim.—As a new article of manufacture, the wrought-iron cylinder or tube A, for the purpose herein set forth and described.

94,816.—PHINEAS FROST, Medfield, Mass.—*Grinding-Plate for Paper-Pulp Engines.*—September 14, 1869.

Claim.—1. A "bed-plate," so called, for paper-pulp engines, composed of two series of upright bars and their movable knives or blades, when the latter are placed entirely above the confining-bolts of the device, and when the foundation of such knives is a concave surface transversely, essentially in manner and for the purpose as explained.

2. The body or foundation of a "bed-plate" for paper-pulp engines, composed of two series of bars, when the upper edges of such bars, in aggregate, compose concave surfaces transversely of their length, substantially in manner and for the purpose hereinbefore described and shown.

94,817.—EBENEZER G. GREEN, East Gloucester, Mass.—*Hoisting-Apparatus.*—September 14, 1869.

Claim.—The employment of a movable shoe, or of several shoes, arranged to support the foot of the boom, substantially as and for the purpose set forth.

94,818.—G. HABERLAND, Pontiac, Ill.—*Floating Velocipede.*—September 14, 1869.

Claim.—The described construction and arrangement of the double crank-shaft *c c′*, standards *s s*, steering-wheel *w*, supported by a sleeve, inclosing the shaft *c c′*, ropes *r r′*, and rudder T, when combined in the manner and for the purposes herein set forth.

94,819.—JOHN L. S. HALL, Wheeling, West Va.—*Compound for Curing Corns, Bunions, &c.*—September 14, 1869.

Claim.—The application of nitric acid, in combination with the herein-described compound, in the manner and for the purposes herein set forth.

94,820.—GEORGE A. HARLEY, New York, N. Y.—*Hair-Cutter.*—September 14, 1869.

Claim.—A hair-cutter, formed of a comb in one piece, and a knife inserted in a longitudinal aperture made therein for the purpose.

94,821.—JOSEPH HATHAWAY, Woodstock, Vt.—*Water-Wheel.*—September 14, 1869.

Claim.—1. The chutes E and cam-posts *h*, constructed, arranged, and operating substantially as and for the purposes shown and described.

2. The levers I, and the plate K, with the rolls *m*, combined, arranged, and operating substantially as described, for the purposes set forth.

3. In combination with the chutes E, arranged and operating as described, the lips S, on the buckets R, substantially as and for the purposes set forth.

94,822.—MARTIN R. HELIKER, Norwalk, Ohio, assignor to RICHARD G. ELLIOTT.—*Clothes-Drier.*—September 14, 1869.

Claim.—The combination of the hubs B C, arms *b*, braces *c*, jointed post A, blocks E E′, and cords *h* b^3, all constructed and arranged to operate as set forth.

94,823.—JAMES B. HENDRICKS, Clayton, Ill.—*Axle-Box.*—September 14, 1869.

Claim.—The combination with the spindle, which has the double screw-thread, of the bearings C C′, which have grooved flanges *d*, to receive the ends of the axle-box, substantially as herein shown and described.

94,824.—H. N. HILL, Pontiac, Mich.—*Picket-Fence.*—September 14, 1869.

Claim.—The improved fence, formed of sections, consisting of rails B, and the pickets A, having prismatic central portions, and cylindrical ends, said sections being connected by the coupling-rails C C, fitted on three of the pickets of one section and one of the other, or on two pickets of each, as herein shown and described, for the purposes specified.

94,825.—VITALIS HIMMER, Brooklyn, N. Y.—*Stem-Winding and Setting Attachment to Watches.*—September 14, 1869.

Claim.—1. The jointed plate G I, acted upon by the pin *m* of the mainspring-drum, for throwing the winding-attachment out of gear, substantially as herein shown and described.

2. The plate G, when slotted and fitted around the swiveled plate *p*, which rests on a cross-bar, *r*, of the plate G, so that the latter can be turned horizontally and vertically, substantially as herein shown and described.

94,826.—Canceled.

94,827.—LEVI S. IVES, Pittsburgh, Pa.—*Steam-Generator.*—September 14, 1869.

Claim.—1. The combination, with a steam-boiler, of the pan C, constructed as described, and arranged to receive the feed-water, substantially as specified.

2. The combination, with the boiler and the said pan, of either or both sets of blow-off pipes, D E F or H J, substantially as specified.

94,828.—CHARLES E. JOHNSON, San Francisco, Cal.—*Portable Fence.*—September 14, 1869.

Claim.—1. The arrangement of the key C, constructed as described, with reference to the fence-panels, whereby the same are firmly held by said key when brought into line, substantially as specified.

2. The brace, consisting of the pieces of timber E and F, blocks *f* and *g*, and opening *e*, constructed

and arranged substantially as and for the purpose herein described.

3. The brace D and coupling C, in combination with the panels of a fence, the whole constructed and arranged substantially as and for the purpose herein described.

94,829.—JACOB G. JONES, Baltimore, Md.—*Sash-Balance.*—September 14, 1869.

Claim.—The sash-balance herein described, consisting essentially of the adjustable shaft *f*, gear-wheel *g*, spring *k*, shaft *d*, pinion *e*, and pulleys *b*, all constructed, arranged, and operating in the manner and for the purpose specified.

94,830.—JAMES KING, Suckasunny, N. J.—*Churn.*—September 14, 1869.

Claim.—1. The square or rectangular churn, composed of the flanged bottom A, sides B, flanged top rim or plate C, cover H, and dasher D, made in two equal parts, and provided with the crank E and socket F, all constructed and arranged as herein shown and described, whereby the parts may be readily joined together or detached from each other, and packed for transportation or otherwise, as set forth.

2. Forming the dasher D, formed in two parts, detachably connected to each other at right angles by means of transverse notches in the centers of their adjacent edges, substantially as herein shown and described, and for the purpose set forth.

3. In combination with the dasher, constructed as described, the semi-cylindrical block or socket F, adapted to be inserted in the recess in the end of the dasher, to receive the square or angular end of the crank-shaft E, all as herein shown and described.

94,831.—EDOUARD LARSSEN, Stavanger, Norway.—*Tobacco-Pipe Stem.*—September 14, 1869.

Claim.—1. In combination with the cylinder B, adapted to contain water, the interior bent tubes *c d*, plugs *f*, and caps or short tubes C D, substantially as herein shown and described, for the purpose specified.

2. In combination with the cylinder B, and caps or short tubes C D, the elastic packing-rings *b* or *s*, substantially as herein shown and described, for the purpose specified.

3. In combination with the cylinder B, interior bent tubes *c d*, and short tube D, the valve *m*, substantially as herein shown and described, for the purpose specified.

94,832.—R. O. LOWREY, Salem, N. Y.—*Compound of Hard Rubber and Fibrous Material.*—September 14, 1869.

Claim.—1. Mixing, uniting, or incorporating the fibers or any fibrous material with hard-rubber compound, and then submitting the mixture to the process of vulcanization, in the manner substantially as herein described, and for the purposes set forth.

2. The products resulting from the process herein described, in whatever form or shape they may be produced, as new articles of manufacture.

94,833.—WILLIAM A. MADARA, Spang's Mills, Pa.—*Smelting-Furnace.*—September 14, 1869.

Claim.—The double-cone regulator A, constructed as described, in combination with the suspension-chain or bar B, cross-bar C, guide-bar D, and lower cross-bar E, substantially as herein shown and described, and for the purposes set forth.

94,834.—MODEST MERK, Rochester, N. Y.—*Carriage-Axle Gauge.*—September 14, 1869.

Claim.—1. The bevel-gauge A, composed of tongue *a*, arm *a'*, and pivoted blade B, substantially as and for the purposes set forth.

2. The axle-gauge C, when used in combination with the bevel-gauge A, for the purposes set forth.

3. The fixed projection *i* on the face of the bar C', in combination with the spurs *x* on the templets, for the purpose specified.

94,835.—A. J. MISENHIMER, Oskaloosa, Ill.—*Planter and Cultivator.*—September 14, 1869.

Claim.—1. The combination of the seed-boxes G, axle A, crotched braces I, and hooks L, when constructed and arranged substantially as specified.

2. The combination of the seed-boxes G, connecting-rods N, cranked axle O, wheels N', connecting-rod Q, oscillating-rod K, and valves S, all arranged substantially as specified.

3. The described arrangement of the vibrating fulcrum V, oscillating seat-support or lever W, yoke U, cross-bar T, rods N, and wheel N', with reference to each other, as set forth and shown.

94,836.—Canceled.

94,837.—CHARLES H. NYE, Vineland, N. J.—*Boat-Detaching Apparatus.*—September 14, 1869.

Claim.—The arrangement of the rods *d*, recessed levers *b*, shoulder-bolts *a*, lever *f*, lugs *j*, stanchions *e*, and bifurcated braces *k*, with reference to each other, whereby levers *b* are moved simultaneously in the same direction, to lock or unlock the bolts *a*, as herein described, for the purpose specified.

94,838.—A. J. OCKINGTON, Stratford Hollow, N. H.—*Machinery for Making Clothes-Pins.*—September 14, 1869.

Claim.—1. The combination of the inclined hopper B, recessed blank-holder and transferrer C, and guide E, arranged as described, so that the first will feed the blanks by gravity to the second, which shall transfer and hold them to the saw, as set forth.

2. The carrier-wheel N, provided with the hooked fingers O and sliding spring-fingers P, combined with the carrier I, and arranged to present the blanks to a saw, W, all substantially as specified.

3. The combination of rotating-wheel N, provided with spring-holding fingers P, as shown, with the perforated gear S, spring R, and spiral guide T, all arranged and operating together, as described.

94,839.—JOHN A. REED, New Market, N. J.—*Carriage-Wheel.*—September 14, 1869.

Claim.—A wheel, formed with metal spokes that extend in radial lines, or nearly so, and are bent into a trough-shape near their outer portions, where they curve around, and are attached upon the inside of the tire or felly, as and for the purposes set forth.

94,840.—PIERRE RIUYPEYROU, San Francisco, Cal.—*Tooth-Wash.*—September 14, 1869.

Claim.—A tooth-wash, compounded of the above-named ingredients, prepared in the manner substantially as above described.

94,841.—NATHANIEL ROBINSON, Patchogue, N. Y.—*Plow.*—September 14, 1869.

Claim.—1. The arrangement of the double beam G G' and colter I, substantially as and for the purposes specified.

2. In connection with the double beam G G', cross-bar E, and plow A B C, the vertical screw-standard H, and adjusting-nuts *m m'*, constructed to operate substantially as and for the purposes specified.

94,842.—M. L. ROOD, Denver, Colorado Territory.—*Velocipede.*—September 14, 1869.

Claim.—1. The frame A B, made of two parts, the front part having its rear end supported on the segmental plate *c*, of the rear part, while the front upright arm *a* of the rear piece connects the two parts, substantially as herein shown and described.

2. The arrangement of the jointed frame and steering-device, with respect to the driving-mechanism, in the manner and for the purpose specified.

3. The brake, consisting of the Gothic-shaped frame L, operated by a lever, *t*, and arranged substantially as herein shown and described.

4. The combination of the rods H, stirrups *h i*, cranks *g*, and shaft C, with the handles J, levers *m*, and rods *n*, all connected to form the propelling-mechanism, substantially as herein shown and described.

94,843.—PELEG ROSE, Norwich, Conn.—*Paper-Pulp Engine.*—September 14, 1869.

Claim.—1. Constructing the back-fall of a paper-engine with a top curving back from the cylinder, as seen at *g*, and with a curved back slope, as seen at *h*, substantially as described.

2. Constructing the corners of the tub and midfellow of a paper-engine curved instead of angular, substantially as and for the purposes described.

94,844.—T. SALISBURY, Albion, Pa.—*Arrangement of Gearing for Driving Agricultural Machinery.*—September 14, 1869.

Claim.—The combination, with sleeves J J, rotating loosely upon the same continuous axle B, of a spur-driving gear, C, fastened fixedly thereon, the intermediate parts being substantially as shown and described.

94,845.—ROBERT SCORER, Troy, N. Y.—*Cooking-Stove.*—September 14, 1869.

Claim.—1. In a three-flued and water-reservoir cooking stove, the arrangement of the expanded and contracted parts F and E, forming the rising flue thereof, together as shown, and in the rear of the descending flues H and H′, so as to overlap the same, substantially as described.

2. In a three-flued and water-reservoir cooking-stove, the combination of the expanded lower part F, and the contracted upper part E of the rising flue thereof, with each other and with the diving-flues H and H′, arranged substantially as described.

3. In a three-flued cooking-stove, the aforesaid enlarged and contracted rising flue thereof, arranged in the rear, and overlapping the diving-flues H and H′, substantially as described.

4. The extension G of the oven of a three-flued cooking-stove to the rear plate A of the same, between the diving-flues H and H′ thereof, substantially as described.

5. The construction of the water-tank or reservoir D of a cooking-stove, at its front side, where adjoining the rear end of the stove, with a recessed contracted flue, E, therein, substantially as and for the purpose described.

6. The combination, with each other, of the water-reservoir D, its recessed contracted rising flue-part E, the expanded rising flue-part F, the diving-flues H and H′, and the damper *a*, all constructed and relatively arranged, substantially as and for the purpose described.

94,846.—J. G. SEHORN, Iowa City, Iowa.—*Hay-Loader.*—September 14, 1869.

Claim.—The adjustable chain-brace I, swiveled band or sleeve E G, and rotating bar F, in combination with each other and with the bar H, post A, cross-bar B, adjusting stop-pin K, and rope L, substantially as herein shown and described, and for the purpose set forth.

94,847.—TALIAFERRO P. SHAFFNER, Louisville, Ky.—*Cartridge for Artillery and Blasting.*—September 14, 1869.

Claim.—The application of intestine, membranaceous, or cutaneous matter, for sacks or bags, to be used as artillery or blasting-cartridges, substantially in the manner and for the purposes hereinbefore described.

94,848.—ORIN SKEEL, Winslow, Ill.—*Washing and Wringing Machine.*—September 14, 1869.

Claim.—The combination of the tub, the spring-supported frame E, rollers D, hinged frame F, and the rollers N, when arranged with the shaft of the driving-gear for the rollers N, and the table P, of the wringer-roller R and the roller S supported in adjustable spring-bearings T, all substantially as specified, with the windlass, as shown.

94,849.—THOMAS J. SLOAN, New York, N. Y.—*Porcelain-Knob Machine.*—September 14, 1869.

Claim.—1. The employment, in combination with a feeder or hopper, A^2, for supplying the material, a perforated rotary disk, U, for receiving the charges, and a stationary bottom-plate, W, and packing-plunger *z*, of suitable dies G and S *a d*, for compressing the material into shape within the perforated disk, the whole constructed to operate substantially as hereinbefore set forth.

2. The employment, in combination with a die and perforated holder, or disk, of another compound die, adapted to form the shank-cavity and back side of the knob, substantially as herein set forth.

3. The combination, with the feeder A^2, molding-disk U, and dies G and S *a d*, and packing-plate W, and plunger *z*, of an ejector, *i*, and receiving-apron, the whole arranged to operate as specified, for the purpose set forth.

4. The employment, in combination with the face of a die, of a cleaning and lubricating brush, or its equivalent, which is arranged to revolve against the face of the die in the manner described.

5. Hanging either of the dies, or die-frames, on a yielding fulcrum, substantially as described, so that in the event of an overcharge from "claming," or other obstruction to the movements of the die, any breakage or overstraining of the machine or its parts will be avoided, as set forth.

94,850.—WILLIAM H. STEARRETT, Wilmington, Del.—*Dumping-Wagon.*—September 14, 1869.

Claim.—1. The combination of the springs E and the turning axle C, to which they are secured, with the horizontal supporting and locking plates F, for the wagon-body, constructed and arranged substantially as described.

2. The horizontal plates F, having supporting-rollers *a* at each end, and slots *b b′*, by which the body is both supported upon and connected with the plates, by the locking-pins *c*, in the manner described.

3. The curved connecting rods H, secured to the front truck-frame, and hinged to a rear turning axle, C, in the manner described.

94,851.—WILLIAM A. TARBUTTON, Harrisburgh, Pa. — *Machine for Forming Sheet-Metal Pans.*—September 14, 1869.

Claim.—1. The bed and bending-plates A B, provided with the elongated slots *b b b b*, in combination with the "corner-formers" D D and adjustable "clamp pivot-blocks" *a a*, substantially as set forth.

2. The corner-formers D′ D′, in combination with angular blocks *d d*, adjustable in elongated slots, substantially as set forth.

94,852.—HORACE THOMPSON, Concord, N. H.—*Beefsteak-Crusher.*—September 14, 1869.

Claim.—In a beefsteak-crusher, the combination of a hinged and recessed compressor, B, provided with a series of chambers for the reception of the detachable cutter-stocks C, all as shown and described.

94,853.—THOMAS C. WALTER, San Francisco, Cal.—*Thill-Coupling.*—September 14, 1869.

Claim.—The arrangement of the several parts of the above-described device, when the movable part of the eye D is hinged directly to the other part C, while the prolongation E of the former is secured in the recess at *a* by the band or slide F, held by the spring *b*, substantially as described.

94,854.—JOHN M. WHARTNABY, Philadelphia, Pa., assignor to himself and SAMUEL P. FAUNCE, same place, assignors to said WHARTNABY and FRANCIS SCHNECHTER.—*Rock-Drill.*—September 14, 1869.

Claim.—A rock-drill, having an inclined end, and an inclined or vertical cutting-edge, substantially as and for the purpose described.

94,855.—JAMES H. WILLIAMS, Tontzville, Kansas.—*Harrow.*—September 14, 1869.

Claim.—The combination of the angular head-piece B, section C, pivot-bolts, links D, and stay-bar E, when all arranged substantially as specified.

94,856.—CHARLES G. WILSON, Brooklyn, N. Y. —*Railway.*—September 14, 1869.

Claim.—1. The combination of the two wooden rails B, the two flanged iron plates C, and the central steel rail D with each other and with the longitudinal sleepers or timbers A, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the tie-bars E, gradnated washers F, and spring or wedge keys G, with the compound rails B C D C B of the track, substantially as herein shown and described, and for the purpose set forth.

94,857. — JOSEPH ALLONAS, Mansfield, Ohio, assignor to C. AULTMAN and H. H. TAYLOR, same place.—*Machine for Punching Metal.*—September 14, 1869.

Caim. — 1. In combination with a machine for punching metals, the adjustable guide-bar D, pro-

vided with a perforated extension and the sliding gauge E, operating substantially as set forth.

2. In combination with a machine for punching metals, the adjustable guide-bar D, provided with a perforated extension, the sliding gauge E, and the tongue E′.

3. The combination of the bed-plate A, lugs F′, levers F, cammed lever G *g*, lugs G′, and guide-bar D.

94,858.—LAURITZ ANDERSON, Chicago, Ill.—*Hobby-Horse.*—September 14, 1869.

Claim.—The improvements in a rocking-horse herein described, consisting of the plate B, frame C, pulley *c*, spring D, and elastic cord H, constructed and arranged to operate substantially as specified.

94,859.—CHARLES H. BAGLEY and CHARLES E. MASON, Elgin, Ill.—*Stove-Pipe Shelf.*—September 14, 1869.

Claim.—1. The shelf A, when provided with a heating-chamber beneath it, constructed substantially as and for the purposes specified.

2. The device *m*, for holding drying-bars, in combination with a hollow warming shelf, constructed substantially as described.

3. The deflector C, when provided with the curved wings *d*, in combination with the register *n*, plates A B, and side D, of a warming-shelf, substantially as and for the purpose specified.

4. The warming-shelf herein described, when provided with the damper or register *n*, placed in the deflector C, and the circular damper *r*, inclosing the damper *n*, substantially as and for the purposes specified.

94,860.—R. A. BELDEN and E. H. CUTLER, New Haven, Conn.—*Machine for Planing Metals.*—September 14, 1869.

Claim.—1. The longitudinal bar E, combined with the transverse bar L and pinion I, so that the movement of the planer-table B will force the transverse bar out and in to ship the belt, substantially in the manner described.

2. In combination with the above, the arrangement of the pinion R, to operate the cross-head P, to work the feeding-device of a planing-machine, substantially as set forth.

94,861.—ADOLPH BERND, GUSTAV BERND, and ABNER WHITE, Macon, Ga., assignors to ADOLPH BERND and GUSTAV BERND.—*Harness-Fastening.*—September 14, 1869.

Claim.—In a harness the combination of the metal plate B, having slots *b* in its raised portion, with the hook C, provided with a transverse flange *c*, substantially as and for the purpose set forth.

94,862.—DAVID P. BIRD, Richwood, Ohio.—*Key-Hole Guard.*—September 14, 1869.

Claim.—The key-hole slide or protector, in combination with guides and spring, arranged as described, so that the slide may be released without any manipulation of the spring, as set forth.

94,863.—JOHN BIRD, Philadelphia Pa.—*Press for Molding Glassware.*—September 14, 1869.

Claim.—1. Extending the lower portion of each of the bearings *b′ b′* downward through and beyond the spring-plate E, substantially in the manner described and set forth, for the purpose specified.

2. The eccentric projections 4 4, and the flanges 3 3, on the inner ends of the bearings *b′ b″*, in combination with the corresponding concentric seats around in the holes in the ends of the cross-head, as and for the purpose described, the said bearings and cross-head being adjustably secured together by means of screw-bolts or otherwise.

94,864.—THOMAS BOYD, Cambridge, Mass.—*Chimney-Top.*—September 14, 1869.

Claim.—1. The combination and arrangement of the pipe or funnel C, casing B, and cap E, substantially as and for the purpose set forth.

2. The combination of the funnel C, casing B, and coiled pipe F, substantially as and for the purpose set forth.

3. The combination of the chimney-top, consisting of the funnel C, casing B, and cap E, with the flue or chimney A, substantially as and for the purpose set forth.

94,865.—C. J. BRACKENBUSH and C. E. MERRIFIELD, Indianapolis, Ind.—*Harvester.*—September 14, 1869.

Claim.—1. In a harvester, the combination of the platform A, toothed endless belts C, false platform E, and grain-box F, when arranged to operate substantially as and for the purpose set forth.

2. The mechanism herein described for simultaneously operating the bottom of the grain-box and the false platform, substantially as and for the purpose set forth.

94,866.—JABEZ BURNS, New York, N. Y.—*Window-Shade Fixture.*—September 14, 1869.

Claim.—The triangular wedge-shaped cams *e*, contained in the recesses *k*, of the cam-case *l*, and acting against the flat surfaces of the pin *c*, which forms the journal for one end of the roller A, all combined and arranged as herein shown and described.

94,867.—H. N. BURR, Mount Gilead, Ohio.—*Combination-Square.*—September 14, 1869.

Claim.—1. The combination of the frame A, arbor C, head B, and blade D, in the manner and for the purposes described.

2. The combination of the frame A and feet E E, in the manner and for the purpose set forth.

3. The spacing-arm K, arranged for conjoint operation with the blade D, in the manner and for the purpose specified.

4. The angle-arm L, in combination with the instrument constructed as described, for the purpose stated.

94,868.—JOHN CHASE, Paterson, N. J.—*Turbine Water-Wheel.*—September 14, 1869.

Claim.—1. The combination, with a horizontal water-wheel, of a gate to control the discharge from or through its buckets, arranged to rotate in common with said wheel, substantially as specified.

2. The independent throttle-valves E E to the discharging-mouths of the buckets, made to operate as additional buckets and revolving with the wheel, also being collectively adjustable to stop or start or regulate the speed of the wheel, essentially as described.

3. The adjustment of the gate which controls the discharge-openings from the wheel, and rotates with the latter, from or through the center of the wheel, essentially as specified.

94,869.—E. W. CLARK, Hartford, Conn.—*Solution for the Treatment of Wood.*—September 14, 1869.

Claim.—The solution for the preservation of wood, composed of the ingredients specified, in or about in the proportions set forth.

94,870.—WILLIAM A. CLARK, Woodbridge, Conn.—*Washer-Cutter.*—September 14, 1869.

Claim.—The combination, with the annular spring-borne center C and its stock A, of the cutter-arm B, constructed as described, of a main branch, *m*, and clamping-plate *n*, formed with dovetailed inner edges, to hold the adjustable cutters R R in between them, as shown and described.

94,871.—JAMES M. CONNEL, Newark, Ohio.—*Harvester.*—September 14, 1869.

Claim.—1. An endless chain, with cutters attached, so constructed and arranged that it may be made to move to the right or left, at the option of the driver, substantially as shown and described.

2. The links of the endless chain, when formed with depressions on the upper sides for the reception of the cutters, and depressions on the lower sides for engagement with the pulleys, substantially as shown and described.

3. The chain-cutters, formed in sections, with two knives to each section, and with the angular shoulders, substantially as shown and described.

4. The finger-bar U, with the rectangular depression *u**, the groove *u*, and the beveled front edge, when made as shown and described, for the purpose specified.

5. The lever Z, in combination with the horizontal shaft C, pinion D, and bevel-wheels *c c'*, for starting, stopping, and changing the motion of the chain-cutters, when arranged and operating as herein shown and described.

6. The vertical shaft F and bevel-wheel *f*, in combination with the bevel-wheels *c c'*, when arranged and operating as herein shown and described.

7. The divider T, with its rounded projection *t*, and the vertical guard-plate R', in combination with the chain-cutters, when made and operating as shown and described.

94,872.—William G. Creamer, Brooklyn, N. Y.—*Hot-Air Register.*—September 14, 1869.

Claim.—The construction of a register for the discharge of hot air, in such a way that the valves may be adjusted and fixed at any desired point, substantially as described, and for the purposes mentioned.

94,873.—George Crompton, Worcester, Mass.—*Loom.*—September 14, 1869.

Claim.—1. Lifter, depressor, and evener-bars, connected by the slide-rods and links, and actuated from the crank-shaft, by means of levers *p* and connectors *r s*, combined, arranged, and operating substantially as described.

2. The combination, with the connectors *r s*, of the levers *p*, provided with the slots *t u*, by which the relative movements of the opposite ends of the bars, pointed to the lever by these connectors, may be adjusted, substantially as described.

94,874.—Lancelot Davidson, Brantford, Canada.—*Changeable-Gauge Railway-Car Truck.*—September 14, 1869.

Claim.—1. The combination of cases F, boxes E, axles C, and forks G, when arranged substantially in the manner herein shown and described, and for the purpose set forth.

2. The packing *a* on the outer ends of the axles C, when arranged to slide in the boxes D, together with the axles C, substantially as herein shown and described.

3. The forks G G, adapted to lock the wheels B and their axles C in suitable positions to fit the car or truck to a suitable gauge, as specified.

4. The non-flanged broad wheels I, when arranged in combination with the shifting wheels B of a changeable-gauge railroad-track, substantially as and for the purpose herein shown and described.

94,875.—Loyal M. Doddridge, New Mount Pleasant, Ind.—*Rotary Clod-Fender.*—September 14, 1869.

Claim.—1. In combination with a plow or cultivator, a reversible revolving concave clod-fender.

2. The combination of the clip C, when constructed and attached to plow-beam, as shown, and having the stop C', with the crank-shaft B B', and dished frame A, substantially as and for the purpose set forth.

3. In the above combination, the dished dirt-pan A', substantially as and for the purpose set forth.

4. The construction of the frame A, substantially as described.

94,876.—Francis B. Dunn, New York, N. Y.—*Steam-Generator.*—September 14, 1869.

Claim.—1. The arrangement of the feed-pump B, steam-generating tubes C, and steam-drum G, provided with connecting-pipe I, substantially as set forth.

2. The arrangement of the collars F within the feed-head E opposite or in line with the tubes C, and each provided with a small orifice, *m*, for the equal distribution of water or other fluid to said tubes, substantially as specified.

94,877.—Levi S. Enos, Almond, N. Y.—*Sheet-Metal for Roofing and for other Purposes.*—September 14, 1869.

Claim.—1. As an article of manufacture, a metallic roofing, composed of block-tin, lead, and bismuth, or lead and bismuth alone, substantially as herein set forth.

2. The process above described, for manufacturing metallic roofing, substantially as herein set forth.

94,878.—David Evans, Eureka, Cal.—*Circular-Saw Mill.*—September 14, 1869.

Claim.—The saws A, A^1, A^2, and C, when arranged to operate substantially as and for the purpose described.

94,879.—Elihu Evans, Denver City, Colorado Territory.—*Section-Roller and Marker Combined.*—September 14, 1869.

Claim.—The section-roller and marker for irrigating purposes, substantially as above described, having the frame A, draught-pole B, short independent rolls R R, and interposed markers M M, rotating independently of each other and of the rolls, when constructed in the manner herein set forth, and for the purposes specified.

94,880.—Joseph Firmenich, Buffalo, N. Y.—*Manufacture of Beer, Ale, and other Fermented Liquors.*—September 14, 1869.

Claim.—1. The manufacture of ale, beer, porter, and other similar fermented liquors direct from grain, by the starch and saccharine process, either alone or combined with malt, substantially as herein described.

2. The combination of the several processes herein described, for crushing the grain, separating the husk and non-starchy material, the saccharification of the starch, and conversion of the same into ale, beer, porter, or other similar fermented liquors, all substantially as herein described.

94,881.—Thomas Jefferson Flagg, New York, N. Y., assignor to Fisk, Clark and Flagg, same place.—*Suspender-Ends.*—September 14, 1869.

Claim.—The composite felt suspender-end, herein-before described, composed of felt, combined with a strengthening-material, the same being a new article of manufacture.

94,882.—William A. French, Philadelphia, Pa.—*Compound for Coating the Surfaces of Steam-Boilers, &c.*—September 14, 1869.

Claim.—A non-conducting coating or cement, composed of the ingredients herein described.

94,883.—William A. French, Philadelphia, Pa.—*Compound for Coating the Surfaces of Steam-Boilers, &c.*—September 14, 1869.

Claim.—A plastic non-conducting-coating, composed of the ingredients substantially as described.

94,884.—Henry Grogan, Flatbush, N. Y.—*Vacuum-Still.*—September 14, 1869.

Claim.—1. The conical steam-jacket D, in the interior of the still, and over the mouth of the discharge-pipe, substantially as set forth.

2. The arrangement and combination of the still A, jacket D, discharge-pipe E, and condenser G, substantially as set forth.

3. The arrangement and combination of the still A, jacket D, discharge-pipe E, residuum-tank L, pipes *l l*, and condenser G, all as substantially shown and described.

94,885.—Manasseh Grover, Clyde, Ohio.—*Nut-Fastener.*—September 14, 1869.

Claim.—1. The nut-fastener A, arranged and operating substantially for the purpose hereinbefore set forth.

2. The nut T, or its equivalent, arranged and operating substantially for the purpose hereinbefore set forth.

94,886.—C. L. Hammond, Java, N. Y.—*Medical Compound.*—September 14, 1869.

Claim.—The above-described medical compound, made substantially in the manner and for the purposes herein set forth.

94,887.—A. B. Hitchcock, Juneau, Wis.—*Combined Rake and Reel for Harvesters.*—September 14, 1869.

Claim.—1. The arm *m* of the rake, when constructed as described, in combination with the cylinder F.

2. The collar *g*, in combination with the collars *v* and *f*, when constructed and operating substantially as and for the purposes specified.

3. The lever *l*, in combination with the sliding collar *g* and stationary collars *v* and *f*, substantially as described.

4. The arm *o*, in combination with the cams *a* and *w*, for operating and turning the rake, substantially as specified.

5. The cam *b*, in combination with the spring *d*, for locking and unlocking the rake, substantially as described.

6. The post-collar *v*, when provided with teeth *t* and projection *u*, substantially as and for the purposes specified.

7. Connecting the separate arms H of the reel-bars D to the shaft by mortise and set-screw, or bolt I, so that the diameter of the reel can be regulated, and the reel laterally adjusted, substantially as specified.

94,888.—C. HOËLLER, Cincinnati, Ohio.—*Ice-Creeper.*—September 14, 1869.

Claim.—The frame A, the bridge A′, provided with a series of knife-edges, the bosses *b*, armed with steel points, the cushion *a*, and eccentric knife-edges B, or their equivalent, when the same are constructed and arranged substantially as and for the purpose specified.

94,889.—JESSE HUDSON, Charleston, Ill.—*Horse-Rake.*—September 14, 1869.

Claim.—1. The arms C C, so arranged as to operate the prongs of the hay-rake over obstructions, substantially as set forth.

2. The combination of the elongated axle A with the projecting tines, and the pivoted arms C C, all substantially as set forth.

94,890.—THOMAS M. HUSTIN, Orange, Ind.—*Machine for Filing Saws.*—September 14, 1869.

Claim.—1. The block Y, provided with a burr, so that the file can be lowered or raised, and working on the screw-rod W, in combination with the file-bar *f*, screw *g*, and set-screw *i*, constructed to operate as and for the purposes set forth.

2. The slide L, moving back and forth in the frame K, and provided with the clamps M, brace P, and spring, and so constructed that it can be moved by means of the screw-rod N, so as to adjust the saw without loosening the clamps, substantially as shown.

3. Providing the heel of the file with grooves, so that it can move up and down, for the purpose of giving elasticity to the file, substantially as set forth.

4. The set-screw *i*, bearing upon the arm C, so as to raise the file upward in its backward motion, in combination with the screw *g*, having a spiral spring wound its surface, arranged to operate for the purpose described.

5. The cylinder *o*, in which the ends of the file are secured, in combination with the segment *n*, when used substantially as specified.

6. The segment *n*, having openings in its top, so that it can be secured at any desired point for giving a suitable pitch to the file, substantially as described.

7. Levers H and S, spring V, and cam-wheel F, when used to move the slide forward, in combination with the screw U and slide L, when constructed as described, and operated by the screw-rod N, substantially as shown.

8. The file-holder, when composed of the file-bar *f*, grooved wheel *d*, block *k*, segment *n*, and cylinders *o*, when combined substantially as described.

94,891.—THOMAS L. JONES, Natchez, Miss.—*Combined High and Low Pressure Engines.*—September 14, 1869.

Claim.—1. The combination of pipe O, valve-chest M, valve *n*, and pipe Q, when the latter is arranged at the side of the valve-chest, with an air-chamber above it, substantially as set forth.

2. The cross-head T, in combination with the valve-stem n^1, fixed to it by a set-screw, the valve-stem m^1 sliding loosely through it, and the stop *v*, to regulate the distance which the rod m^1 slides through the cross-head, substantially as and for the purposes set forth.

3. The combination and arrangement of the valve-chests M N, valves *m* m^1 *n* n^1, passage P, pipes Q R, cross-head T, and springs m^2 n^2, substantially as described.

94,892.—EDMUND KEITH, Buffalo, N. Y., assignor to himself, BELA H. COLEGROVE, and CHAUNCEY B. HUTCHINS, same place.—*Water-Meter Adapted for Rotary Pumps.*—September 14, 1869.

Claim.—1. The arrangement, with the case A and paddles C, of the inclosing piston-head B, with the flange *i*, inclosing the operating-parts, consisting of the cam-ways *f* *f*′ and cross-arms *m* *m*′, the whole operating in the manner and for the purpose specified.

2. The combination, with the case A and paddles C, of the flat extended butment *d*, on one side of the case, and serving the double purpose of a stop to the water and a guide to the paddles, as described.

94,893.—FRANCIS KEMLO, Boston, Mass.—*Fish-Hook.*—September 14, 1869.

Claim.—The combination of the stem A, sliding hook B, and lock C′, arranged to operate substantially as and for the purpose set forth.

94,894.—FRANCIS KEMLO, Boston, Mass.—*Fish-Hook.*—September 14, 1869.

Claim.—A fish-hook, constructed with a long barb-end, and provided with a spring-lock, for retaining a fish after it has been hooked, substantially as shown and described.

94,895.—FRANCIS KEMLO, Boston, Mass.—*Fish-Hook.*—September 14, 1869.

Claim.—The combination of the stem A, plate B, springs *b* b^1 b^2, grappling-hooks C, plate D, and bait-hooks E, all arranged to operate substantially in the manner set forth.

94,896.—JAMES T. KETCHLEDGE, Burns, Mich.—*Elevator.*—September 14, 1869.

Claim.—1. The center-pole A, provided with the slide C and sleeve H, in combination with the braces D and leg B, when used to form an elevating-apparatus, substantially as described.

2. The pivot E and lever F, provided with three pulleys, in combination with the cord G and sleeve H, substantially as described.

3. The platform I, attached to the elevating-apparatus and provided with a device for holding a vessel of water, substantially as set forth.

4. The trestle O, when constructed in the manner, and used substantially as described.

5. The platform I, slide C, cord G, pivot E, braces D, and legs B, when all are used to form an elevating-apparatus, as specified.

94,897.—JUDSON N. KNAPP, Syracuse, N. Y.—*Blacking for Harness-Leather, &c.*—September 14, 1869.

Claim.—A blacking-compound, composed of the within ingredients, in about the proportions mentioned, substantially as set forth.

94,898.—JULES FRANÇOIS LAFROGNE, Paris, France.—*Apparatus for Carburetting Air.*—September 14, 1869.

Claim.—1. The novel application to the carbonizing-apparatus of a motor actuated by a calorific supply obtained from the gas produced, the which motor may be worked by air, gas, or steam; and I claim particularly the use of Laubereau's motor, before mentioned, in conjunction with my invention.

2. The reheating of the hydrocarbon essential oils or liquids by the use of a jacket attached to the motor, in which said jacket water is caused to circulate.

3. The employment of a series of bellows with continuous action worked by the motor, and serving for drawing in and expelling air, and of a reservoir for accumulating the air and regulating its flow.

4. The reheating of the air before its admission into the carbonizer.

5. The employment of the mass of wool and shavings, moistened by capillary attraction, and also by an injection of liquid by the motor.

94,899.—NORBERT LANDRY, San Francisco, Cal.—*Velocipede.*—September 14, 1869.

Claim.—A velocipede, constructed substantially as described, consisting of four wheels, one fast and one loose, upon the double crank-axle I, the treadles H, supporting-braces E J J, spring F, and guiding-rod M M, with upright arms or handles N N, as and for the purpose set forth.

94,900.—WILLIAM LEONARD, Orleans, Ind.—*Gate.*—September 14, 1869.

Claim.—The shaft *b*, arm *c*, spring *d*, and hook *e*, in combination with gate C and post A, arranged as herein described.

94,901.—NATHANIEL B. LEWIS, Hopewell, N. Y.—*Ditching-Machine.*—September 14, 1869.

Claim.—The scoop D, rollers H and K, traveling-platform R, apron T, adjustable handles U, and driving-wheel and pinion, as described, when constructed and arranged to operate substantially as and for the purposes specified.

94,902.—WALTER A. LOVELACE, Richmond, Mass.—*Interfering-Pad.*—September 14, 1869.

Claim.—1. An interfering-pad, provided with wire or elastic metal clamps, constructed substantially as shown and described.

2. In combination with the elastic metal clamps, the pad, or pad-frame, constructed of elastic wire, in a convolute form, substantially as specified.

94,903.—EDWARD P. LYNCH, Davenport, Iowa.—*Cultivator.*—September 14, 1869.

Claim.—1. A walking cultivator, having the central or fifth shovel applied thereto, substantially as described.

2. The combination of the bars C and the beam D, the latter being curved, as shown, and secured to the former by the bolt *o* and pin *e*, as set forth.

3. Securing the beam D to the bar B, by means of the bolt *o* and clip *a*, with the pin *e*, as described.

4. Constructing the beams of cultivators of wrought-iron bars, made thicker on their lower edges, as herein shown and described.

94,904.—J. MCCUNE, Auburn, Ind.—*Knitting-Machine.*—September 14, 1869.

Claim.—1. A rotary knitting-machine, having a tapering needle-cylinder, grooved at both ends, so that the needles can be used at either end for the purpose of knitting different sizes of fabrics on the same machine, the parts being constructed and arranged substantially as and for the purpose set forth.

2. The combination of the tapering and reversible needle-cylinder B with the tapering and reversible shell C, having the cam-grooves C^1 and C^2 all constructed and operating as described, so that a fabric may be knit at both ends of the needle-cylinder, substantially as and for the purpose set forth.

94,905.—JOHN MCNEVEN, New York, N. Y.—*Fresh-Air Apparatus.*—September 14, 1869.

Claim.—The cap A, provided with one or more air-tubes, B, having inlet and outlet-valves, with a suitable fastening to hold it in position when applied to the face, substantially in the manner and for the purposes herein shown and described, combined with the elastic packing, as set forth.

94,906.—LEWIS H. MITCHELL and LEVI STONE, Mount Vernon, Ohio.—*Rotary Steam-Engine.*—September 14, 1869.

Claim.—1. The construction and arrangement of the revolving arm F, with reference to passages *e* and *d*, substantially as described.

2. The construction and arrangement of the valves C, *f*, and *n*, with reference to the openings *e* and *d*, substantially as specified.

94,907.—JAMES O. MORSE, Englewood, N. J., and GARDNER D. HISCOX, Brooklyn, N. Y.—*Kettle for Boiling by Steam.*—September 14, 1869.

Claim.—1. The combination, for the purpose of forming a kettle for boiling by steam, of a hollow cast bottom, fitted to receive and contain steam, with a body or sides of sheet-metal, or other thin metal, formed separately, and fitted and put together, substantially as herein described.

2. The combination, for a like purpose, of such a hollow cast bottom, having its upper surface tinned, or otherwise protected against corrosion by the chemical action of the contents of the vessel, with a body or sides formed of sheet-metal, or other material, of a kind not liable to be so corroded.

94,908.—E. R. NORNY, McDonough, Del., assignor to himself and AMOS CARLISLE, Philadelphia, Pa.—*Preserving Animal and Vegetable Substances in Transit.*—September 14, 1869.

Claim.—1. The combination and arrangement of the valve I with the compartment A, substantially as and for the purpose set forth.

2. The arrangement of the vessel F, bracket E, elevated open bottom B, gate G, and valve I, in relation to each other, and the compartment A, substantially as and for the purpose specified.

94,909.—J. A. PARK, Lansing, Mich., assignor to himself and WILLIAM WOODHOUSE, same place.—*Hay-Fork.*—September 14, 1869.

Claim 1.—Providing the fork with a shield, C, secured to one side of it, when constructed and made to operate substantially as and for the purpose set forth.

2. The combination and arrangement of the shield C, prongs B and B′, lever L, and the ear or socket E, when all constructed substantially as and for the purpose set forth.

94,910.—W. S. PELHAM, Kirkville, Iowa.—*Hand Corn-Planter.*—September 14, 1869.

Claim.—The combination and arrangement of seed-slide C, scatterer E, and flexible partition F, substantially as and for the purpose set forth.

94,911.—WILLIAM QUANN, Philadelphia, Pa., assignor to himself, CHARLES C. LATHROPE, and A. R. WITMER.—*Furnace for Reducing Gold, Silver, Copper, and other Refractory Ores.*—September 14, 1869.

Claim.—1. A furnace, A, having a roof *d*, and bed *a*, inclined toward each other, substantially as described, in combination with a cupola, C, of the form or approximating to the form described and illustrated.

2. The charging-holes *j* and *j′*, arranged, with respect to the cupola C and furnace A, substantially in the manner described.

3. The combination, with the furnace A and cupola C, of an oven, F, substantially as herein set forth.

4. The combination and arrangement of the furnace A, cupola C, oven F, passages *k* and *k′*, tank G, and chimney H, when the whole are arranged for joint operation, substantially in the manner described.

5. The chamber g^1 and guard g^2, arranged, with respect to the fire-place B and door *g* of a furnace, substantially as herein set forth.

94,912.—BARNET R. RAPP, Philadelphia, Pa., assignor to himself, E. LANE, and J. GORDON MAXWELL, same place.—*Thill-Coupling.*—September 14, 1869.

Claim.—1. The shaft, hung at its end N to a stationary pin, C, the block of rubber H, adapted to the rounded end of the shaft, and adjustable to and from the same, and the cam-lever F, bearing with its inner end against a plate, I, beneath the block H, the whole being arranged substantially as described.

2. The arrangement, on the cam-lever F, of the arms *f f*, all substantially as and for the purpose set forth.

94,913.—JONAS RAUCH, Selin's Grove, Pa., assignor to himself and FREDERICK APP, same place.—*Seaffold for Painters.*—September 14, 1869.

Claim.—1. The post A, with hinged brace-frame D, foundation-frame C, platform E, carriage B, with lifting-apparatus, and spring and lever *l*, substantially as shown and described.

2. In combination with the frame F of the described scaffold, the roller U, arranged as specified.

94,914.—JOHN ROBBINS, Centralia, Ill.—*Clothes-Line Holder.*—September 14, 1869.

Claim.—The device herein described, having jaws

A and B, loops H and I, and rivets or pins *c c*, constructed, arranged, and operated substantially as specified.

94,915.—DANIEL G. ROLLIN, New York, N. Y.—*Bustle.*—September 14, 1869.

Claim.—1. A bustle, composed of hoop-skirt wires, united together in the manner and for the purpose substantially as described and represented.

2. The bustle, in combination with a hoop-skirt, when provided with the means of raising or lowering the forward ends of the bustle, to give greater or less prominence to the latter, substantially as described.

94,916.—TITUS H. RUSSELL, Northfield, Vt.—*Water-Wheel.*—September 14, 1869.

Claim.—1. The threaded shaft D and check-nuts d^1 d^2, in combination with the shaft B^1, bearing *d*, step *c*, and stationary shaft C, the whole constructed and operating substantially as and for the purpose described.

2. The pivoted collars F F′, in combination with the tubular shaft B, stationary shaft C, and tubular bearing E′, substantially as set forth.

3. The rings *h* h^1, gates H, and movable chutes H^2, in combination with the case E and stationary chutes H^1, constructed and operating substantially as described.

4. A friction-roller or gear-wheel, within the bearing of the countershaft G, and pressed up to the latter by a spring for the purpose of supplying oil to the bearings, substantially as described.

94,917.—A. C. SAWYER, Canton, N. Y.—*Butter-Tub.*—September 14, 1869.

Claim.—The mode of securing the covers to butter-tubs by the use of two short levers meeting in the center and secured by the use of the concave or inverted U-shaped button, with its flange or flanges S, operating for the purpose and in the manner substantially as set forth.

94,918.—HENRY F. SHAW, West Roxbury, assignor to JAMES A. WOODBURY, Boston, Mass.—*Harvester-Cutter.*—September 14, 1869.

Claim.—1. Combining with the divided cutter-bar of a mowing-machine, the clearing-hook K K′, or its equivalent, operating for the purpose set forth.

2. The finger P P′ P″, made substantially as described, in combination with the clearing-hook K K′, as and for the purpose set forth.

94,919.—GEORGE H. SHEARER, Bay City, Mich.—*Saw-Mill.*—September 14, 1869.

Claim.—1. The construction of the jambs or ways, or both, of a saw-mill, in such manner that access may be had to the bearing-ends of the nodal-pin or cross-head without removing or loosening said nodal, or either side of the ways in which it moves.

2. The jambs or ways of a saw-mill, provided with mortises or perforations, for the purpose set forth.

3. The removable back D, in combination with the sides C C, operating as set forth.

4. The cap B, in combination with the jamb A.

94,920.—NOAH C. SMITH, Berlin, assignor to the ROYS & WILCOX COMPANY, East Berlin, Conn.—*Die for Manufacturing Spring-Calipers.*—September 14, 1869.

Claim.—The dies A A′, constructed and operating to form spring-caliper and divider-blanks, substantially as specified.

94,921.—JAMES G. STEPHENSON, Bucyrus, Ohio.—*Horse-Power.*—September 14, 1869.

Claim.—1. The trip F and pivoted bar D, or their equivalents, for throwing the parts in and out of gear, substantially as shown and described.

2. The brake G and lever I, when arranged and operated as shown and described.

94,922.—ROBERT N. STEWART, Philadelphia, Pa.—*Attachment for Gas-Burners.*—September 14, 1869.

Claim.—The heater B, the same being constructed substantially as and for the purpose hereinbefore set forth.

94,923.—JOHN P. SUMMERS, Tiffin, Ohio.—*Rock-Drill.*—September 14, 1869.

Claim.—1. The miter-wheel C, provided with the hinged doors G G, all constructed and used substantially as and for the purposes specified.

2. The auger Y, when provided with the movable bottom *d*, and valves *c*, and adjustable bits or drills *m*, when used in the manner and for the purpose set forth.

3. The arrangement of the tilting-frame T T, disks N N, rock-shaft W, and arm X, with the drill *l*, all connected and operated substantially as and for the purposes set forth.

4. The arm H, in combination with the auger Y, when used in the manner and for the purpose specified.

5. The combination of the lever P and shaft with wheels L and M and the wheel K, all operating substantially as and for the purposes set forth.

6. The arrangement of the wheels L, M, I, K, C, E, and disks N N, all substantially as and for the purposes set forth.

7. The arrangement of the wheels O, S, and *r*, reel *g*, tilting-frame T, and derrick X, when combined for the purpose set forth.

94,924.—HANNAH G. SUPLEE, San Francisco, Cal.—*Sewing-Machine Needle.*—September 14, 1869.

Claim.—The within-described needle for sewing-machines, having a slot or opening, A, from the eye, with points *c d* and projection *b*, substantially as and for the purpose set forth.

94,925.—WILLIAM F. SWEET, Jackson, Pa.—*Indicating-Attachment to Weighing-Scales.*—September 14, 1869.

Claim.—1. The application, to the sway-beam of a scale, of a hook, substantially as described, in such a manner that the weight, when the scales are balanced, shall indicate the cost of the article weighed at a specified price per pound.

2. The removable frame N, applied to the sway-beam of a scale, for supporting the table or book *h*, substantially as herein described and shown.

3. The combination of the removable frames N and *p*, for supporting a book, *h*, and retaining it in an open position, substantially as described.

4. The removable balance-beam D, constructed substantially as described, and capable of application to any scale of the kind specified, for balancing the scales with a vessel thereon, which vessel is to contain the article purchased, before weighing the latter.

94,926.—JAMES H. TRACY, Mayville, Mich.—*Hook.*—September 14, 1869.

Claim.—The combination, substantially as described, of hook B with shield A, constructed and operating as set forth.

94,927.—CHARLES M. TYLER, Indianapolis, Ind.—*Velocipede.*—September 14, 1869.

Claim.—1. The cover or awning herein described, arranged for operation by the cords *v* and *y* and the hook *h*, substantially as specified.

2. The head-rest H and spindles *x* and *z*, when arranged, with reference to a velocipede, substantially as specified.

94,928.—WILLIAM P. UHLINGER, Philadelphia, Pa.—*Rustic Settee.*—September 14, 1869.

Claim.—1. The eccentric lock *l*, when arranged to operate with reference to the slanting pins *e*, substantially as and for the purposes specified.

2. The eccentric lock *l*, when arranged to operate with reference to the lugs *f* and screws *g*, substantially as and for the purposes described.

3. The brace-lock *c*, when arranged to operate with the slanting pin *e*, substantially as and for the purposes specified.

4. The brace-lock *c*, when arranged to operate with the lugs *f* and screws *g*, substantially as and for the purposes set forth.

5. In combination with the rustic settee herein described, the slanting pin *e*, and the modifications *f* and *g*, constructed and arranged substantially as specified.

94,929.—JOHN N. WELLS, Brooklyn, N. Y., assignor to himself, JOHN S. HULL, and JEROME B. BRYANT, Cincinnati, Ohio.—*Burglar-Alarm.*—September 14, 1869.

Claim.—1. The adjustable spring-seat L, for the armature E, substantially as herein specified.

2. The arrangement of the adjusting-support I, arm H, screw *l*, and of the key G, in connection therewith, as set forth.

3. The coiled wire *n*, to connect the key with the hammer and armature-lever, for the purpose specified.

4. Making the peripheral band *u* of the base A, part of the circuit, as herein specified.

5. The construction and arrangement of the indicating-knobs M M, with notched shafts or equivalent thereof, the springs *s s*, and spring-clamp connections N N, together constituting the indicating-device, substantially as herein specified.

6. Placing the indicator upon, or attaching it to the same base A that supports the magnets and bell.

94,930.—PHILIPP WENZEL, Mayence-on-the-Rhine, Germany, assignor to IGNATIUS HAHN, Philadelphia, Pa.—*Rest for Lathes for Turning Spheres.*—September 14, 1869.

Claim.—The arrangement, herein described, of the carriage B, its pillars *c e*, and plate D; the conical stem F, its worm-wheel G, and arm H; the worm *e*, rest J, stem *r*, tool M, and screw *k*, all constructed as set forth.

94,931.—LEVI H. WHITNEY, Washington, D. C.—*Clothes-Boiler.*—September 14, 1869.

Claim.—The combination of the body or shell A of the boiler, the false bottom E, and heating-pipes F, or their equivalents, substantially as and for the purpose set forth.

94,932.—JOSEPH B. WILSON, Philadelphia, Pa., assignor to ELEANOR WILSON, same place, and HENRY M. RILE, Wilmington, Del.—*Carriage-Axle.*—September 14, 1869.

Claim.—A hollow axle, cast, annealed, and hardened, substantially as and for the purpose herein set forth.

94,933.—WILLIAM W. T. GREENWAY, Baltimore, Md.—*Thill for Carriages.*—September 14, 1869.

Claim.—1. The use, in connection with vehicles, of the shafts or thills 2, separately hinged and braced thereto, so that each may move vertically, independent of the other, and be rigidly braced laterally, substantially as described.

2. In combination with the said brace and shaft, a suitable trace-fastening, substantially as set forth.

94,934.—ANSON ATWOOD, New York, N. Y.—*Revenue-Stamps for Cigars.*—September 21, 1869; antedated September 13, 1869.

Claim.—The several parts of the device, for the purposes set forth and described, and the combination of the same, for the purposes and in the manner herein described.

94,935.—JOHN S. BARDEN, Providence, R. I.—*Alloy for Tubing.*—September 21, 1869.

Claim.—Tubing made from metal composed of the elements and possessing the characteristics substantially as described.

94,936.—JOHN S. BARDEN, Providence, R. I.—*Alloy for Making Water-Meters.*—September 21, 1869.

Claim.—A water-meter, made from metal composed of the elements and possessing the characteristics substantially as described.

94,937.—JOHN S. BARDEN, Providence, R. I.—*Boiler-Feed-Water Regulator.*—September 21, 1869.

Claim.—1. The combination of the chamber B, tube D, link H, bell-crank lever K, rod L, and piston N, the whole constructed and arranged substantially as described.

2. The combination of the weight R, bell-crank lever K′, rod L, and piston N, the whole constructed and arranged substantially as described.

3. The combination of the cylinder O, piston N, in connection with the parts M and M′ and tube P, the whole constructed and arranged substantially as described.

94,938.—GEORGE W. BENTON, East Pike, N. Y.—*Washing-Machine.*—September 21, 1869.

Claim.—The arrangement, with the concave D, ribbed cylinder C, frame E, and tub A, of the adjusting-screw *o*, rod *l*, spiral springs *s g*, and guide-pins *r f*, as herein set forth.

94,939.—JOB W. BLACKHAM, Brooklyn, N. Y., assignor to himself and JAMES H. PRENTICE, same place.—*Felting-Machine.*—September 21, 1869.

Claim.—1. In combination with one or more rolls D D, the stop or stops T, and reciprocating-presser I, combined and arranged for joint operation, relatively to each other and to the means for wetting, heating, &c., in a felting-machine, substantially as and for the purposes herein set forth.

2. The lever M, the arms M′, the slides O, and wheels P, in combination with the reciprocating-presser I of a hat-felting machine, and arranged to operate therewith in the manner and for the purposes herein set forth.

94,940.—CHARLES BOECKH, Buffalo, N. Y.—*Brush.*—September 21, 1869.

Claim.—The combination, with the brush-head A and handle C, of the metallic plug D, entered reversely from the bottom, thereby expanding the handle in its socket, and provided with a head, *a*, thereby securing the bristles in place, the whole arranged as described, and operating in manner and for the purpose specified.

94,941.—SAMUEL BRILLINGER, Clarence Center, N. Y.—*Brush.*—September 21, 1869.

Claim.—1. The combination and arrangement of the conical screw B, and expanding-nut *a a*, as herein described, the said screw screwing directly into the sectional nut, without the interposition or agency of other parts, as specified.

2. In combination with the sectional nut *a a*, the defenders *c e*, arranged as described, and operating in the manner and for the purpose specified.

94,942.—M. S. BRINGIER, Ascension Parish, La.—*Apparatus for Evaporating Cane-Juice.*—September 21, 1869.

Claim.—The mode of evaporation herein described, when the same is effected by the means and in the manner substantially as described, for the purpose set forth.

94,943.—JOHN BRISTOW, Detroit, Mich.—*Axle-Box Lid.*—September 21, 1869; antedated September 6, 1869.

Claim.—A removable car-axle oil-box cap, having a central opening, closed by a tapering slide, with gap, stop, and projection underneath, the slide retained in any desired position by side spring or springs, substantially as set forth, and for the purpose described.

94,944.—ERASTUS CASWELL and HERMAN LACHMANN, Chicago, Ill.—*Signs for Street-Lamps.*—September 21, 1869.

Claim.—Suspending or hanging the letters designating the names of streets on street-lamps by the hinged bar *a*, for the purpose and in the manner substantially as described.

94,945.—CHARLES B. CLARK, Buffalo, N. Y.—*Sash-Pulley.*—September 21, 1869.

Claim.—The overlapping ears A A of the cap, combined and operating with the corresponding portions B B of the base-portion, substantially as set forth.

94,946.—CHARLES E. CLUM, Troy, N. Y., assignor to himself and MOSES C. HASKELL, same place.—*Scrubber.*—September 21, 1869.

Claim.—1. The manner of securing the scrubbing-strips by means of the clamps E E, as herein shown and described.

2. In combination with the toggle-jointed clamps, the pins G G, and openings B B, as and for the purpose specified.

3. Holding the sponge I on the same side with and between the scrubbing-strips, and the manner of securing the same, as herein set forth.

94,947.—E. T. COVELL, Brooklyn, N. Y.—*Machine for Closing the Seams of Metallic Vessels.*—September 21, 1869; antedated September 10, 1869.

Claim.—1. One or more movable or stationary, notched or grooved "anvil" or bed plates, in combination with one or more opposite and correspondingly-notched or grooved "drop-plates," and with intermediate fixed or movable "supporting-plates" or mandrel, when said compressing "anvil" and "drop" plates are arranged in pairs to meet, embrace, and close upon opposite points on the sides, or upon the edges or angles of a metallic vessel sustained by said intermediate supporting-plates or mandrel, so as to compress and close the seams of the vessel, all substantially as herein described.

2. In combination with compressing "anvil" and "drop" plates, arranged and operating to close the joints at the ends of a metallic vessel, an elastically-yielding, grooved, or notched central supporting-plate, M, substantially as herein described.

3. In combination with compressing "anvil" and "drop" plates, operating substantially as herein described, to close the end joints of metallic vessels, elastically-yielding sustaining or supporting plates L L′, arranged at right angles thereto, to receive and support the projecting edges of the joints at the ends of the vessel, and to be removed therefrom at pleasure, substantially in the manner herein set forth.

4. In combination with "anvil" and "drop" plates operating to close the side seams or seam of a metallic vessel, substantially as herein described, a central, inner-supporting block or mandrel, pivoted and supported at right angles thereto, upon elastically-yielding supports to receive and sustain the metallic vessel under the operation of said plates, substantially as herein set forth.

94,948.—WILLIAM P. DAVIS and SAMUEL ELWELL, Jr., Gloucester, Mass.—*Protector for Stems of Boats.*—September 21, 1869.

Claim.—The combination and arrangement of the elastic head B, as described, with the bow or cutwater of a boat, A, the said elastic head being for the purposes or objects as set forth.

94,949.—FREDERICK DODGE, Syracuse, N. Y.—*Door-Spring.*—September 21, 1869.

Claim.—In a door-spring, constructed substantially as described, attaching the spring-plate, or its equivalent, to the door, by means of the extended socket and the pivoted crank-shaft, as and for the purpose described.

94,950.—JOHN J. EMERY, Owl's Head, Me.—*Surge-Reliever for Cables.*—September 21, 1869.

Claim.—The combination and arrangement of the chain-cable pawl A, the bridge B, the spring or springs S S, and their supporting-rods *a a*, or mechanism, the whole to operate substantially as set forth.

94,951.—FRANKLIN FIELD, Troy, N. Y.—*Necktie.*—September 21, 1869.

Claim.—As a new article of manufacture, a neck-tie, consisting of two parts, A and A′, joined together, as above described, and adapted to be attached to one end of a collar, substantially as hereinbefore specified and set forth.

94,952.—MORRISON FOSTER, Cleveland, Ohio.—*Grinding-Mill.*—September 21, 1869.

Claim.—The reducing-disks, which are arranged and constructed to work together, with their axes oblique to each other, in combination with a central feed-passage, C, substantially as herein described.

94,953.—NEWTON J. GLOVER, Waveland, Ind.—*Portable Fence.*—September 21, 1869; antedated August 31, 1869.

Claim.—In combination with the brace A, provided with cleats *c*, the notched blocks *o*, constructed and arranged as described.

94,954.—J. T. GREENWOOD, Beloit, Wis.—*Washing-Machine.*—September 21, 1869.

Claim.—The arrangement of the levers C C, in combination with the covered rollers B and D D, guide-rollers E E, and springs *d d*, when constructed and connected as shown and described.

94,955.—N. B. HADLEY and R. J. COSTAIN, Northampton, Mass.—*Compound for Emery-Wheels and Oil-Stones.*—September 21, 1869.

Claim.—The compound for emery-wheels and oil-stones, substantially as herein set forth and described.

94,956.—JOHN B. HARRIS, Ottawa, Ill.—*Machine for Dressing Millstones.*—September 21, 1869.

Claim.—1. The arm E, in combination with eccentric or cam-shaft Q, and guide-bar C, so that the arm may be moved from side to side, without disturbing its vibrations, substantially as set forth.

2. The bar J, in combination with the grooved shaft K, for moving the frame B upon the base-frame, substantially as specified.

3. The shaft or roller K, when provided with the spiral groove *b* and the longitudinal groove *c*, substantially as and for the purposes described.

4. The adjustable stop or rest *f*, in combination with the lever M, pawl N, and ratchet-wheel L, for adjusting the movement of the frame B, substantially as specified.

5. The adjustable stop G, provided with the set-screw *i*, in combination with the pick I, provided with the set-screw *j* and the arm E F, for adjusting the exact distance for the pick to enter the stone, substantially as specified.

6. The combination and arrangement of the frames A and B, arms E F, shaft Q, guide C, arm or rod J, and roller K, with the ratchet-wheel L and driving-mechanism, substantially as set forth.

94,957.—WILLIAM A. HASTINGS, Thorndike, Mass.—*Mounting Lease-Rods for Looms, &c.*—September 21, 1869.

Claim.—An elastic warp-index, consisting of one or more rods *a*, to each end of which is attached the spring *b*, secured to a convenient place upon the loom, all constructed and operating substantially as and for the purposes herein described and set forth.

94,958.—SIMEON HAWKINS, Carmel, Ind.—*Tile-Machine.*—September 21, 1869.

Claim.—The reciprocating plungers B B, connected by bars X, and operated by crank J and toggle-bars H, turning upon semicircular bearings I, in combination with double cut-off K K and cam L, when said parts are constructed and arranged to operate, with relation to each other, as and for the purpose herein set forth.

94,959.—L. S. HEREFORD, West Baton Rouge Parish, La.—*Apparatus for Evaporating Cane-Juice.*—September 21, 1869.

Claim.—The two elongated semi-cylindrical or elliptical boilers A, when provided with flues B B′ B″ B‴, and the dampers E, in combination with the troughs G and the recipient H, when the latter is provided with the pipes 5, 6, and 7, in which are placed stop-cocks, and all the parts are constructed, arranged, and operate substantially as described, for the purpose set forth.

94,960.—AMOS A. HOTCHKISS, Hannibal, Mo., assignor to himself and WILLIAM J. QUALEY, same place.—*Brake-Shoe.*—September 21, 1869.

Claim.—1. The spring-catch *b*, working in a socket in the brake-shoe, for the purpose of holding the sole in place, constructed and operating substantially as herein described and shown.

2. The sole B, with its lugs, shoe A, spring *o*, and catch *b*, all arranged, constructed, and operating substantially as and for the purpose shown and specified.

94,961.—ANDREW B. HOWLAND, Titusville, Pa.—*Argand Lamp.*—September 21, 1869.

Claim.—As a new article of manufacture, a glass lamp, with a central glass tube, concentric with the burner, opening at the top, substantially as and for the purposes set forth.

94,962.—THOMAS F. KIFF, Havana, N. Y., assignor to ELIJAH A. SIMMONS, Chatsworth, Ill.—*Holdback for Carriages.*—September 21, 1869.

Claim.—The combination of the bracket A, lever B, spring D, and rivet C, substantially as herein shown and described, and for the purpose set forth.

94,963.—EDWIN KING, Dunkirk, N. Y.—*Field-Fence.*—September 21, 1869.

Claim.—The posts A B, clips E, in combination with the fence-bars *b*, secured by means of bolts, or their equivalent, as and for the purpose substantially as set forth.

94,964.—JOHN KINHART, Athens, Ill.—*Adjustable Harrow.*—September 21, 1869.

Claim.—1. An adjustable harrow, consisting of two parts A A′, united by a hinge and connected by a rod, E, when constructed and arranged substantially as and for the purpose shown and specified.

2. A double adjustable harrow, composed of the devices above specified, and the parts B B′, with the guiding-yoke D, all relatively arranged and constructed and operated substantially as and for the purpose shown and specified.

94,965.—JEREMIAH R. LITTLE, Jamaica Plains, Mass.—*Metallic Button-Hole or Clasp.*—September 21, 1869.

Claim.—1. The button-clasp, as made of elastic wire, or its equivalent, bent or curved so as to form an expansive eye or button-hole, *c*, to operate substantially as set forth.

2. A button-clasp, as made of elastic wire, or its equivalent, bent or curved so as to form an expansive eye or button-hole, *c*, to operate substantially as set forth, and a loop or eye, *a*, for connecting the article to a strap.

94,966.—CHARLES E. MASON, Elgin, Ill.—*Harvester.*—September 21, 1869.

Claim.—1. The combination and arrangement of the two cross-heads D, shafts *a*, and pitmen *b*, with the double sickle *c* and *d*, substantially as specified.

2. The lever *j*, provided with the heel *m* and projection *k*, in combination with the axle B, substantially as and for the purposes specified.

3. The projection or hub *k*, provided with the set-screw *l* and plug *o*, when constructed and operating substantially as set forth.

94,967.—OSCAR F. MAYHEW, Indianapolis, Ind.—*Drier.*—September 21, 1869.

Claim.—1. The heating-apparatus, composed of the chambers C, E, and F, and pipe D, case J K, and perforated floor M, all constructed and arranged substantially as and for the purpose set forth.

2. The drying-chamber, constructed with the double ends and top, constituting the vertiduct O, arranged for downward ventilation, when said vertiduct is connected by pipe I, with the heated chamber formed by surrounding the smoke-pipe G with a jacket, H, and combined with the heating-device specified in the first claim, all arranged and operating substantially as set forth.

94,968.—GEORGE W. MOORE, Worcester, Mass.—*Gauge for Turning Bevels.*—September 21, 1869.

Claim.—1. A blank bevel-gauging device, composed of the beam A, the projecting bolts or standards B, secured to and adjustable upon said beam, and the gauge-blades C, adjustable upon and secured to said bolts or standards, and having their outer ends either obliquely cut, for the purpose stated, or not, as preferred, the parts being arranged substantially as described, so that the gauging-blades can be applied to the center of the blank bevel, without necessitating the removal of the latter from the arbor on which it is mounted, as herein set forth.

2. The combination, with the slotted supporting beam A, of the slotted gauging-blades C C, bushings B′ B′, and bolts B B, together with means, substantially such as herein described, for tightening said bolts and holding said gauging-blades in the desired position, substantially as and for the purposes set forth.

94,969.—GEORGE M. MOWBRAY, Titusville, Pa.—*Method of Purifying Nitric Acid.*—September 21, 1869.

Claim.—The process of separating nitrous-acid gas from nitric acid or other acids that may be mixed therewith, substantially as described.

94,970.—JAMES PATTERSON, Hornellsville, N. Y.—*Railway-Frog.*—September 21, 1869.

Claim.—1. The part C^2, extending from the broad end of the frog-point, and matching to the adjacent rail-ends, so as to aid in supporting the same laterally and vertically, and to form an attachment for the holding-down lug C^4, as herein shown.

2. The webs C^3 C^3, extending along the base of the frog-point and beyond the end of the working portion thereof, and serving the double function, first, of aiding to support the wings, both vertically and laterally, and, second, of forming a junction for the lug C^5, as and for the purposes herein shown and described.

94,971.—WILLIAM H. PLUMB, New York, N. Y.—*Archimedean Screw Water-Elevator.*—September 21, 1869; antedated September 8, 1869.

Claim.—1. The tub *a*, attached to the lower end of the inclined screw-cylinder *k*, and revolving with the same, in combination with the spout *b* for discharging the water into said tub *a*, so as to keep the step or journal *m* free from water and gritty substances, as specified.

2. The wing *a′*, in combination with the tub *a* and screw-cylinder *k*, as and for the purposes specified.

3. The discharge-box *l*, formed with the rim *i*, and inclosing the upper end of the inclined screw-cylinder *k*, in combination with the flange *g* and pendent rim *h*, as and for the purposes specified.

4. The conical support 3, surrounding the screw-cylinder *k*, in combination with the conical support 2, upon the shaft of the pulley *f*, so as to steady and sustain the inclined screw-cylinder while being revolved, substantially as set forth.

94,972.—PETER PORTOIS, San Francisco, Cal.—*Chimney.*—September 21, 1869.

Claim.—The chimney, consisting of the galvanized iron or copper, or other metallic tubes or flues, surrounded by the concretion C, composed of clay and broken bricks, or their equivalents, the whole inclosed in the wooden box or frame-work B, all substantially in the manner and for the purposes set forth.

94,973.—ELTING POST, Boston, Mass.—*Steam-Engine Valve.*—September 21, 1869.

Claim.—The combination and arrangement of the auxiliary exhaust-passages *p p′ q q′*, and the main exhaust-passages *n n′* with the passages *m m′* and with the valve D, as constructed, with the chambers *b c* and the passages *d f*, and *f′*, and passages *e c′*, substantially as specified.

94,974.—DAVID H. PRIEST, Watertown, and JOHN R. HOWARD, Charlestown, Mass.—*Weighing-Scoop.*—September 21, 1869.

Claim.—The combination and arrangement of the handle B, the spring *c*, the rod *e*, and the platform *f*, with the scoop A, said handle B being rigidly fastened to the scoop, and the whole being constructed substantially as and for the purpose set forth.

94,975.—WILLIAM N. REED, Washington, D. C.—*Animal-Trap.*—September 21, 1869.

Claim.—The toothed spring-post lock, in combination with the mainspring, to prevent the premature opening of the trap, as herein described.

94,976.—T. S. REEVE, C. D. SMITH, and H. L. SWARTWOUT, Chicago, Ill.; said SMITH and REEVE assign their right to said SWARTWOUT.—*Sewing-Machine.*—September 21, 1869.

Claim.—1. The twisted needle G, constructed and arranged to operate substantially as and for the purpose set forth.

2. The combination of the needle G, needle-bar A, thread-bar C, and guide-loop F, as and for the purpose set forth.

94,977.—PETER C. RENIERS, Pittsburgh, Pa.—*Basket for Grinding Tile.*—September 21, 1869.

Claim.—1. A tile-grinding basket, consisting of a frame, *a*, two or more pressure-blocks, *d*, and to each a nut, *c'*, on a screw, *c*, and with or without an interposed spring, *e*, the parts specified being so arranged as to hold the tile or slabs vertically while their edges are being ground, substantially as described.

2. The inclined rests *m*, adjustable as described, in combination with the frame *a*, bars *m*, and adjusting and holding devices, for the purposes set forth.

94,978.—S. T. RUSSELL, Springfield, Ohio.—*Steam-Generator.*—September 21, 1869.

Claim.—The pump C, in combination with a single continuous coiled tube or pipe, steam-generator A, and the receiver B, constructed substantially as described and set forth.

94,979.—SAMUEL S. SIMMONS, Watsonville, Cal.—*Spring-Seat for Vehicles.*—September 21, 1869.

Claim.—Making grooves, for the reception of elastic disks, in the two parts A and B of the seat-supports, with longer and shorter flanges, *a* and *b*, on the opposite sides of the grooves, and so arranged that the long flanges of the supports of the two ends of the seat shall together limit or restrain its motion, either way, in the direction of its length, without other guides, substantially as shown and described.

94,980.—CORELLI W. SIMPSON, Bangor, Me.—*Needle-Threader.*—September 21, 1869.

Claim.—1. Combining, with a needle-threader, receptacles for retaining and holding ready the wax, in manner substantially as described and shown.

2. Combining, with a needle-threader, a needle-sharpener, substantially in manner as described and shown.

3. Combining, with a needle-threader, a cutting-blade, substantially in manner as and for the purposes specified.

4. Combining, with a needle-threader, a cleansing-point, *i*, substantially as and for the purposes set forth.

5. Combining a needle-threader, needle-sharpener, eye-cleaner, and thread-cutter, and thread-waxer, substantially as described and shown.

94,981.—ALFRED E. SMITH, Bronxville, N. Y.—*Carriage-Spring.*—September 21, 1869; antedated September 15, 1869.

Claim.—1. The combination of the bolt D, having a T or similar-shaped longitudinal slot in it, with the ribs of a skeleton, or leaves of a flat elliptic spring, as a means of locking their ends together, substantially as hereinbefore described.

2. The combination of upper and lower parallel rows of independent and opposing ribs or strips of metal A, with the clip B, and washers E, arranged and operating substantially as hereinbefore set forth.

94,982.—ANDREW R. SPANG and DANIEL F. SCHEAF, Dayton, Ohio.—*Gas-Machine.*—September 21, 1869.

Claim.—1. So arranging the heating-coil of a gas-machine that it will receive its requisite supply of fuel from the heavier part of the gasoline, substantially as herein set forth.

2. The arrangement of the pipe A and branch-pipe and burner B, substantially as and for the purposes herein set forth.

94,983.—ORRIN J. STICKLES, Canton, N. Y.—*Clothes-Pounder.*—September 21, 1869.

Claim.—The metallic ring D, in combination with the projections B, pounder A, and handle E, as shown and described.

94,984.—JAMES C. STRONG and LUTHER C. MCNEAL, Buffalo, N. Y.; said LUTHER C. MCNEAL assigns his right to said JAMES C. STRONG.—*Fire-Place.*—September 21, 1869.

Claim.—1. The fire-place A, with its sloping perforated back, in combination with the inclined corrugated top, constructed and arranged substantially as described.

2. In combination with the subject-matter of the foregoing claim, the air-inlet passages D and F and chamber E.

94,985.—C. W. STROUT and AMOS WILDER, Hallowell, Me.—*Machine for Painting Floor Oil-Cloths.*—September 21, 1869.

Claim.—The combination of the frame A and adjustable frame B, by means of sliding-bar K and pin L, or their equivalents, whereby a rocking motion is produced, in order to bring the frame B to any desired angle, that its relation to rack W may be changed at pleasure.

94,986.—ISAAC VAN HAGEN, Chicago, Ill.—*Stove-Pipe Damper.*—September 21, 1869.

Claim.—The sheet-metal disk H, provided with a recess inside of the holes I, to receive the knob G, in combination with the spur F, handle D, damper B, and damper-rod C, the latter being provided with a knob, E, to hold it in the pipe A, and the whole being constructed and arranged as and for the purpose set forth.

94,987.—JOHN H. WEEDEN, Waterbury, Conn., assignor for one-half to GEORGE C. THOMAS, same place.—*Bag and Shoe-String Fastener.*—September 21, 1869.

Claim.—1. The combination of the sleeve *s* and sliding wedge *w*, substantially as and for the purpose described.

2. The combination of the sleeve *s* and sliding wedge *w* with the hook *h* and shank *k*, substantially as and for the purpose described.

3. The combination of the sleeve *s* and sliding wedge *w* with the hook *h*, shank *k*, and string *n*, substantially as and for the purpose described.

94,988.—F. HANCOCK WILLIAMS, Washington, D. C.—*Dumping-Cart.*—September 21, 1869.

Claim.—1. The cam or wiper F, arm F″, and chain or cord *g*, when combined with the body of a cart, and arranged and operated substantially as and for the purpose set forth.

2. The cam F, arm F″, chains or cords *f e*, and rock-bar and lever H I, in combination with the tail-board of a dumping-cart, substantially as described and for the purpose set forth.

3. The hinged partition K, secured by the rod *i* and nut *k*, or their equivalent, when combined with the body of a dumping-cart, as specified.

94,989.—GEORGE ALEXANDER, Romney, Ind.—*Wagon-Tongue Support.*—September 21, 1869.

Claim.—The curved bars D, hinged or pivoted rod E, adjustable cross-head G, rubber-spring H, and collar I, whether rigid or adjustable, in combination with each other, and with the axle A, hounds B, and tongue C, substantially as herein shown and described, and for the purpose set forth.

94,990.—A. ARMANDO, New York, N. Y.—*Rocking-Carriage.*—September 21, 1869.

Claim.—1. The bolts *d* on the wheels C of a rocking-carriage, when provided to lock said wheels to the axle, substantially as herein shown and described.

2. The frame A, constructed as herein shown and described, crank-axle B, and wheels C, with the pivoted carriage-body I, springs F, steering-wheel D, and tiller G, all arranged and operating substantially as herein shown and described.

94,991.—JOHN M. BAKER, Marshfield, Ohio.—*Curry-Comb.*—September 21, 1869.

Claim.—1. A curry-comb, so constructed that the handle and comb-plate may be reversed in position relatively to each other, substantially as shown and described.

2. The combination of the comb-plate A, the two holes equally distant from the rivet D, the handle B having its front end beveled, and the set-screw E and hooked rivet D, all constructed, arranged, and operating as and for the purpose set forth.

94,992.—ROBERT J. BARR, Philadelphia, Pa.—*Velocipede.*—September 21, 1869.

Claim.—1. The arrangement of the revolving axle A, chain-wheel W, supports S and S′, shafts T and T¹, chain-wheels W¹ and W², cranks N, N¹, N², and N³, endless chains C and C′, bearings B and B′, and brace F, substantially as and for the purpose set forth.

2. The arrangement of the reach R, seat I, plate P, rim M, bolt E, shaft T^2, cranks G and G′, rods H and H′, straps J and J′, axle A′, lever L, clutch U, and rack D, as and for the purpose set forth.

94,993.—CHARLES J. BEASLEY, Petersburgh, Va., assignor to himself and TAPPEY, LUMSDEN & Co., same place.—*Cotton-Press.*—September 21, 1869.

Claim.—1. The combination, with reciprocating rods B and a follower, K, of a shaft, which turns in its bearings above the frame, to allow ingress to the cotton, in the manner described.

2. The combination of a lever, having a fixed fulcrum, with an arm, H, and movable grasper D, to pull the reciprocating rods B downward, in the manner described.

3. The combination, with the depressing-device mentioned in second clause, of a stationary guide and frictional detainer E, arranged as set forth.

94,994.—HENRY BESSEMER, London, England. —*Manufacture of Iron and Steel.*—September 21, 1869; patented in England, December 31, 1867.

Claim.—1. The treating molten crude or cast iron with nitrate of soda or other solid oxygen-yielding substance in a vessel mounted on trunnions, such vessel being provided at one end with a chamber or case, to contain the nitrate or other substance, and at the other end with a mouth, serving to receive and deliver the iron, and also as an exit for the gases passing away during the conversion, the arrangement being also such that the vessel may have the metal poured into it at the mouth without coming in contact with the nitrate or other substance, and may then be tipped so as to carry the nitrate or substance below the molten metal, and finally, when the conversion is complete, may be again tipped to pour out the metal at the mouth.

2. In treating molten crude or cast iron, the pouring the nitrate of soda or other fusible oxygen-yielding substance, in a melted state, into the case or chamber, in which it is used, allowing it to become solid in the said case or chamber, and form a mass, the surface only of which can be attacked by the molten iron.

3. In treating molten crude or cast iron, the closing the top of the case or chamber in which the nitrate or other substance is contained beneath the molten iron, with a perforated fire-tile, or a slab of refractory stone.

4. The treating molten crude or cast iron with nitrate of soda or other fusible oxygen-yielding substance, by forcing the liquid nitrate or substance in jets into and amongst the molten metal.

5. The forcing heated air or steam through the same tuyeres or orifices by which the liquid nitrate or other substance is forced into the metal, so as, before the nitrate is supplied, to heat the said tuyeres or orifices, and to exclude the metal from them both before and after the application of the liquid nitrate or substance.

6. In the treatment of molten crude or cast iron, and in the manufacture of malleable iron and steel, the use of apparatus, arranged as is represented in Figs. 2 and 3 of the drawings.

7. The treating molten crude or cast iron by carrying nitrate of soda or other oxygen-yielding substance, in a powdered state, into and amongst the said metal, by means of a jet or jets of carbonic-acid gas, or other gas incapable of yielding oxygen to the molten metal.

94,995.—HENRY BESSEMER, London, England. —*Manufacture of Iron and Steel.*—September 21, 1869; patented in England, March 21, 1868.

Claim.—The forcing or injecting downward into molten crude iron, or remelted pig or other carburet of iron, streams or jets of fused or liquid nitrate of soda, or nitrate of potash, or other fused or liquid substances which contain or are capable of evolving oxygen, when brought in contact with liquid iron.

94,996.—HENRY BESSEMER, London, England. —*Manufacture of Iron and Steel.*—September 21, 1869; patented in England, March 21, 1868.

Claim.—1. The treatment and purification of molten pig or other carburet of iron in a converting-vessel, by means of currents of air and steam, used separately or combined, and applied in such manner that the metal shall thereby be rendered semi-fluid, pasty, or granular, and become mechanically mixed with the slags or cinder formed in the process, and subsequently the admixture therewith, in the same vessel, of a further portion of molten pig or other carburet of iron, and the effecting the complete fusion of such metallic mixture into fluid malleable iron or steel, by forcing air in sufficient quantities upward through it.

2. The employment of nitrates of soda or nitrates of potash, to act on and purify molten pig or other carburet of iron in a converting-vessel, and the subsequent admixture, in the same vessel, of the iron so treated with another portion of pig or other carburet of iron, and the conversion of such mixture into fluid steel or malleable iron, by means of currents of air forced upward through the metal.

3. The construction and employment, in the manufacture of malleable iron and steel, of converting-vessels having two hearths or cavities, and separate tuyere-boxes, as herein described.

4. In the construction of furnaces suitable for fusing malleable iron or steel, on the hearths thereof, the use of hollow fire-bricks, arranged to form flues or passages, through which currents of air may be caused to pass, as described.

5. The fusion of malleable iron or steel, or other partially-decarbonized puddled or purified iron, on the sole or hearth of a gas or other reverberatory furnace, by adding to the materials to be fused a portion of pig-iron or carburet of iron, and forcing air into it, so as to cause heat to be generated, which heat, acting in conjunction with the heat of the furnace, and by joint action therewith, fuses the solid portions of the metal, and, blending the mixtures, converts the whole into fluid malleable iron or steel.

94,997.—HENRY BESSEMER, London, England. —*Manufacture of Iron and Steel.*—September 21, 1869; patented in England, March 31, 1868.

Claim.—1. The fusion of solid pieces of malleable iron or steel, or of iron which has been more or less decarbonized or rendered partially malleable, mixed with pig or other carburet of iron, in a molten or solid state, by means of a jet or jets of flame and heated products arising from the combustion of coke, coal, or other solid fuel, when such jet or jets of flame and products of combustion are made to enter among the said metal up through such portion of the metal as is molten or becomes molten during the operation.

2. The fusion of solid pieces of malleable iron or steel, or of iron which has been more or less decarbonized or rendered partially malleable, mixed with pig or other carburet of iron, in a molten or solid state, by means of a compound or combining jet or jets of gaseous or fluid fuel and air, or a jet or jets of flame and heated products arising from the combustion of gaseous or fluid fuel, when such jet or jets are made to enter among the said metal up through such portion of the metal as is molten or becomes molten during the operation.

3. The manufacture of cast steel or cast malleable iron, by fusing malleable iron or steel, or iron which has been more or less decarbonized, or rendered partially malleable, mixed with pig or other carburet of iron, by means of a jet or jets of flame, or of gaseous or fluid fuel and air, when such jets are made to enter among the metal up through such portion of the metal as is molten or becomes molten during the operation.

4. The treating and raising the temperature of molten iron or steel, by means of a jet or jets of flame, or of a compound or combining jet or jets of gaseous or fluid fuel and air, when such jet or jets are forced into the iron or steel at the bottom of the containing-vessel, and rise up through the molten metal.

5. The fusion of solid pieces of malleable iron or steel, or of iron which has been more or less decarbonized or rendered partially malleable, mixed with pig or other carburet of iron, by the use, in the same vessel, of a jet or jets of flame, or of a compound or combining jet or jets of gaseous or fluid fuel and air, and a jet or jets of air alone, or without fuel, such jet or jets of air alone, or without fuel, being applied

either before or after the flame or compound or combining jet or jets, or simultaneously therewith, and the several jets being made to enter among the metal up through such portion of the metal as is molten or becomes molten during the operation.

6. The melting of pig or other cast iron, by means of a jet or jets of flames and heated products of combustion, from solid fuel or gaseous fuel and atmospheric air, or by means of compound or combining jets of fluid or gaseous fuel and air, when such jets are forced up among the pig or other cast iron, so as to rise up through the molten portions thereof as the fusion progresses. Such gaseous matters so injected may have an oxidizing, carbonizing, or neutral flame, as desired.

7. The employment of a jet or jets of flame and heated products of combustion, arising from solid, fluid, or gaseous fuel and atmospheric air, or of compound or combining jets of fluid or gaseous fuel and air, when such jets are forced upward through fluid iron or steel, contained in a gas or other reverberatory furnace.

8. The employment of melting or converting vessels, mounted on axes, and having a fire or fuel-chamber attached thereto, for the purposes hereinbefore described.

9. The employment of melting or converting vessels, having a combustion-chamber or tuyere-box, arranged for the combustion or conveyance into the metal of liquid or gaseous combustible matters and atmospheric air, as hereinbefore described.

10. The fusion of pig-iron or other carburet of iron, or of malleable iron or steel, or iron in a more or less decarbonized or malleable state, in furnaces or apparatus in which flame and products of combustion are passed beneath an inverted fire-bridge or partition, and thence upward among the pieces of metal to be fused, or upward and among the particles of any fluid metal arising from the fusion of such pieces of metal, or of any molten pig-iron that may be employed in addition thereto.

94,998.—A. Brinckmann, New York, N. Y.—*Self-Closing Faucet.*—September 21, 1869.

Claim.—The faucet, constructed as described, with the spring *a*, shoulder *b*, adjustable screw-cap C, notched plate *c*, provided with a screw-thread upon its edge, the set-screw *e*, and weighted handle E, all arranged substantially as described, for the purpose specified.

94,999.—James Cate, Rumsey, Ky.—*Wool-Picking Machine.*—September 21, 1869.

Claim.—The bed or concave of a wool-picker, made in two or more sections, which are constructed and arranged substantially as described, so that they are susceptible of a longitudinal motion for cleaning the bars.

95,000.—R. W. Churchill, Bridgeport, Conn.—*Lamp-Shade.*—September 21, 1869.

Claim.—The improved expanding lamp-shade, above described, formed by the combination of hexagonal wire support A, hinged adjustable shade-sections B, tongue C, and semi-elliptical springs D, all being arranged with respect to each other, and fitted together, substantially as shown and described.

95,001.—George Conrou, New York, N. Y.—*Water-Closet.*—September 21, 1869; antedated September 8, 1869.

Claim.—1. The arrangement of the bowl, reservoir, and valve-chamber, substantially as shown, and for the purposes specified.

2. The arrangement of the pipe D, branch D′, globe-valve I, plunger G, arm *f′*, pivot *f*, float F, bowl A, and reservoir B, substantially as and for the purposes specified.

3. The arrangement of the waste-pipes K, L, and O, substantially as and for the purpose described.

95,002.—William A. Coventry, Paterson, N. J.—*Self-Winding Line-Machine.*—September 21, 1869.

Claim.—The combination and arrangement of the back case C with the socket-neck D, pivot base A, spring E, gear-wheels F and T, pinions I and K, and pulley G, constructed and operating substantially as shown and described, and for the purposes set forth.

95,003.—Joseph P. Curry, Vincennes, Ind., assignor to S. S. Burnet, same place.—*Extension-Table.*—September 21, 1869.

Claim.—The combination of the slide G H with the cords C C and D, and shaft A, substantially as and for the purpose specified.

95,004.—Charles H. Davis, Syracuse, N. Y.—*Box-Loop for Carriage-Tops.*—September 21, 1869.

Claim.—The box-loop A, when formed as described, with the lugs or spurs H upon its edges, and applied to a carriage-top, by passing said lugs through the same, and through the metal plate C, and then bending them down upon the surface of said plate, substantially as described, for the purpose specified.

95,005.—William J. Dawson, Brookfield, Mo.—*Revolving Plow.*—September 21, 1869.

Claim.—1. An improved revolving plow, formed by the combination of the plow or shovel-plates K, arms J, shaft I, pivoted adjustable frame F, horizontal frame C, axle B, gear-wheels L M, and wheels A, with each other, and arranged to operate as herein shown and described, and for the purpose set forth.

2. The combination of the long bolts G and pivoted lever H with the adjustable frame F and stationary frame C, substantially as herein shown and described, and for the purpose set forth.

95,006.—John Dennis, Oswego, N. Y.—*Hay and Grain Elevator.*—September 21, 1869.

Claim.—1. A machine, whose mode of operation is substantially as shown and described.

2. The combination of the bars E, ropes or chains F, shaft or drum G, gear-wheel J, gear-wheel K, pulley N, band O, and pulley P, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the sliding frame or plate M, brake Q, and lever R, with the gear-wheel J, substantially as herein shown and described, and for the purpose set forth.

95,007.—M. L. Drake, Rockford, Ill.—*Hames-Fastener.*—September 21, 1869.

Claim.—The device described, consisting of the parts A B, lever-hook C, and button a^2, the whole being constructed as and for the purpose set forth.

95,008.—Charles L. Drury, Rockingham, Vt.—*Horse-Power.*—September 21, 1869.

Claim.—1. The inclined shaft B, carrying the wheel C, in combination with the steps *a* and sliding-guide D, substantially as herein shown and described.

2. The swinging bars *e*, carrying the wheels *d*, and arranged in combination with the shaft E and rollers *c*, substantially as and for the purpose herein shown and described.

3. The frame A, having the bars *h h*, the gate *j*, and the whiffletree *i*, or its equivalent, hung to it, in combination with the inclined shaft B and wheel C, substantially as specified.

95,009.—Lewis C. England, Philadelphia, Pa.—*Method of Heating Tan-Bark Leaches by Steam.*—September 21, 1869.

Claim.—1. Large tube or hollow log, *a*, placed over or near the top of the leach-vats.

2. Discharge-pipes *b b*, with stop-cocks *c c*, through which the condensed or partially condensed steam is admitted into the desired leach, or their equivalents.

3. Conveying the condensed or partially condensed steam through the large tube *a*, and discharge-pipes *b b*, as herein set forth.

95,010.—William P. Ewing, Fancy Hill, Va.—*Horse Hay-Rake.*—September 21, 1869.

Claim.—1. The handles G, rod I, supports H, stop-bars L, rod N, springs Q, and stops M, and rake-head, all combined and arranged substantially as specified.

2. The combination, with the handles, of the treadle K, when all are arranged as specified.

3. The combination, with the arms, of the supports H and hook S, substantially as specified.

4. The arrangement of the arms G, supports H, treadle, spring-stops R, and rake-head, substantially as specified.

95,011.—T. W. Fay, Camden, N. J.—*Stump-Extractor.*—September 21, 1869.

Claim.—1. A machine, whose mode of operation is substantially as shown and described.

2. The combination, with grappling-device and holder F, of a vertically-reciprocating and non-rotating screw D, and actuating, revolving nut E, all co-operating to lift the stump in a perpendicular line, and without rotation of the carrying-screw.

3. The combination of revolving nut E and recessed plate B of the friction-balls *d d*, freely moving around with said plate, for the purpose of producing rolling instead of sliding friction, thereby greatly lessening the resistance to be overcome by the power applied.

4. The combination, with the legs A, shoes *c*, and plate B, of double eye-bolts affixed thereto, for the purpose of forming an expanding frame, which will accommodate itself to any unevenness of ground, in the manner set forth.

95,012.—E. J. Fenn, Medina, Ohio.—*Horse Hay-Fork.*—September 21, 1869.

Claim.—1. The lever F, in combination with the connecting-plates I and slotted plate H, arranged and operating substantially as and for the purposes described.

2. The combination of the lever F, the bar B, slotted plate H, the connecting-plates I, and the tines C D, with the shaft A, constructed, arranged, and operating substantially as and for the purposes described.

95,013.—David Flanery, New Orleans, La.—*Telegraph-Apparatus.*—September 21, 1869.

Claim.—The combination, in a portable box or case, C D, of a local battery, relay, magnet, key, and sounder, when arranged for inclosing the same, and to form a writing-case when open, substantially as specified.

95,014.—Joseph J. B. Frey, New York, N. Y.—*Self-Closing Telegraph-Key.*—September 21, 1869.

Claim.—The key A, constructed as described, with the convolute spring B, in combination with the platina point *b*, and insulated point *a*, all arranged and operating as described, for the purpose specified.

95,015.—James Galloway, Chetopah, Kansas.—*Coffee-Roaster.*—September 21, 1869.

Claim.—The browning and obtaining the extract of coffee by subjecting the raw coffee-berry to heat when immersed in water, substantially in the manner described.

95,016.—F. A. Geisler, Bristol, R. I.—*Thrashing-Machine.*—September 21, 1869.

Claim.—1. The vibrating-bar O, and the method of shaking the sieves, and screen, and the straw-apron, substantially as herein shown and described, for the purposes set forth.

2. The bars S S, in combination with a thrashing-machine, substantially as and for the purposes described.

3. Giving motion to the sieves of a thrashing-machine by means of a crank on the driving-shaft, substantially as set forth.

95,017.—John D. Grey, Pittsburgh, Pa., assignor to himself and John Lippincott, same place.—*Manufacture of Galvanized Iron.*—September 21, 1869.

Claim.—1. The improved process herein described, of preparing iron for galvanizing, substantially in the manner and for the purpose specified.

2. As an improved article of manufacture, galvanized iron, when prepared in the manner herein specified.

95,018.—Charles C. Harris, La Fayette, Ill.—*Windmill*—September 21, 1869.

Claim.—1. The buckets D, journaled in the sides A B, as described, and provided with the studs F G, for limiting their axial motion, substantially as specified.

2. The axial projections H of the buckets, shaped as described, and combined with the weighted and pivoted arms I, having the segmental arms M, all substantially as specified.

3. The combination of the shaft Q, the inclines R, shaft C, and roller S, all arranged substantially as specified.

95,019.—M. C. Hawkins, Edinborough, Pa.—*Sewing-Machine.*—September 21, 1869.

Claim.—1. In combination with the needle-bar F and take-up bar G, the shaft C, crank-pin K, pitman E, crank *g*, crank-wheels *e* and *i*, and arm *b*, all arranged and operating together, as set forth and shown.

2. The combination of the needle-bar F, having the inclined slot *n*, with the take-up bar G, which has the angular slot *n*, as described, and with the crank-pin K, on the shaft C, all arranged and operating substantially as herein shown and described.

95,020.—William E. Hill, Renovo, Pa.—*Water-Wheel.*—September 21, 1869.

Claim.—1. The buckets, composed of the fixed and movable parts, and the latter provided with springs, all substantially as specified.

2. The gates *f g*, arranged and combined with the wheel, having buckets arranged substantially as herein specified.

3. In combination with the wheel and scroll, the V-grooves lined with India rubber, and arranged with the V-projections of the wheel, as specified.

95,021.—Thomas Holmes, Williamsburgh, N. Y.—*Revolving Dough-Mixer.*—September 21, 1869.

Claim.—1. The loose diagonal bar or knife I, in combination with the revolving cylindrical vessel B, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the buttons G (one or more) and catches or open keepers H with the frame A and revolving cylindrical vessel B, provided with the adjustable partition J and bar I, all constructed and arranged as herein shown and described, and for the purpose set forth.

95,022.—G. H. Kamnacher, Columbus, Ohio.—*Hoisting-Apparatus.*—September 21, 1869.

Claim.—The combination, with a chain-wheel, or chain and carriages, all arranged as described, of the ropes H H, attached to the bottom of the said carriages, and operated alternately in the manner set forth.

95,023.—William Kegg, Lasellsville, N. Y.—*Operating Churn-Dasher.*—September 21, 1869.

Claim.—The stand D, with the circle K, in combination with the vibrating fulcrum G and the lever C, constructed, arranged, and operating substantially as and for the purposes set forth.

95,024.—Jeremiah J. King, New York, N. Y.—*Door-Knob.*—September 21, 1869.

Claim.—The knob formed with a central cavity, E, and inclined channels F F, into which the prongs D D of the socket A are made to enter by pressure on the socket, without the aid of separate wedges, as herein shown and described, for the purpose specified.

95,025.—J. M. W. Kitchen, Brooklyn, N. Y.—*Fruit-Jar.*—September 21, 1869.

Claim.—The recessed cover B, having the parallel rings b^3 b^4 between its inclined upper and its straight lower portions, in combination with the inclined mouth a^1, vertical necks a^2, continuous lugs a^3, rubber packing C, and spring-fastening, all arranged as herein shown and described, for the purpose specified.

95,026.—Josiah E. Kline, Wheeling, West Va.—*Railroad-Car Heater.*—September 21, 1869.

Claim.—1. The pivoted grate D, suspended within the furnace of a car-heater, to remain in a perpendicular position during the motion of the car, substantially as herein shown and described.

2. The semi-oval grate D, when arranged in the furnace of a railroad-car heater, substantially as herein shown and described, to better retain the fuel by its turned-up sides.

3. The safe B, arranged under a car-floor, to surround the furnace C, substantially as herein shown and described, and to form an air-chamber, *b*, as specified.

4. The door F, of the fire-safe, when provided with a funnel, G, which has doors at both ends, as set forth.

5. The feed-apparatus, consisting of the tube H, sliding plate *o*, box I, and cover *p*, all combined and operating substantially as herein shown and described.

6. The apertures *l l*, formed in the sides of the fire-safe B, substantially as and for the purpose herein shown and described.

7. The combination of chamber B, having a single shut-off valve, with the tube J, provided with numerous valves, all as shown and described.

8. The water-reservoir M, when arranged above a car-heater, substantially as and for the purpose herein shown and described.

9. The chamber K, formed above the furnace, to conduct the products of combustion from the furnace into the chimney, substantially as herein shown and described.

95,027. — HENRY LONG, Kittanning, Pa. — *Lamp.*—September 21, 1869.

Claim.—The oil-reservoir A, water-reservoir D, passage E, elevated dividing-wall G, and nozzle F, all combined and arranged substantially as specified.

95,028.—JOHN LONGMAID, New York, N. Y.—*Process for Preserving Eggs.*—September 21, 1869.

Claim.—The above-described process for preserving eggs, substantially as set forth.

95,029.—SAMUEL D. LUCAS, Winterpock, Va.—*Churn.*—September 21, 1869.

Claim.—The construction and arrangement of the churns P, bench A, bed B, posts C and J, bar K, guide L, connecting-rod H, fly-wheel G, small gear-wheel F, large gear-wheel D, crank E, the lever I, sockets M, and dasher-rods R, as herein shown and described.

95,030. — R. D. MCDONALD, Jersey City, N. J.—*Fire-Place.*—September 21, 1869.

Claim.—The combination and arrangement of the flues B D E, and openings A C, in a fire-place heater, made of cast or sheet-metal, substantially as herein shown and described, and for the purpose set forth.

95,031.—JOHN MCLEISH, Chicago, Ill.—*Corn-Harvester.*—September 21, 1869.

Claim.—1. The stalk-grasping device H, constructed and operating in connection with the lifters F, slotted platform *a'*, cutters G, and endless apron I, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the endless apron I with the grasping-device H, rollers J K, frame A, and rollers S T, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the guides Q or equivalent with the endless apron I, frame A, and grasping-device H, substantially as herein shown and described, and for the purpose set forth.

4. The combination of the rollers S T with the frame A, endless apron I, and hopper or spout X, substantially as herein shown and described, and for the purpose set forth.

5. The spout or hopper X, operated from the carrier by means of a crank and pitman, in combination with the rollers S T, frame A, and carrier Y Z A', substantially as herein shown and described, and for the purpose set forth.

95,032.—C. C. MERRIMAN, Brighton, N. Y.—*Traction-Engine.*—September 21, 1869.

Claim.—1. The feet, as described, when arranged in any manner to operate in combination with one or more driving-wheels, for the purpose of producing traction.

2. The feet C, when combined with the wheel A, and actuated by any kind of a spring or elastic material, substantially as specified.

3. The method of increasing or diminishing the traction by altering the line of draught, substantially as described.

4. The arrangement of the draught-chain L, relatively to the rear end of the engine, for increasing the pressure on the driving-wheels, substantially as specified.

95,033.—HENRY MILLARD, New York, N. Y.—*Machine for Grinding Mower and Reaper Knives.*—September 21, 1869.

Claim.—The slotted branched adjustable arm J, roller-bar and arms L M, and holder-frame N O, arranged in relation to each other, and to the grind-stone C and frame A, substantially as herein shown and described.

95,034.—FRANKLIN H. MORRILL, Philadelphia, Pa.—*Machine for Winding Bobbins.*—September 21, 1869.

Claim. — The arrangement of the heart-shaped gear H G, arm A, and pinions N and N^1, for the purpose of giving a variable rotary motion to the bobbins B, substantially in the manner and for the purpose specified.

95,035.—ISAAC J. MORROW, Everton, Ind.—*Cultivator.*—September 21, 1869.

Claim.—1. The adjustable standard G, so constructed that the plow H may always work at a higher level than the plow C of the rear standard B, in combination with the beam A and rear standard B, substantially as herein shown and described, and for the purpose set forth.

2. The adjustable pivoted lever K and fender J, in combination with the adjustable standard G, beam A, and rear standard B, substantially as herein shown and described, and for the purpose set forth.

95,036. — JEAN MARIE MUTERSE and HENRI GUIBERT DE VALORY, Guérande, France. — *Composition for Use in Fire-Extinguishers.*—September 21, 1869.

Claim.— 1. The within-described fire-extinguishing compound, in the form of a dry powder, adapted for ready diffusion and quick solution in water, composed of the combination of ingredients and in about the proportions herein set forth.

2. The cartridge, herein described, composed of the within-described antiphlogistic powder, or its equivalent.

95,037.—HENRY H. NICHOLS, Keeseville, N. Y., assignor to P. S. WHITCOMB, same place.—*Machine for Binding Wood.*—September 21, 1869.

Claim.—1. The combination of the bent piece d^2, spring d^1, rope E, and treadle *e*, as and for the purpose described.

2. The combination of the parts described, consisting of the beams A A^1, carriage B^1, screw-shaft B, pulleys *b* b^1 b^2, platform C, arms C^2, strip D', form C^1, and cross-head H, arranged and operated substantially as described.

95,038.—AUGUST NITTINGER, Jr., Philadelphia, Pa.—*Meat-Cutting Machine.*—September 21, 1869.

Claim.—The arrangement of the upright U, triangular-shaped guides G, G^1, G^2, and G^3, spring-catches K, K^1, and K^2, and plate L, substantially in the manner and for the purpose specified.

95,039.—ALFRED PARAF, New York, N. Y., assignor to EDWARD SABINE RENWICK, trustee.—*Extract of Madder for Dyeing and Printing.*—September 21, 1869.

Claim.—The before-described compound extract of madder, being a composition of the coloring-matter of madder and the compound of the alkaline base and volatile acid, substantially as before described, the same being a new article of manufacture.

95,040.—ALFRED PARAF, New York, N. Y., assignor to EDWARD SABINE RENWICK, trustee.—*Process for Printing Colors on Textile Materials.*—September 21, 1869.

Claim.—The process, hereinbefore described, of

printing colors upon a textile material, by printing it with the coloring-material, applying a compound of an alkali and volatile acid to it, and steaming it, substantially as before described.

95,041.—D. C. PIERCE, Washington, D. C.—*Railway Rail-Chair.*—September 21, 1869; antedated September 8, 1869.

Claim.—1. A railway-chair, having inner convex surfaces, and chocks with corresponding concavities, all constructed and operating together substantially as described, and for the purposes set forth.

2. In combination with such chair, a bearing-plate, applied and operating substantially as described, and for the purposes set forth.

3. In like combination, elastic packing applied and operating substantially as described, and for the purposes set forth.

95,042.—J. H. PRESTON, Jefferson City, Mo.—*Machine for Bending Wood.*—September 21, 1869.

Claim.—The combination, with the foundation A, of the block B, form H, adjustable angle-irons I, bending-lever C, flanged roller G, adjusting-straps E, band N, rod P, lever O, rack-bar R, key M, and clamp L, when constructed and arranged substantially as herein shown and described, for the purpose specified.

95,043.—PERRY PRETTYMAN, Paradise Spring Farm, Oregon.—*Railway-Car Truck.*—September 21, 1869.

Claim.—1. The arrangement of the wheels D upon axles attached to each side of the car-truck, in the position and for the purpose specified.

2. The arrangement of the guard-rollers G upon the truck, at the points specified, for the purpose of limiting the lateral movement of the car.

3. The combination, with the auxiliary wheels D, of the chute H, substantially as and for the purpose described.

95,044.—JOHN J. RAY and JAMES R. YOUNG, New Orleans, La.—*Cultivating-Hoe.*—September 21, 1869.

Claim.—The blades A, connected and supported by posts, braces, and transverse beams, in the angular arrangement described, and provided with weed-cutters and wheels, all substantially as specified.

95,045.—CHARLES A. H. RICE and A. J. VAN DEREN, Central City, Colorado Territory.—*Guide for Stamp-Mills.*—September 21, 1869.

Claim.—An adjustable guide for stamp-mills, consisting of the sectional support A, boxes B, screws D, gibs E, and wooden guides F, the screws having the shoulders *c* and the concave lower ends, when all these parts are arranged together as herein shown and described, for operation as set forth.

95,046.—A. C. RODGERS, Fort Washington, Pa., assignor to himself and LEWIS SHAFFER, same place.—*Railroad-Station Indicator.*—September 21, 1869.

Claim.—The wheels C, having two sets of teeth *a b* on its two faces, and notches *c* in its edge, in combination with the levers F H H′, bars I I′ and J J′, levers E E′, and rod D, all arranged and operating as described, for the purpose specified.

95,047.—JOHN H. RYLAND, Baltimore, Md.—*Straw-Cutter.*—September 21, 1869.

Claim.—The combination and arrangement of the gear-wheel C, the knife-wheel D, the curved knives K, the arm I, and the roller R, when constructed as and for the purpose set forth.

95,048.—WILLIAM H. SCHWALBE, New York, N. Y.—*Sofa and Bedstead.*—September 21, 1869.

Claim.—1. The frame K, made in two parts, hinged to each other, and to the parts C of the sofa and bed, in combination with the hinged parts A C of the said sofa and bed, substantially as herein shown and described, and for the purposes set forth.

2. The hinged frame E, in combination with hinged and folding parts C A, and with the vertical back H, whether said back be made solid with or separate from the partition or wall of the room, substantially as herein shown and described, and for the purpose set forth.

3. The hinges F and G, constructed as described, in combination with the hinged frame E and grooved back H, substantially as and for the purpose set forth.

95,049.—LEWIS SCOTT, Sinking Spring, Ohio.—*Pan and Furnace for Evaporating.*—September 21, 1869; antedated September 10, 1869.

Claim.—The furnace A, constructed as shown and described, with the pans B, C, and J′, in combination therewith, when the same are constructed and arranged as herein set forth, for the purposes specified.

95,050.—JOSHUA SEIP and HENRY J. SCHMEYER, Macungie, Pa.—*Combined Threshing-Machine and Separator.*—September 21, 1869.

Claim.—1. In combination with a threshing-machine, the separating-floor D, formed of the aprons F and G, with the strips H, constructed, arranged, and operating substantially as herein shown and described, for the purposes set forth.

2. The arrangement of the slide *o* beneath the cylinder of the cleaner, to regulate the outflow of air and diminish the blast, in the manner specified.

95,051.—GEORGE V. SHEFFIELD and JAMES F. COBURN, Hopkinton, Mass.—*Railway.*—September 21, 1869.

Claim.—1. The angle-rail B, supplementary rail C, and the wheel D, in combination, substantially as and for the purposes described.

2. The combination of the angle-rail B and the tie A, arranged as described, and for the purposes set forth.

95,052.—JOSEPH H. SMITH and ELIJAH G. PECKHAM, Toledo, Ohio.—*Saw.*—September 21, 1869.

Claim.—The saw-blade, which combines in its construction pairs of teeth, separated below their cutting or sharpening-bevel, and an intermediate single clearing-tooth, which has an angle, *i*, on each of its sides, substantially as described.

95,053.—LUTHER L. SMITH, Brooklyn, N. Y.—*Nickel-Faced Type.*—September 21, 1869.

Claim.—1. The electro-plating of metallic type and of electrotype or stereotype-plates made from movable type with nickel, and thus producing an improved type or plate.

2. A metallic type, electro-plated with nickel, or a stereotype-plate made from movable type and electro-plated with nickel, as a new article of manufacture.

95,054.—W. SMITH, San Francisco, Cal.—*Slow-Closing Valve for Water-Closets.*—September 21, 1869.

Claim.—1. A valve for water-closets, having its suspending-chambers partitioned off from, and having no communication with the water-passages, substantially as shown and described and for the purposes specified.

2. In combination with the plunger H, the chamber N, gland *r*, and tube D, the spindles C and G, valve *f*, packing or valve-face *q*, and packing *e*, arranged substantially as shown and described, for the purposes set forth.

95,055.—LOUIS TRIPLETT, Columbia, Ky.—*Side-Saddle Tree.*—September 21, 1869.

Claim.—1. The improved sheet-metal blanks A B, constructed, shaped, and adapted as herein described, for employment in the construction of side-saddle trees, substantially as specified.

2. Side-saddle trees, composed of the sheet-metal parts A B and pads N, when shaped, connected, and arranged substantially as specified.

95,056.—HERMANN VON HOLTEN, Hoboken, N. J.—*Coffee-Pot.*—September 21, 1869.

Claim.—An improved coffee-pot formed by the combination of the partition B, tube C, rod F, vessel D, shield H, filter I, and skeleton-plate J, whether the flannel filter be used or not, with each other and with the vessel A, substantially as herein shown and described, and for the purposes set forth.

95,057.—ADDISON G. WATERHOUSE, San Francisco, Cal.—*Rotary Mechanical Power.*—September 21, 1869.

Claim.—1. In combination with the inner circulating cog-wheel, actuated by an eccentric or crank, as described, and the outer revolviug cog-wheel, a sliding ring or cross-arm, having independent sliding bearings on opposite sides, and sliding bearings at right angles therewith, for the circulating wheel or plate, substantially as herein described.

2. In combinatiou with the circulating eog-wheel, the circulating plate, with an adjustable clutch to attach and detach said plato to and from the circulating wheel, substantially as and for the purpose set forth.

3. In combination with the circulating and revolving cog-wheels and sliding riug or cross-arm, the revolving shaft B, the hollow stationary shaft C, and the stationary disk H, with sliding bearings thereon for the ring or cross-arm, substantially as described.

95,058.—JOSEPH P. WHITE, Savannah, Ga.—*Combination-Loek.*—September 21, 1869.

Claim.—1. The tumblers D, auxiliary tumblers E, spring-dogs D^2, and bolt A, arranged substantially as specified.

2. The combination of the tumblers D, auxiliary tumblers E, and eccentric disks F, substantially as specified.

95,059.—JOSEPH P. WHITE, Savannah, Ga.—*Safe.*—September 21, 1869.

Claim.—A safe made with strong interior shell B, and thin exterior shell A, arranged with a space between them, filled with explosive powder, and a rough substance, which, by frictional contact with a burglar's tool, will ignite the powder, substantially as described.

95,060.—JACOB WINKELHOUSE, New York, N. Y.—*Bit-Holder.*—September 21, 1869.

Claim.—The socket A and bit-shank F, each provided with a corresponding recess, as shown and described, with a notched bolt B, and spring D, all arranged and operating as a bit-holding device, in the manner set forth.

95,061.—HIRAM WOLF, Saint Louis, Mo., assignor to himself and ABRAM D. WOLF, same place.—*Mining-Pump.*—September 21, 1869.

Claim.—1. The arrangement, above each other, of any desired number of sections, as herein described, each section containing one reservoir and two pumps, the discharge-orifices of which pumps are level with or above the top part of the reservoir, substantially as and for the purpose set forth.

2. The pumps I, when pivoted in such a manner that they may be brought from a vertical to a horizontal position, substantially as and for the purposes set forth.

3. The combination of the pumps I, flanges O P, nut R, and screws S *s*, substantially as and for the purposes set forth.

4. The combination of the pumps I, reservoirs J, and pipes K and L, substantially as and for the purposes set forth.

95,062.—A. H. WOOTTON, Bartow, Ga.—*Combined Corn and Cotton Planter.*—September 21, 1869.

Claim.—1. Forming a recess in the thickened side of the hopper B, to receive the upper part of the drive-wheel C, substantially as herein shown and described, and for the purpose set forth.

2. The combination and arrangement of the axle D, drive-wheel C, and dropping-wheel F *f'*, or H, with the slotted beam A and hopper B *b'*, substantially as herein shown and described, and for the purpose set forth.

3. The combination and arrangement of the slotted beam A, hopper B *b'*, axle D, drive-wheel C, dropping-wheel F *f'*, or H, furrowing-plow I J K, scraper R, covering-plow L M N, and handles O P Q, with each other, substantially as herein shown and described, and for the purpose set forth.

95,063.—WESLEY A. WRIGHT, Liberty, Va., assignor to himself and WILLIAM C. TROWBRIDGE, same place.—*Compound for Restoring Damaged Tobaceo.*—September 21, 1869.

Claim.—The herein-described composition for restoring damaged tobacco, consisting of the ingredients substantially as specified.

95,064.—JOHN ALEXANDER, Green Point, N. Y.—*Coating Iron for the Fronts of Buildings, and for other Purposes.*—September 21, 1869.

Claim.—The within-described imitation brownstone, having a foundation of iron and a coating of stony particles bedded iu a layer of semi-fluid material, and permanently affixed to the iron by baking, all substantially as and for the purposes herein set forth.

95,065.—DAVID L. ALLEN, Williamsport, Pa.—*Expanding-Mandrel.*—September 21, 1869.

Claim.—The screw-nut C, cono B, and chucks A, constructed and combined as herein described, in combination with the solid mandrel, recessed at each end, and with screw-thread extremities E, substantially as set forth.

95,066.—EDWIN ALLEN, Norwich, Conn.—*Hearse.*—September 21, 1869.

Claim.—1. The rollers F, in combination with the floor of a hearse or other vehicle, to operate in the manner substantially as and for the purpose herein described.

2. The arrangement of the rollers F, axles C C, and wedge-formed slide *d*, substantially as and for the purpose herein set forth.

95,067.—GEORGE ARMSTRONG, Elmira, Ill.—*Marker for Seeding-Machines.*—September 21, 1869.

Claim.—1. A marker-pole, A, which is provided on one end with a compound pivot-joint, and on the opposite or free end with a marking-runner, substantially as described.

2. The rod C, applied to the reversible marking-runner B, and provided with a draught-ring, D, substantially as described.

3. The reversible or curved marking-runner B, so constructed and applied, as herein set forth, as to admit of its being drawn by either one of its ends.

95,068.—JAMES ARMSTRONG, Jr., Elmira, Ill.—*Corn-Planter.*—September 21, 1869.

Claim.—1. The wings *o o*, upon the oscillating valve *i*, substantially as described.

2. The valve *i*, with or without wings *o*, when provided with a notch or recess, *e*, substantially as described.

3. A double-channeled or twin seed-distributing tube, G, open at its back, and in combination with a winged valve, J, or the equivalent thereof, substantially as described.

4. The laterally-adjustable dropper's seat F', substantially as described.

95,069.—JAMES B. AYER, Elizabeth, N. J.—*Motive-Power for Sewing and other Machines.*—September 21, 1869; antedatod September 10, 1869.

Claim.—1. The noiseless power for driving sewing-machines, consisting of the combination, with the spring E, of a series of large and small friction-wheels with straight peripheries, arranged above and below each other on shafts C O P, to operate substantially as and for the purpose set forth.

2. In a sewing-machine, for the purpose of transmitting and accelerating motion, one or more series of large and small friction-wheels *h* H *i* I, with straight peripheries, which are covered with India-rubber, or its equivalent, and arranged to operate substantially as herein described.

3. The vertically-oblong bearings *a a'*, of the shaft C, in the pieces A A', substantially as and for the purposes set forth.

95,070.—J. L. BARTLETT and J. B. L. BARTLETT, North Jay, Me.—*Horse-Rake Teeth.*—September 21, 1869.

Claim.—The rake-tooth herein described, having coil A, bent portions B and C, lateral brace E, and hooks D, constructed and arranged as specified.

95,071.—GIACINTO BARTOLOMEI, Chicago, Ill.—*Composition for Roofing and Paving.*—September 21, 1869.

Claim.—The manufacture or preparation of a compound, herein described, of the ingredients, in the proportions and for the purposes set forth.

95,072.—CHARLES BETTINGER, South Dansville, N. Y.—*Device for Preventing Cattle from Jumping.*—September 21, 1869.

Claim.—1. The device for the purpose described, consisting of the suspended frame A, springs E F, inwardly-projecting pins H, outwardly-projecting pins G, and blinds J, arranged together for the purpose described.

2. The spring E, spring F, pins H H, and frame A, constructed and operated substantially as described.

3. The combination, with the suspended frame A, of the spring E at its upper end, and the spring F at its lower end, operating in relation to each other, substantially as described.

4. The blinds J, as applied to the suspended frame, for the purpose as described and set forth.

95,073.—HIRAM BLUNT and ROBERT C. BLUNT, Bath, Ill., by HIRAM BLUNT, for himself, and HIRAM BLUNT and MARY JANE BLUNT, executors of ROBERT C. BLUNT, deceased.—*Wheat-Drill.*—September 21, 1869.

Claim.—1. The seed-box A and feed-boxes E E′, when arranged with slides *e* and the feed-screws *f*, substantially as set forth.

2. The hinged support given to the driver upon the roller-frame, and the foot-rest connected with the seed-box frame when combined to be operated substantially as set forth.

95,074.—THOMAS W. BRACHER, New York, N. Y.—*Hat-Ventilator.*—September 21, 1869.

Claim.—A hat-ventilator, consisting of the metal pieces *c b*, arranged vertically, one above the other, and braided together, to form a fabricated connection between them, through which the stitches pass, to connect the same to the hat, substantially as described.

95,075.—S. R. BRADLEY, New York, N. Y.—*Manufacture of White-Lead.*—September 21, 1869.

Claim.—The process, substantially as described, of treating the pulp with oil, to effect the separation of the water by the act of combining the oil with the pigment, set forth.

95,076.—JAMES L. BRANDER, Boston, Mass.—*Table and Bedstead.*—September 21, 1869.

Claim.—1. A combined table and bedstead, in which the upright head and foot boards serve as the top and leaves of the table, substantially as described.

2. The combination, with the center-piece *a b*, of the hinged box-frames *c d*, and the pieces *i m*, as shown and described.

95,077.—JOHN BROUGHTON, New York, N. Y.—*Faucet.*—September 21, 1869.

Claim.—The valve D, formed with a lower disk, *e*, in combination with the enlarged chamber *f*, in or to the body of the faucet, and the shaft E, with its eccentric lifting-bar *g*, flanges *h*, and packing-rings *i*, essentially as shown and described.

95,078.—A. L. BROUSE and URIAS WEIDMAN, Lake, Ohio.—*Sausage-Stuffer.*—September 21, 1869.

Claim.—1. The stuffer-box B, provided with the extended side C, having the slots O and P cut therein, substantially as and for the purpose specified.

2. The plunger D F, provided with the arm E, with cross-pin *a*, when used in combination with the stuffer-box B, provided with the extended side C, having the slots O and P cut therein, substantially as and for the purpose specified.

3. The combination of the platform A, stuffer-box B, with extended side C, having slots O and P cut therein; plunger D F with arm E and cross-pin *a*, pressure-lever H, connecting-link I, and standard K, the several parts being arranged substantially as and for the purpose specified.

4. The discharge-tube N, provided with the groove *e* and collar *g*, when used in combination with the clamp M and platform A, substantially as and for the purpose specified.

5. The flexible valve G on the plunger F, provided with hole *s*, opening downward, as shown, substantially as and for the purpose specified.

95,079.—DAVID F. BROWN, Champaign, Ill., and ELIJAH C. BROWN, Crawfordsville, Ind.—*Shield for Corn-Plows.*—September 21, 1869.

Claim.—1. The bar A, with rod E and teeth B B, when constructed as described, and used substantially in the manner and for the purposes set forth.

2. The arrangement of the bar C, screw-rod D, and taps or nuts *a b*, substantially as and for the purposes herein set forth.

3. The combination of the bar A, teeth B B, bar C, screw-rod D, taps *a b*, and rod E, all substantially as and for the purposes herein set forth.

95,080.—S. B. BUSHFIELD, Jr., Parkersburgh, West Va.—*Folding-Umbrella.*—September 21, 1869.

Claim.—The combination and arrangement of the handle A, bisected ribs B B, braces G G, cylinder D, springs H K, and metal cap M, with its annular recess or opening N, all substantially as and for the purposes herein set forth.

95,081.—Canceled.

95,082.—ROBERT CARSON, Meredosia, Ill.—*Gang-Plow.*—September 21, 1869.

Claim.—The plows A, connected by the bent adjustable bars *b*, in combination with the intermediate plows C, when arranged as herein described.

95,083.—ISAAC A. CLARK, Marion, N. Y.—*Gate.*—September 21, 1869.

Claim.—The combination of the hinged bar or brace *d* with the rollers *b b*, in the manner described, and for the purpose specified.

95,084.—W. A. CLARK, Boston, Mass.—*Billiard and Bagatelle Table.*—September 21, 1869.

Claim.—1. A table-top, constructed in sections, in combination with a suitable frame-work or under-support, when the connection between the two is such that they can be relatively adjusted, by sliding the one upon the other, substantially as described, for the purpose specified.

2. A table-top, made in sections, and each section so constructed as, when opened, to leave a raised bearing around its interior surface, substantially as described, for the purpose set forth.

3. A table-top, constructed in sections, with one hinged to the under supporting-frame, when the latter is arranged for adjustment under the former, or table-top, substantially as and for the purpose described.

4. A table-top, constructed in sections, with their interior surface provided with sockets for the reception of plugs, substantially as and for the purpose described.

5. The plugs R, for the sockets of the table, when so constructed as to be susceptible of adjustment in length, substantially as described, and for the purpose specified.

6. The plugs R, when made smooth at one end and concave at the other, substantially as and for the purpose described.

7. The two-part plug, secured together for adjustment in length, substantially as and for the purpose set forth.

95,085.—JAMES S. COEN, Attica, Ind.—*Corn-Planter.*—September 21, 1869.

Claim.—1. In combination with the shaft I and boxes H H, the cut-off *h*, of rubber or other pliable material, substantially as set forth.

2. The arrangement of the bar D, runners E E, and connecting-bar F, substantially as shown and described.

3. The spring-rod *f*, constructed as described, and for the purposes set forth.

4. The arrangement, with the bar D and axle A, of the bars M M and platform N, substantially as and for the purposes herein set forth.

5. The rod O, with hook *m*, and slide P and hook *n*, constructed as described, and for the purposes set forth.

95,086.—William W. Colley and William H. Deitrick, Philadelphia, Pa. — *Signal-Holder for Railway-Cars.*—September 21, 1869.

Claim.—1. The slotted bars C and E, jointed at G, and containing the claws I I, and the expanding and contracting band L L, whether made expansible or not, as arranged and combined, in the manner and for the purposes substantially as herein described and set forth.

2. The claw I, and spiral or other spring J, and set-screw K, arranged and combined and moving in the slot H, and on the surface of the bar C, in the manner and for the purposes substantially as herein described and set forth.

3. The expanding and contracting band L L, in combination with the jointed bar or rod M and joint *a*, each being constructed, arranged, and operated in the manner and for the purposes substantially as herein described and set forth.

95,087.—Henry Cordtz, Chicago, Ill.—*Heel for Boots and Shoes.*—September 21, 1869.

Claim.—The metallic heel D, provided with the projections *b*, for securing the leather lifts C, when constructed and arranged substantially as herein shown and described.

95,088.—Charles A. Cowell, Newark, N. J. —*Pump.*—September 21, 1869; antedated September 13, 1869.

Claim.—The arrangement of the hollow shaft *a* and its valve *b*, interior working-rod *c*, and its valve *d*, with the cylinder *f*, stock A, with exhaust *g*, and lever, with pitman on each side of the fulcrum *e*, for alternately operating the rods *a c*, all substantially as herein set forth.

95,089.—L. H. Cowley, Silver Creek, N. Y.— *Device for Collecting Petroleum from the Surface of Water-Courses.*—September 21, 1869.

Claim.—The sunken reservoir D D′, divided by partition and dam B, and arranged in the bed of a creek, so as to operate substantially as set forth.

95,090.—Waldo P. Craig, Milton, Ky.—*Levee.* —September 21, 1869.

Claim.—1. The combined arrangement of guide-piles A A, walings B B, and sheet-piling C, substantially as herein described, the sheet-piling being flanked on either side by the guide-piles and walings, and all constructed and applied substantially in the manner and for the purposes set forth.

2. The piles H, attached to the lower side of hinged or jointed sections G, so as to be driven in the act of lowering said sections, as and for the purpose specified.

3. The combination, with the subject of the last preceding clause, of the sheet-piling C′, and concrete or rubble-filling J, as and for the purpose set forth.

95,091.—Luther O. Crocker, Braintree, Mass. —*Ticket-Cutter.*—September 21, 1869.

Claim.—1. The combination of the stripper *k* with the die-jaws, substantially in manner and so as to operate therewith, and with the dies, as specified, the stripper under such a combination having its inner end jointed to the lower jaw, and its other end supported against one or more springs, and provided with stops, as set forth.

2. The wire *f*, as made, with the finger-bend or recess *g*.

3. The arrangement and combination of the wire *f*, and the finger-recess thereof, with the spring *h*, and the two jaw-levers provided with cutting-dies, or the same, and a stripper, as explained.

4. In combination with the stripper-plate *k*, the inclination of the cutting-face of the die *i*, longitudinally or laterally, or in both directions, relatively to the lower face of the said stripper-plate, so that the stripper-plate, when in the act of clearing a card from the die, may effect the same in a gradual manner from end to end or side to side, or in both ways, of the cut made by the die.

95,092.—George Crompton, Worcester, Mass. —*Loom.*—September 21, 1869.

Claim.—1. In combination with a box-indicating pattern-mechanism at one end of the loom, and with two tappet-wheels and their ratchets at the same end of the loom, and loose upon the tappet-shaft, the two other ratchet-wheels on the same end of the shaft, and the two tappet-wheels at the opposite end of the shaft, one of said last ratchet-wheels and its tappet being fast to the shaft, and the other of said ratchet-wheels being loose upon the shaft, and imparting movement to its tappet-wheel through the auxiliary shaft geared to said last-named ratchet-wheel and tappet-wheel, substantially as shown and described.

2. In combination with the shipper-lever f^2 and rocker-shaft i^2, the arm l^2, depending from such lever, and operated by the finger n^2, on the end of the lever o^2, substantially as described.

95,093.—Phineas D. Crosby, Danbury, Conn. —*Thill-Coupling.* — September 21, 1869; antedated September 11, 1869.

Claim.—A carriage-shackle, in which the bolt D is constructed with a groove or notch, *a*, in combination with the packing *d* and screw E, the whole constructed, arranged, and operating substantially in the manner specified.

95,094.—Ernest Dams, Newark, N. J.—*Fulling-Mill.*—September 21, 1869; antedated September 17, 1869.

Claim.—1. The arrangement, within the trough B, of removable frames E, for carrying the rollers *a*, substantially as and for the purpose herein set forth.

2. The steam-chamber *m*, covered by a perforated plate, *n*, arranged with relation to and in combination with the rolls *a*, substantially as shown and described.

95,095.—Constantine De Bodisco, Saint Petersburg, Russia, and Pedro Diez De Rivera, Madrid, Spain.—*Artificial Sliding-Hill.*—September 21, 1869.

Claim.—1. The structure A, consisting of a tower, B, an inclined plane at the side of the latter, a platform at the top and a staircase leading from the ground to the said platform, the whole being constructed and arranged substantially as and for the purposes described.

2. The combination, with the structure above described, of an elevating-apparatus, for the purposes set forth, together with the endless belt or strap F, having the hooks *e*, arranged and operating in the tower B, as specified.

95,096.—Avery Denison, Woodville, Ohio, assignor to himself and William Keil, same place.— *Apparatus for Making Butter.*—September 21, 1869.

Claim.—1. The arrangement of the two parts of the cylinder B, projections *a a a*, governors or clamps *b b b*, upper orifice *c*′, lower orifice *c*′, opening *d*, the grooves or furrows in its inner surface, plane surface around the opening *d*, when constructed and operating substantially as herein set forth.

2. The arrangement of the cylindrical wheel C, plane surface of the same, *c*′, around the opening or core made to receive the shaft *g*, with the arrangement of the grooves or furrows, as shown in the drawings, when constructed and operating substantially as herein described.

3. The geared wheel D, gudgeon *e*, pin *e*′, handle *f*, pinion-wheel E, shaft *g*, box H, when constructed, arranged, and operating substantially as herein specified.

4. The combination and use of the table A, cylinder B, cylindrical wheel C, geared wheel D, pinion-wheel E, box H, with their attachments, as herein specified, when constructed, arranged, and operating substantially as and for the purposes mentioned.

95,097.—Charles W. Dwelle, Saint Louis, Mo.—*Manufacture of White-Lead.*— September 21, 1869.

Claim.—1. The arrangement of a fan, or other suction and forcing device, in connection with the separating-reels and hoppers, or similar devices, and the combination therewith of bag receivers or cisterns, substantially as set forth.

2. The cistern G, its pan G′, and ring *g*, when ar-

ranged and operating substantially as and for the purposes set forth.

3. The hopper B^1, its trough and conveyer, combined with the spout H, rollers I, spout K, and second separator-device L M M′, when acting substantially as and for the purposes set forth.

95,098.—W. P. Elam, Petersburgh, Ill.—*Carriage-Wheel.*—September 21, 1869.

Claim.—A box for wagon-hubs, consisting of the case C, having the flanges *c* and the plate I, both having an annular groove, *e*, on their inner face, with the journaled rollers *a* mounted therein, all constructed and arranged as set forth.

95,099.—David Eynon, Richmond, Va.—*Pile for Railroad-Chairs.*—September 21, 1869.

Claim.—A pile composed of rails arranged with their most prominent parts in contact, as set forth.

95,100.—H. H. Flick, Lavansville, Pa.—*Bee-Hive.*—September 21, 1869; antedated September 8, 1869.

Claim.—1. The double honey-frame F, when constructed and arranged as herein shown and described.

2. The combination of the moth-trap E with the base B, having the door B′, when arranged in the manner and for the purpose herein shown and described.

95,101.—William T. Freligh, Jersey City, N. J.—*Hinge for Blinds.*—September 21, 1869.

Claim.—The hinged hook *k*, sustained by the pin *o* upon the eye *g*, but allowed to drop and take the catch *l*, when the notch *s* comes below said pin *o*, as set forth.

95,102.—Alonzo French, Philadelphia, Pa.—*Instrument for Tightening and Loosening Screw-Caps of Fruit-Jars.*—September 21, 1869.

Claim.—The within-described instrument, consisting of two handled jaws, hinged together, and having in their inner sides a screw-thread, adapted to that of a screw-ring for fruit-jars, all substantially as set forth.

95,103.—Russel Frisbie, Cromwell, Conn., assignor to J. and E. Stephens and Company, same place.—*Hinge for Boxes.*—September 21, 1869.

Claim.—The sheet-metal cars C C, united in or by the process of casting, as described, with the one section or portion of the box, for attachment of the two sections or portions, consisting of a body, A, and lid, B, by bending said ears so as to receive, through holes *b b* formed in them, hinge-pins or studs *a a* provided on the other section or portion, substantially as specified.

95,104.—Charles E. Goodhue, Malden, Mass.—*Urn-Stand.*—September 21, 1869.

Claim.—A stand for coffee-pots and similar vessels, consisting of the frame A and the tilting bottom D, provided with the ledge *d*, pivoted eccentrically, and arranged to rest on the bar or stop C, substantially as shown and described.

95,105.—George C. Grut, Milwaukee, Wis.—*Spring-Bed Bottom.*—September 21, 1869.

Claim.—The arrangement and combination of the slotted braces C, rubber springs D, spiral springs supporting the bed, and the bed-pieces A and B, substantially as and for the purposes set forth.

95,106.—I. A. Hammer, Newton, Iowa.—*Bake-Oven.*—September 21, 1869.

Claim.—1. The dampers L, placed in the bottom of the ovens, so that the heat can always be readily controlled, and so as to cause a current of heated air upward, substantially as set forth.

2. The dampers L, in combination with the flue-dampers O, when so arranged that the heat from the oven can be turned up the flue, and *vice versa*, substantially as shown.

3. The pulleys K, V, and W, endless rope or chain X, shaft Z, and chain H, when used to lower and raise the shelves, substantially as specified.

4. The adjustable slide S, provided with a hook, T, or its equivalent, when used substantially as set forth.

5. The depression or recess M, forced in the back of the furnace, for the purpose of receiving an ash-pan, substantially as described.

6. The chambers C, shelves G, dampers L and O, furnace D, chains H and X, pulleys K, W, and V, slide S, hook T, and flue N, when all are combined to form an oven, substantially as specified.

95,107.—John Hazeltine, Melrose, and Charles L. Wheeler, Cambridge, Mass.; said Hazeltine assigns his half to said Wheeler.—*Elastic Cushion for Horses' Feet.*—September 21, 1869.

Claim.—1. The combination, with an elastic or flexible rubber cushion, constructed substantially in the form as shown and described, of a metal spring, E, when the said spring is applied to the cushion in the manner, by the means, and for the purpose specified.

2. The combination, with an elastic or flexible rubber cushion, formed, constructed, and provided with a spring, as described, of catches *g*, when said catches are applied to the cushion in the manner, by the means, and for the purpose specified.

95,108.—C. V. Hemenway, New London, Ohio, assignor to himself and A. A. Powers, same place.—*Brick-Machine.*—September 21, 1869.

Claim.—1. The adjustable side E′ and spring G′, as arranged in combination with the press-box E, in the manner as and for the purpose set forth.

2. The rock-shaft P, arms O Q, and spring D′, when constructed and arranged to operate by means of the sweep N, in the manner as described, and for the purpose specified.

95,109.—Alexander W. Hendrick, Batavia, Ill.—*Coffin.*—September 21, 1869.

Claim.—The within-described coffin-lid, composed of two transverse sections, and secured in place by means of the spring-catches and dowel-pins, substantially as and for the purpose specified.

95,110.—Coleman Hicks, Lancaster, Ky.—*Sash-Holder.*—September 21, 1869.

Claim.—1. The clutch-nut E, with its toothed flange and square shaft, constructed substantially as described, in combination with the pinion *d* and spring *k*, as a device for locking and unlocking a window-sash, all constructed and arranged substantially as and for the purpose described.

2. The flanged cylinder D, the pinion *d*, the rack *e*, spring *k*, clutch-nut E, all constructed and arranged substantially as described, when in combination, as parts of a sash-lock, as above set forth.

95,111.—Louis Hillebrand, Philadelphia, Pa.—*Trunk-Hasp.*—September 21, 1869.

Claim.—A hasp constructed of spring-metal, substantially as described.

95,112.—William J. Horstmann, Philadelphia, Pa.—*Let-Off and Tension-Device for Spools of Braiding-Machines.*—September 21, 1869.

Claim.—The arrangement of the pawl G on the ratchet-bobbin spindle B, in respect to the guide E, having a slot, *e*, opening *y*, and weight F, as described.

95,113.—Thomas Houghton, Philadelphia, Pa.—*Machine for Forming Screw-Threads on Sheet-Metal Caps.*—September 21, 1869.

Claim.—1. The mode of swaging threads on sheet-metal ware, from the inside thereof, substantially as described.

2. The rollers D, chuck C, and sectional die E D″, combined and operating substantially as described.

3. The blank-holder F, in combination with the die, substantially as described.

4. The hollow mandrel B, with screw-threads *b′* and groove *b*, and the wheel B′, operating together substantially as described.

5. The tripping-mechanism for the lever M, consisting of the collar K′, pin L′, lever H′, and spring H″, or equivalent, substantially as described.

6. The forked lever K, in combination with the collar K′ and lever M, substantially as and for the purpose described.

7. The means for throwing the pulleys R R′ in and out of gear, consisting of the conical pulley or clutch Q, the hollow shaft O, and the sliding rod N′, substantially as described.

8. The eccentric bushings for the rods bearing the swaging-rollers D, substantially as and for the purpose described.

9. The sectional die, consisting of the stationary part D′, and the hinged part E′, in combination with the advancing and receding chuck C, substantially as described.

10. The combination of the various parts, substantially as described, for the purposes specified.

95,114. — BERNARD HUGHES and DANIEL HUGHES, Rochester, N. Y.—*Dredging-Apparatus.*—September 21, 1869.

Claim.—1. In combination with a dredging-apparatus, a detachable lighter, F, constructed and arranged substantially as described.

2. Providing the lighter F with one or more turn-tables, for the purposes set forth.

3. Providing the outer turn-table I′ with a suitable elevating-device, as and for the purposes specified.

4. The elevating-tramway *n*, arranged substantially as described, in combination with the lighter F, for the purpose set forth.

95,115.—ROBERT HUTTON, Williamsburgh, N. Y., assignor to himself and JOSEPH T. G. MIDDLETON, same place.—*Attachment for Lamp-Burners.*—September 21, 1869.

Claim.—A lamp-burner attachment composed of the part B, with arms *b b*, all made in one piece, as a new article of manufacture, when it forms no part of the burner proper, but is separately applicable, as and for the purpose herein described.

95,116.—JOHN C. JEWETT and JOHN VOGT, Buffalo, N. Y.; said VOGT assigns his right to said JEWETT.—*Bird-Cage.*—September 21, 1869.

Claim.—1. The sliding guard *e*, arranged and operating with the hook *b*, provided with stem *b′*, substantially as hereinbefore set forth.

2. In combination therewith, the ledge and notch *i* and *i′*, arranged and operating as set forth.

95,117.—CLARK JILLSON, Worcester, Mass.—*Machine for Turning Tapers.*—September 21, 1869.

Claim.—1. The combination, with the tool-operating screw and pendent arm *h*, of a guide-screw, substantially as and for the purposes set forth.

2. The combination, with the pendent arm, of two adjustable guide-screws *m m*, arranged relatively, to each other, as shown in the drawings, and for the purposes set forth.

95,118.—EDWARD M. JUDD, Wolcottville, Conn.—*Twine-Holder.*—September 21, 1869.

Claim.—The twine-holder, formed of two half shells, to the bottom one of which the downward-projecting stud *e* is connected, in combination with the socket *f*, substantially as and for the purposes set forth.

95,119.—HENRY LIGHTY, Attica, Ind.—*Washing-Machine.*—September 21, 1869.

Claim.—The combination of the tub A, movable bottom B, beater D, rollers G G, arms H H, rods L L, cross-shaft N, and standards M M, all substantially as and for the purposes specified.

95,120.—MARTIN H. LINEBACK, Greenfield, Ind.—*Clothes-Line Fastener.*—September 21, 1869.

Claim.—The table or flange A, 1, 2, 3, 4, and the dog B, 5, 6, 7, 8, constructed as shown and described, adapted for attachment to a post or other support, by means of screws C C D, and to operate in combination, substantially as and for the purpose set forth.

95,121.—H. C. LOCKE, Somerville, Tenn.—*Seed-Planter.*—September 21, 1869.

Claim.—1. The standard D, constructed as shown, in combination with the separate shovel or plow C, as described.

2. The combination and arrangement of the colter E, curved backward, as described, the shovel C, and standard D.

3. The wedge L, constructed as described, in combination with the standard D and shovel C, as and for the purpose described.

4. The combination and arrangement, in a seed-planter, of the seed-hopper F, with its dropping-device, the standard D, shovel C, and colter E.

95,122.—NATHAN C. LOMBARD, Cambridge, as signor to JAMES A. WOODBURY, Winchester, Mass.—*Railway-Car and Driving-Wheel.*—September 21, 1869.

Claim.—1. The combination of a double-beveled tire with a bevel-faced wheel and binding ring, substantially as described.

2. The combination of a double-beveled tire with a wheel-body and a binding-ring, which are recessed, as and for the purpose described.

3. The combination of an inner double-beveled flanged tire with a bevel-faced fastening or binding-ring, and with the body of the wheel, when the tread portion of said tire is over or around said binding-ring, and the flanged portion over or around the solid portion of the body of the wheel, substantially as described, and for the purpose set forth.

95,123.—CLARK LOSEE, Perrysburgh, N. Y.—*Fence-Post.*—September 21, 1869.

Claim.—An iron fence-post, consisting of the uprights A A, braces *c c*, and connecting base-rod *b*, bent from a single rod and secured in the ground, substantially as shown and described.

95,124. — PATRICK J. MANNING, Troy, Ill.—*Churn.*—September 21, 1869.

Claim.—The rod D, having spiral grooves, combined with the rollers c^1 c^2, the socket D^1, dasher-rod E, and dashers *e*, and actuated by the lever F, substantially as and for the purposes set forth.

95,125.—JAMES MARTIN, Chesterfield, Ohio.—*Sled.*—September 21, 1869.

Claim.—The socket-joint *c*, in combination with the bar A and brace B, when constructed and operating substantially as and for the purposes specified.

95,126.—G. MCDONALD, Athens, Ga.—*Dentists Impression-Cup.*—September 21, 1869.

Claim.—1. In an impression-cup, the employment of a movable flap, for the purpose described.

2. In an impression-cup, the employment of movable sides, for the purpose described.

3. The flap C, having the spring-bar or ratchet *c*, when combined with the base A, as and for the purpose described.

4. The cup described, consisting substantially of the base A, sides B, and flap C, the whole being combined and arranged as and for the purpose described.

95,127.—GEORGE E. MORE, Royalton, Wis.—*Shingle-Binder.*—September 21, 1869.

Claim.—A shingle-binding machine, consisting of the frame A, with the end-pieces L and H, the stakes K, and levers B C, provided with the cross-pieces *a b*, and operated by the rock-shaft G, and curved hooks *e f*, all constructed and arranged to operate substantially as described.

95,128. — CHARLES S. MOSELEY, Elgin, Ill.—*Watch.*—September 21, 1869.

Claim.—1. The combination of the bridge C, provided with the lip *c* and the strips *a*, when arranged substantially as described.

2. Providing the plates A B with grooves *b b′*, substantially as and for the purposes specified.

3. The metallic strips *a a*, in combination with the plates A B, having the grooves *b b′*, substantially as and for the purposes specified.

95,129.—ARTHUR O. NEAL, Hyde Park, Mass.—*Mortising-Machine.*—September 21, 1869.

Claim.—The double-lip screw-auger *a*, in combination with cutters *d d′* and circular saws *e e′*, when constructed in the manner and for the purpose substantially as described.

95,130.—CHARLES HORACE NOYES, Brooklyn, N. Y.—*Childs' Round Comb.*—September 21, 1869.

Claim.—The combination of the head-band, side

comb, and detachable fastening, substantially as before set forth.

95,131.—CHARLES PARKER, Meriden, Conn.—*Cracker and Grinding Mill.*—September 21, 1869.

Claim.—In a box-mill, in which the runners F and I are set the one above the other, forming the stud *a* upon one and projections *d d* upon the other, so that while the lower is driven by the turning of the upper, the upper forms the bearing for and holds the lower in its central position, substantially as set forth.

95,132.—R. F. PATTON, Quincy, Ohio.—*Corn-Drill.*—September 21, 1869.

Claim.—1. The slide N, provided with an opening, *n*, made adjustable by means of a block, *n'*, and screw O, in combination with the box M and hopper L, substantially as described, and for the purpose set forth.

2. The means employed for securing to the frame, and rendering adjustable laterally, the outside hoppers and dropping-devices, consisting of the lugs *m'*, *m'*, and *m''*, secured to and projecting downward from the box M, and the spring *f* secured to the lug *m''*, and provided with a pin, *f'*, which engages with a series of holes in the lower side of the strip F, substantially as shown and specified.

3. The means employed for securing to the frame, and rendering adjustable thereon laterally, the drill R and spout P, consisting of the bolt *r*, provided with the ring-shaped head, and working through the slot *e'*, in the bar E, substantially as and for the purpose specified.

4. The means employed for connecting the drills and dropping-devices with the main frame, and rendering them adjustable vertically, consisting of the guides D, secured to the rear ends of the bars C and C', the sleeves or thimbles *e*, attached to the strip E, the shaft I, journaled within the standards H, and provided with the arms *i* and connected to the adjustable frame by means of the links *g*, the lever K, the notched bar *k*, and the spring *k'*, substantially as herein shown and described.

5. The means employed for operating the dropping-devices, consisting of the shaft S, provided with the arms T, *s*, and *s'*, the pin *s''*, the rods U, the bar V, the band *b*, provided with the studs *b'*, the clutch *c*, and the curved spring *c'*, all constructed and arranged substantially as and for the purpose specified.

6. The marker Y, operated by means of the lever Z and cam-arm *z*, substantially as shown, and for the purpose set forth.

95,133.—CHARLES PEILLARD, France.—*Horse-shoe.*—September 21, 1869.

Claim.—The horseshoe herein described, consisting of the two parts *a b* of equal length, the one having a circular projection, *a'*, fitting a corresponding recess in the other, thereby forming a joint at the toe, as and for the purpose set forth.

95,134.—G. W. PERRY, Wilmington, Del.—*Car-Window.*—September 21, 1869.

Claim.—1. The adjustable sash F, sliding in guides between the outer and inner sashes of a car-window, substantially as and for the purpose described.

2. The bent strips *b*, arranged between the outer and inner sashes of a car-window, and guiding an intermediate sash F, substantially as specified.

95,135.—HENRY PETRIE, Chicago, Ill.—*Coffee and Spice Mill.*—September 21, 1869.

Claim.—1. The hoppers A A A, cast in one piece, substantially as herein described.

2. In combination with the hoppers A A A, when cast in one piece, the bed-plate B and grinding-cylinders C, substantially as herein described.

3. The box E and drawers F, in combination with the bed-plate B and grinding-cylinders C, substantially as herein described.

95,136.—JOEL F. PLUM, near Greencastle, Pa.—*Grain-Separator.*—September 21, 1869.

Claim.—The combination of the stacker C, apron D, pulleys *a*, *a*, *b*, *d*, *c*, *f*, and *h*, and their connecting-cords, with the separator F, all substantially as and for the purposes set forth.

95,137.—ABIATHER F. POTTER, San Francisco, Cal.—*Projectile.*—September 21, 1869.

Claim.—1. A projectile, provided with wings B B and an elastic cushion, E, between the head and the explosive charge, substantially as described.

2. The sectional elastic packing E, arranged between the wings in front of the explosive charge, and behind the head of the projectile, substantially as described.

95,138.—J. C. PRICE, New Philadelphia, Ohio.—*Sash-Rope Pulley.*—September 21, 1869.

Claim.—The bisected sash-box B, provided with the alternate projections *b* and *e*, on the upper and lower surfaces, and supporting the pulley A, all substantially as and for the purposes set forth.

95,139.—WILSON S. PURDEY, Butler, Ind.—*Corn-Planter.*—September 21, 1869.

Claim.—The shaft D, combined with the levers *c e e*, and slides *a' a'*, substantially as and for the purpose set forth.

95,140.—EZRA RHODES, Erie, Pa.—*Machine for Sawing Pellies.*—September 21, 1869.

Claim.—1. The saws D E, in combination with the adjustable mandrel and oscillating carriage, substantially as described, for the purpose specified.

2. The recessed collars F, G, and H, constructed as described, and applied to the saws D E, in the manner set forth for the purpose specified.

3. The arrangement of the carriage K L, adjustable carriage-support M N, shaft P, and worm-gears Q R, all operated substantially as specified.

95,141.—HENRY R. ROBBINS, Baltimore, Md.—*Fly-Brush.*—September 21, 1869.

Claim.—1. The combination, with the main drum *a*, of the coiled spring *a'*, and the cord and weight *b b'*, arranged and operating as set forth.

2. The winding-mechanism, consisting of the slotted pawl *e*, ratchet *a''*, and spiral spring *h*, all arranged to operate in the manner explained.

95,142.—JAMES H. ROBINSON, Selma, Ala.—*Corn and Cotton Cultivator.*—September 21, 1869.

Claim.—1. Attaching draught-pole by means of two pivots, substantially for the purposes described.

2. The construction and combination of draught-pole K, rock-shaft B, and hand-operating lever J, so as to form a joint, through which universal leverage may be conducted, by means of a single hand-operating lever, for the purposes substantially as described.

3. Mode of arranging the plows in front and rear of rods D and *c*, and having plates of different length, and projecting to the front and rear, the rods passing through them for the purposes described.

4. Rock-shaft B, arms C, rods D and *c*, arranged to counteract each other under pressure, and to move the plows up and down at a uniform angle, for the purposes described.

5. The treadles H, and their application to rod *c*, for the purposes described.

6. The combination of the rock-shaft B, arms C, rod D, plates E E', standards F F', rod *c*, treadle H, and hand-lever J, substantially as and for the purpose described.

7. So arranging the plows as that they will operate in the ground parallel with or nearly opposite to the axis of the draught-pole and hand-operating lever, for the purpose described.

8. Mode of securing standards by means of hooks and cross-chains, for the purposes described.

95,143.—JOHN B. ROSE and JEROM B. BROWN, New London, Wis.—*Upset, Punch, and Shears.*—September 21, 1869.

Claim.—The improved machine herein described, consisting of beams A A', cross-brace B, projections *a c g*, adjustable plate *d*, keys *b h e*, levers T and H', and shears N, all arranged and operating substantially in the manner and for the purpose described.

95,144.—JOHN B. ROSE and JEROM B. BROWN, New London, Wis.—*Upset, Punch, and Shears.*—September 21, 1869.

Claim.—The movable upset G, conneeted, by the plate H, to the lever B, and traveling with the same, substantially as herein set forth.

95,145.—GEORGE ROTH, New York, N. Y., assignor to HEINEMANN AND SILBERMANN, same plaee.—*Loom for Making Fringe.*—September 21, 1869.

Claim.—1. The hook *i*, mounted upon the lay *b* and slide *m*, in eombination with the meehanism, substantially as speeified, for revolving said hook, and stopping the same in position for the bullion to be unhooked, substantially as set forth.

2. The finger *r*, mounted upon the bent lever 29, and aetuated by the movement of the lay, substantially as set forth.

95,146.—D. C. SAGE, Middletown, Conn.—*Shutter-Hook.*—September 21, 1869.

Claim.—1. The eonstruetion of the hook-bearing B of the inside shutter-fastening herein deseribed with a serew-threaded stem b^2, and with a eentral orifice for the reeeption of the pivot of the hook, substantially as herein described and shown.

2. The eombination of the hook A with the shutter-hook bearing B, which has a serew-threaded stem, by means of a pivot which forms a part of the hook, and enters through the faee of the plate *b*, and is riveted, substantially in the manner shown and deseribed.

3. The inside shutter-fastening herein deseribed, consisting, first, of the bearing B, with serew-threaded stem b^2 and plate *b*; second, of the hook A with the rivet-pivot b^1; and, third, the button C, with serew-threaded stem c^2, nut-bearings c^3, neek c^1, and head *c*, all for use together, substantially in the manner and for the purpose deseribed.

95,147.—CHARLES W. SANBORN, Morrill, Me.—*Horse-Rake.*—September 21, 1869.

Claim.—1. The rollers or pulleys around whieh the teeth are wound, substantially as deseribed.

2. The rollers N, teeth-bars A, and lifting-lever C, the whole arranged and operating as deseribed.

95,148.—JOHN G. SCHILLER, New Middletown, Ohio.—*Sawing-Machine.*—September 21, 1869.

Claim.—The hereinbefore-deseribed deviee, when eonstructed and operated substantially as and for the purpose speeified.

95,149.—ANDREAS SCHOPP, Belleville, Ill.—*Seed-Feeding Device for Grain-Drills, &c.*—September 21, 1869.

Claim.—The distributing-wheel C, arranged with continuous groove, and combined with the regulating-slide D, substantially as set forth.

95,150.—CHRISTIAN SHARPS, Philadelphia, Pa.—*Propeller.*—September 21, 1869.

Claim.—1. In combination with an inclined propeller-shaft, A, a roller, *k*, for resisting the strain imparted to the said shaft, as set forth.

2. A blade, D, composed of three plates, connected together, and secured to a flange on the hub, as set forth.

3. The hollow hub B, with its hollow projeetions *b*.

95,151.—ERASMUS N. SHEDD, Three Oaks, Mieh.—*Bee-Hive.*—September 21, 1869.

Claim.—The sliding-cap D, provided with the eentral eompartment *g*, having a grated opening *j*, arranged and operating substantially as and for the purposes speeified.

95,152.—JAMES SHEEDY, New York, N. Y.—*Atomizer for Administering Medicines.*—September 21, 1869.

Claim.—In an atomizer or spray-apparatus of the character described, the combination of the eock K, constructed substantially as specified, with the outlet D, from the generator to the jet-pipe, and with the lateral eseape-passage or pipe M, from the seat L of said eock, essentially as and for the purposes herein set forth.

95,153.—JOHN P. SHERWOOD, Fort Edward, N. Y.—*Cylinder Paper-Machine.*—September 21, 1869; antedated September 10, 1869.

Claim.—1. The arms *b'*, beveled off upon their lower edges, in combination with the induetion-openings through the partition B, substantially as herein shown and deseribed, and for the purpose set forth.

2. The eombination of the sliding or vibrating frame F, and eurved rods or bars H, whether round or flattened, with the eylinder D, substantially as herein shown and deseribed, and for the purpose set forth.

3. Operating the sliding or vibrating frame F by means of the tongues G adjustably attached to the said frame F, and the notehes or teeth formed in or upon the ends of the eylinder D, substantially as herein shown and deseribed.

4. The series of eurved spouts K, in eombination with the eylinder I, slotted partition J, and sliding or vibrating frame F, substantially as herein shown and deseribed, and for the purpose set forth.

95,154.—TOM SHREWSBURY, New York, N. Y.—*Screw-Cutting Die-Plate.*—September 21, 1869.

Claim.—1. The arrangement of the pinion *e*, annular eam D, shoulders *c c'*, and reciprocating serew C, in the manner and for the purpose speeified.

2. The eombination, in the same serew-cutting die-plate, of the deviee above deseribed, for opening and closing the threaders, and the swiveled serew C, pinions *f*, raek *g*, and set-serew *h*, for adjusting the throw of the eutters to bolts of different size, all eonstructed and arranged together in the manner deseribed.

95,155.—GERARD SICKLES, Boston, Mass.—*Valve for Steam and other Enginery.*—September 21, 1869.

Claim.—1. The balanee-valve E, eonstructed substantially as herein deseribed.

2. The valve E, in combination with sliding bloek D and valve-chest A, substantially as deseribed.

3. The valve E, block D, chest A, in combination with lever L and valve-stem G, substantially as above speeified.

95,156.—JOHN SMITH, East Liverpool, Ohio.—*Butter-Jar.*—September 21, 1869; antedated May 26, 1869.

Claim.—A butter-jar, consisting of the earthenware body, and its internal-flanged rim *a*, which is arranged below the top of the body, the earthenware eover *b*, leaving a spaee *c*, in eombination with the sealing-substanee, as set forth, and the auxiliary paper eovering *e*, when all parts are constructed and adapted to operate together as deseribed.

95,157.—LOUIS P. SMITH, Middletown, Pa.—*Lifting-Jack.*—September 21, 1869.

Claim.—1. The lever E, eonstructed with eogs *d* and ratchet-teeth *e*, in combination with the lifting-bar B, having raek-teeth *b*, and with the detent E, substantially as and for the purpose herein specified.

2. The construction and arrangement of the standard A, with the working-parts of the lever D, and detent E ineased therein, and the lifting-bar B with its long side-wings sliding in grooves thereof, substantially as set forth.

95,158.—OTIS SNOW, Burlington, Vt.—*Butter-Worker.*—September 21, 1869.

Claim.—The box A, perforated, to admit the pivot of the standard C, roller F, ears E E, handle D, hinged, at *a*, to the standard C, and said standard pivoted through the bottom of box A, when all the parts are eonstructed and arranged, substantially as hereiu set forth.

95,159.—PALMER SPALDING, Chieago, Ill., assignor to himself, WILLIAM SPALDING, and TRUMAN D. SPALDING.—*Pinch-Bar.*—September 21, 1869.

Claim.—A pinch-bar, having its short arm with a fixed convex face, and its heel or fulerum formed with teeth, as and for the purposes hereinbefore set forth.

95,169.—JOHN STEVENS, Mount Vernon, N. Y.—*Playing-Cards.*—September 21, 1869.

Claim.—The combination of the several cards, above described, to form a pack, substantially as set forth.

95,161.—JOSEPH J. STOUT, SANFORD J. RUSSELL, and NOAH MENDENHALL, Greensburgh, Ind.—*Combined Oven and Drum.*—September 21, 1869.

Claim.—The construction and arrangement of the drum A, formed, as described, of two cylinders *c d*, one or more tubes D, doors B, window C, grating G, and hook H, all substantially as shown and described.

95,162.—MOSHER A. SUTHERLAND, New York, N. Y.—*Rubber Compound.*—September 21, 1869.

Claim.—A compound, composed of the ingredients, in the proportions and prepared in substantially the manner herein set forth.

95,163.—ABEL TEAGUE, Madisonville, Ky.—*Plow.*—September 21, 1869; antedated September 10, 1869.

Claim.—1. The metallic standard F, constructed substantially as and for the purpose described.

2. The bar, or sole D, constructed substantially as and for the purpose described.

3. The bar, or sole-brace E, when used in combination with the bar, or sole D, constructed substantially as described.

4. The metallic frame-work of a plow, composed of the standard F, and the bar, or sole D, when cast in one single piece, constructed substantially as described.

95,164.—PARKER A. THAYER, Theresa, N. Y.—*Horse-Rake.*—September 21, 1869.

Claim.—1. The combination of the frame A, rake B, and handles C with the springs H, pitman D, and extension-rods G, when the same are all constructed and arranged to be adjustable, and operate in the manner substantially as described, and for the purpose set forth.

2. Providing the rods G with the nuts *j* and *k*, to adjust the length of the rods, and to regulate their longitudinal movement, substantially as herein described, and for the purpose set forth.

3. The adjustable slotted iron *h*, when constructed and arranged as described, and for the purpose set forth.

95,165.—HUGH THOMAS and ROBERT WALLACE, New York, N. Y.—*Mechanical Movement.*—September 21, 1869.

Claim.—The combination, with the wheel A, of the case B, having a radial extension, B′, provided with grooves *f* f^1 f^2, the rod or lever C, fitting to the said socket, and having a beveled inner end, and a feather, *e*, to fit the grooves in the socket, and the spring D, the whole arranged substantially as herein described.

95,166.—C. W. TSCHUMY, Fremont, Ohio.—*Gauge for Saws.*—September 21, 1869.

Claim.—The arrangement, upon the grooved gauge A, of the slide B with its pivoted marker E, plate C, and thumb-screw D.

95,167.—STEPHEN S. ULREY, North Manchester, Ind.—*Churn.*—September 21, 1869.

Claim.—The combination of the adjustable support G, standard C, lever A, dashers B L′, and barrel K J, constructed and arranged to operate as described.

95,168.—JAMES S. UPTON, Battle Creek, Mich.—*Horse-Power.*—September 21, 1869.

Claim.—The combination of the bed A, swinging frames C C, levers D D, and braces E E, all constructed, arranged, and combined substantially in the manner and for the purposes herein set forth.

95,169.—FRANK R. VAN DAKE, Jackson, Miss.—*Fruit-Crate.*—September 21, 1869.

Claim.—The top A and bottom A′, each having cleats *a a*, side pieces B B′, and end pieces E E, when the same are so connected together, by loops formed in the brace-bands, that hinged joints are provided, whereby the box can be compactly folded in three layers, the sides falling in between the cleats of the top and bottom, and the end pieces folding over, and meeting on either the top or bottom, substantially as described.

95,170.—NICHOLAS S. VEDDER, Troy, N. Y.—*Cooking-Stove.*—September 21, 1869.

Claim.—1. The flues *b c b*, above the top-plate of the stove, and in line with the oven-heating and draught-flues B C B, against the upper part of the front side of the reservoir H, in combination with the heating-flues *m n m*, substantially as and for the purpose set forth.

2. The ascending and descending flues *m m*, in combination with the ascending and descending oven-heating flues B C B, in the manner and for the purpose set forth.

3. The water-reservoir, having its back and ends naked or uncovered, and its front covered by the flues *m n m*, when the said flues are in connection with the oven-heating flues, as hereinbefore described, for the purpose set forth.

4. In combination with the stove and reservoir, when constructed and arranged as described, the dampers F and G, operating substantially in the manner and for the purpose set forth.

95,171.—C. A. VOSBURGH, Memphis, Tenn., assignor to himself and MERRIAM, BOYD AND COMPANY, same place.—*Ruffling-Attachment for Sewing-Machines.*—September 21, 1869.

Claim.—A ruffling and gathering attachment for sewing-machines, composed of the plates A and B, with arms *n* and H, and the slotted guide-plate D, with its clasping-arm *o*, all arranged for joint operation, and constructed substantially as and for the purpose shown and specified.

95,172.—MICHAEL WALPOLE, Milford, Mass.—*Shoemakers' Tool.*—September 21, 1869.

Claim.—The adjustable fulcrum D, arranged in combination with pincers A, in the manner and for the purpose set forth.

95,173.—JOHN WARD, Evansville, Ind.—*Medical Compound.*—September 21, 1869; antedated September 13, 1869.

Claim.—A preparation, compounded substantially in the manner and for the purposes described.

95,174.—JAMES C. WELLS, Warren, Pa.—*Eccentric.*—September 21, 1869.

Claim.—1. The combination of the eccentric wheel A, eccentric ring B, strap C C^1, and bolts D, all arranged and operating substantially as set forth.

2. The combination of the eccentric wheel A, eccentric ring B, strap C C^1, bolts D, and set-screw *a*, operating substantially as set forth.

95,175.—JAMES WHEELER, Dowagiac, Mich.—*Potato-Digger.*—September 21, 1869.

Claim.—1. The construction of the bow or hoop A, with its shares D D in one piece, as and for the purposes set forth.

2. In combination with the hoop A and shares D D, the screen, composed of the rods 1 2 3 4 5 6 7 8 9 10, (or any suitable number,) the shaft E, cam-wheels *a a*, handles B B, braces H H, and bail C, when constructed, arranged, and combined as set forth.

95,176.—M. F. WICKERSHAM, Springfield, Ill., assignor to himself, THOMAS ECKARDT, H. F. ELDRED, J. G. LAW, T. HUTCHINSON, C. B. HURD, C. DRESSER, and D. SHERMAN.—*Dumping-Cart.*—September 21, 1869.

Claim.—The body of a dumping-cart, hung upon the axle in such a manner as to be dumped at either end, and arranged substantially as herein shown and described, for the purpose specified.

95,177.—M. F. WICKERSHAM, Springfield, Ill., assignor to himself, THOMAS ECKARDT, H. F. ELDRED, J. G. LAW, T. HUTCHINSON, C. B. HURD, C. DRESSER, and D. SHERMAN.—*Street-Sweeping Machine.*—September 21, 1869.

Claim.—1. The adjustable brush F, arranged as described, to discharge the dirt, in the process of sweeping, beneath the front platform H, directly

into a separate dumping-cart without the employment of an endless chain of buckets, substantially as herein shown and described, for the purpose specified.

2. In combination with the brush F, the lever-bail *d*, arranged as described, whereby the brush is brought in contact with the ground or raised above the same, substantially as herein shown and described, for the purpose specified.

3. The arrangement of the pivoted lever L and clutch K, with relation to the shaft of the brush, the racks *j* and the loose gear-wheel J, as herein described, for the purpose specified.

4. The loose pivoted curved apron M, in combination with the frame A, drum E, and brush B, arranged to operate in connection with a detachable cart, substantially as herein shown and described, for the purpose specified.

5. The frame A, constructed as described, with the front platform H and central transverse drum E, and mounted upon the axle B and swiveled truck D, as herein set forth, for the purpose specified.

95,178.—M. K. BUTTERFIELD, Eddyville, N. Y.—*Fence-Post.*—September 21, 1869.

Claim.—The fence-post herein described, in combination with the pins *c* and wedges *d*, when the same are constructed and arranged substantially as and for the purposes specified.

95,179.—REUBEN A. ADAMS, Cambridge, Mass.—*Preserving Fish.*—September 28, 1869.

Claim.—The use of saltpeter and alum in the process of curing fish, in the manner and for the purposes substantially as described.

95,180.—ORSON ARMSTRONG, Oshkosh, Wis.—*Sash-Balance.*—September 28, 1869.

Claim.—The ratchet *d* and pawl E, when attached to the side of the sash, and used, in combination with the sash A A and cord *k*, as and for the purposes set forth.

95,181.—THEOPHILUS A. AUBERLIN, Detroit, Mich.—*Permutation-Lock.*—September 28, 1869.

Claim.—1. The bolt C, provided with tumbler *d*, stump *c*, key-stump *d'*, and stud *c'*, on which is sleeved the dog D, arranged and operating in the manner and for the purposes set forth.

2. In combination with said bolt, the slide E, provided with studs *e*, substantially as and for the purpose specified.

3. The annular tumblers F', each provided with a slot, *g*, notch *i*, and stud *j*, the tumbler-carriers F and clamps *f*, arranged and operating in the manner and for the purpose set forth.

95,182.—RODMAN BACKUS, Albany, N. Y.—*Base-Burning Stove.*—September 28, 1869.

Claim.—1. The combination of the fuel-magazine, a fire-pot whose fire-brick lining is arranged within a skeleton frame, and a perforated casing located beneath illuminating-windows, substantially as described.

2. A prismatic or many-sided fire-pot, capped by a removable guard-ring, D, and arranged beneath a fuel-magazine, substantially as described.

3. Removable fire-bricks *d*, movable ring D', and doors *h*, hinged substantially as described.

95,183.—BURROUGHS BEACH, Meriden, Conn., assignor to JOHN R. PEASE, same place.—*Baby-Jumper and Rocker.*—September 28, 1869.

Claim—1. The combination of the lever C, provided with a suitable seat for the child, with the two rockers A and a spring between the two, substantially as herein set forth.

2. In combination with the above, the adjusting-arm B, with the set-screw *a*, as and for the purpose specified.

95,184.—NICOLAS LOUIS BEAUFILS and JACQUES REXROTH, Paris, France.—*Miners' Safety-Lanterns.*—September 28, 1869.

Claim.—1. The combination of leather washer *k*, spring-blades *l*, and notched washer *m*, with the disk B, arranged as described, to form an air-tight rest for the cylinder F.

2. The combination of tube G M and gratings H N O with the circumjacent cylinder F, all constructed and arranged substantially as described.

3. The combination of the sliding cap I with a lamp and chimney, substantially as and for the purpose specified.

4. In combination with the rod L and tube E', the spring-pin *d* and bayonet-lock *b j*, all arranged as described, to connect or disconnect the lamp and safety-apparatus.

5. In combination with the thumb-screw K J, its threaded nut, and the supports E, the cap I, all operating together in the manner set forth.

95,185.—L. W. BEECHER, Westville, Conn.—*Basket.*—September 28, 1869.

Claim.—In the construction of baskets, the splints diagonally scored and folded at the lower ends, so as to be secured to the bottom, substantially as and for the purpose specified.

95,186.—HERMANN BERGER, Marthalen, Switzerland. — *Embroidering-Machine.*— September 28, 1869.

Claim.—1. A multiple embroidering-machine, substantially such as described, provided with one or more pairs of hooks and needles working from above and below the cloth, in order to apply the same design in reverse order to two or more pieces of fabric, substantially as herein shown and described.

2. The combination with each other of the two embroidering-hooks H H' attached to the rod I, so as to move simultaneously below and above sheets of fabric, as set forth.

95,187.—JAMES BIRCH, Corry, Pa.—*Harvester-Guards.*—September 28, 1869.

Claim.—1. A skeleton-guard, provided with the central stud or post, or equivalent device, forming a support for the heel-end of the stationary cutter, substantially as described.

2. A guard or finger, provided with the stud or post A' and angular shoulder *c* of wings C, for securing the stationary cutters D in place, substantially as described.

95,188.—OLPHA BONNEY, Jr., San Francisco, Cal.—*Harvester.*—September 28, 1869.

Claim.—The knee *c*, interposed between the beam *b* and the spring *i*, in combination with the bar *d* and spring *i*, as and for the purposes set forth.

95,189.—JOHN A. BRADSHAW and WILLIAM H. BROWN, Lowell, Mass., assignors to themselves and DARIUS WHITHEAD, same place.—*Liquid-Meter.*—September 28, 1869.

Claim.—The arrangement and construction of the case *a*, cover *c*, plates *e* and *f*, strainer *h*, conductor *i*, with one or more spouts *j j*, regulating-valve *v*, and wheel *l*, with buckets *k k*, all when combined and operating as described and specified.

95,190.—REUBEN BRADY, New York, N. Y.—*Machine for Fastening Bottoms to Cans.*—September 28, 1869.

Claim.—1. The combination of a yielding beveled can-support, B, with slides C C and actuating-ring E, all arranged and operating as set forth.

2. The arrangement, on the bed A, of the actuating-ring E and the levers *d*, swinging on movable fulera, and impelling the slotted slides C, in the manner described.

95,191.—THOMAS S. BROWN, Poughkeepsie, N. Y.—*Harvester-Rake.*—September 28, 1869.

Claim.—1. The sliding or drop bolts or latches, attached to the rake-arms for operating the cam-switch or gate, substantially as described.

2. The ratchet-wheels or counters, in combination with the slide or bolt on the rake-arms, for regulating the frequency of discharge of the gavels, substantially as described.

3. The inclined track *m*, in combination with the slide or drop bolts, for carrying the latter past the switch-lever without operating the switch, as set forth.

4. The rotating-disk, in combination with ratchet-

wheels or counters, or their equivalent, for the purpose set forth.

5. The spring-pin or bolt, or an equivalent device for holding the disk K and counters L at the desired point of adjustment, as set forth.

6. The shield M, in combination with the disk and counters, for protecting them from the falling grain, as set forth.

7. The combination of disk K, counters L, slide-bolt O, inclined way *m*, and switch-lever H, for operating the rake and reel-arms, as described.

95,192. — DAVID M. BYE, Roanoke, Ind., assignor to himself and H. BASH, same place.—*Bed-Bottom.*—September 28, 1869.

Claim.—The combination of the cross-bars F G, cleats H I, and adjusting-screws J J, all constructed as described, with the ordinary hooked slats D and ropes E, to form a bed-bottom, as described.

95,193.—W. E. CAMERON and A. A. DETTLAFF, Green Island, N. Y.; said CAMERON assignor to said DETTLAFF.—*Machine for Mitering Printers' Rules.*—September 28, 1869.

Claim. — 1. The arrangement, in the machine herein described, of the guide G, rotating and reciprocating sleeve H, and knives L L, substantially as and for the purpose herein shown and specified.

2. The combination of the parts above specified, all constructed and operating substantially as set forth, with the rotating disk B and thumb-screw P, substantially as herein described and set forth.

3. The arrangement of the reciprocating rest-plates R R in grooves in the face of the sill of the frame, substantially as and for the purpose described.

95,194. — EDWIN A. CHUBB, Ionia, Mich.—*Plow-Wheel.*—September 28, 1869.

Claim. — 1. The slotted shank E, provided with slot *n* and hood *m*, substantially as described, for the purposes specified.

2. The cap C, in connection with the channel or recess *a* in the hub B, for the purposes set forth.

3. The arrangement of the wheel A, hub B, cap C, bolt D, shank E, sleeve *o*, recess *d*, and hood *m*, when constructed and operating substantially as herein described.

95,195.—CHARLES A. COLE, Saint Louis, Mich., assignor to himself and JOHN L. EVANS.—*Vise.*—September 28, 1869.

Claim.—The improved construction and arrangement of the several parts of the vise, as herein shown and described.

95,196.—J. B. COLLIN, Altoona, Pa.—*Railway-Car-Journal Box.*—September 28, 1869.

Claim.—The spring-plate C, pivoted to the lid B of a journal-box, and provided with corrugated ends to lock under the hooks *c d*, substantially as and for the purpose herein shown and described.

95,197.—DAVID M. COLLINS, Lowell, Mass.—*Let-Off Mechanism for Looms.*—September 28, 1869.

Claim.—1. The tension-bar A, in combination with the adjustable arm B, and spring *k*, all constructed, arranged, and operating in the manner and for the purpose specified.

2. In combination with the tension-bar A, arm B, spring *k*, and the beam-gear M, as described, the cam-lever F, pawl C, ratchet-wheel D, gears I and K, worm L, cam R, and the friction-device, all arranged and operating in the manner and for the purpose set forth.

3. The method, substantially as described, of controlling or regulating the action of the pawl C on the ratchet-wheel D, to operate the "let-off," for the uniform delivery of warp from the yarn-beam, by means of the adjustable arm B and the tension-bar A, constructed and arranged as shown and described, and acted on by the unwinding warp, which gradually draws the portion E downward, and as gradually carries the end *e* of the arm away from the pivoted head of the pawl, or widens the distance between the two last-named parts, and increases the action of the latter proportionate to the amount of warp on the beam.

95,198. — ALFRED B. COREY, Providence, R. I.—*Loom-Harness.*—September 28, 1869.

Claim. — The improved loom-harness, as made with either twine wound with one coil and a half a coil about the loop of the other at the lower part of the warp-thread eye, the whole being substantially as described.

95,199.—W. E. C. COX, Reading, Pa.—*Method of Constructing Piles for Railroad-Rails.*—September 28, 1869.

Claim. — Constructing the upper portion of the pile of broad and narrow steel bars, arranged alternately on edge, and side by side, and combining them with iron bars, substantially as and for the purpose herein set forth.

95,200. — JOHN CRANDELL, Chicopee Falls, Mass. — *Yarn-Tension Device for Knitting-Machines.*—September 28, 1869.

Claim.—1. In combination with the tension-spring T of a take-up, a fixed loop or guide, L, having an angle, *l*, formed therein, substantially as described.

2. The frame *a b e*, constructed and arranged as described, and supporting the angular loop L and the cylinder A, in combination with the adjusting-screw S, mandrel B, and the tension-spring T, applied thereto, substantially as specified.

95,201.—JAMES CUDDY, Pittsburgh, Pa.—*Manufacture of White-Lead.*—September 28, 1869.

Claim. — 1. The apparatus above described, for showering vinegar over the sheets of lead, as and for the purposes described.

2. The apparatus above described, or its equivalent, for showering vinegar over the sheets of lead, in combination with round casks or chambers, substantially as and for the purpose described.

3. The improved form of slat for the shelves, by which nearly all the under surfaces of the sheets of lead are exposed to the action of the gases within the cask or round chamber, for the purpose described.

4. The application of carbonic-acid gas, at a temperature ranging from 85° to 100° (eighty-five to one hundred degrees) of Fahrenheit's thermometer, as and for the purpose described.

95,202. — J. A. DANDRIDGE, Buffalo, N. Y. — *Burial-Case.*—September 28, 1869.

Claim.—As an article of manufacture, a burial-case of wood, electroplated and ornamented, as set forth in specification.

95,203. — FRANCIS E. DAY, New York, N. Y., assignor to himself and LYMAN H. DAY, same place, assignors to JASON B. LOOMIS for one-half their right.— *Hoop-Skirt Fastening.*—September 28, 1869.

Claim.—The combination, with the hoop or wire and the tape of a hoop-skirt, when said tape is provided with a pocket or loop of lesser width than such tape, of a metallic clasp or fastening, of such length that when its lips are clasped around said hoop or wire, it will not be practically visible when looking at the face or outside of the tape, the whole arranged and operating substantially as and for the purposes herein specified.

95,204.—JOHN DEWE, Toronto, Canada.—*Seal Lock for Bags.*—September 28, 1869.

Claim.—A lock, consisting of the part E, having the tube *e'*, plate *e*, and snaps *m m*, in combination with the rivet I, having a stem, head, fragile neck, and side notches H H, and strap B, substantially as and for the purposes herein specified.

95,205. — EUGENE F. DEWEY, San Francisco, Cal.—*Can-Opener.*—September 28, 1869.

Claim.—1. Securing the knife or cutter C to the pointed bar A, by means of the slots *h h* and spring E, substantially as and for the purpose herein described.

2. The angularly-pointed bar A, provided with the supplementary knife F, substantially as described.

95,206.—Richard S. Dillon, Detroit, Mich.—*Coal-Stove.*—September 28, 1869.

Claim.—1. The arrangement of the annular air-chamber C, provided with registers *c*, the conical deflector-flange D, air-tubes G, and gas-ring H, with or without the perforated diaphragm E, substantially as herein specified, and for the purpose mentioned.

2. The flue F, provided at its top with the outward-projecting flange *f* and the reverberatory chamber I, provided with an internal flange, *i*, arranged within a radiator, J, substantially as and for the purpose herein set forth.

3. The arrangement of the foregoing-named parts with the body A of a stove or furnace, having a contracted neck A′, when constructed, combined, and operating substantially as and for the purposes herein described.

95,207.—Jacob Dobbins, Litchfield, Mich.—*Lath-Machine.*—September 28, 1869.

Claim.—The rotating rest S, and in combination therewith the vibrating lever T, constructed and operating as and for the purpose aforesaid.

95,208.—A. A. Dow, Glenham, N. Y.—*Feeding-Mechanism for Carding-Engines.*—September 28, 1869.

Claim.—1. The combination, with the short-toothed belt A of the diagonal feeding-mechanism herein described, of the geared pulleys B E, intermediate wheel H, and slotted support G, all arranged substantially as specified.

2. The arrangement, with the laying-traveler, of the toothed rollers K, toothed rack M, and guard-plate O, all substantially as specified.

95,209.—Henry S. Draper, Rochester, N. Y.—*Medical Extract.*—September 28, 1869; antedated September 13, 1869.

Claim.—The within-described extract, as a new and useful medicine for the purposes set forth.

95,210.—Charles S. Dunbrack, Swampscott, Mass.—*Boot and Shoe.*—September 28, 1869.

Claim.—1. An outer sole, as made with the upper-receiving groove or channel *e*, arranged in that face or side of the sole which is to abut against the upper leather to be joined to the sole.

2. An outer sole, as made with the sewing or stitch-groove *d* in its outer face, and with the upper-receiving groove *e*, in its inner or upper face, such grooves being arranged relatively or opposite to each other in manner as represented.

95,211.—Charles S. Dunbrack, Swampscott, Mass.—*Manufacture of Shoes.*—September 28, 1869.

Claim.—1. The last, as made with the recess *a*, to receive and support the false inner sole *b*.

2. The false inner sole *b*, made with sole-puncturing and holding spurs or pointed projections, so arranged as to hold the upper and receive and hold the outer sole when forced upon them by blows of a hammer, all constructed substantially as set forth.

3. The arrangement of the false inner sole *b*, setting wholly or partially within a recess, *a*, made in the bottom of the last, such arrangement being that the sole shall be supported against the periphery or edges of such recess *a*, in a manner to be kept in place in the last thereby, whether widthwise or lengthwise, or both widthwise and lengthwise of the last.

4. The mode of confining the upper to the false inner sole, viz, by hitching the upper on the spurs *c*, of the false inner sole, and afterward driving the outer sole upon such spurs and the overlapping parts of the upper, as set forth.

95,212.—Robert Elarton and William J. Elarton, Hillsborough, Iowa.—*Churn.*—September 28, 1869; antedated September 16, 1869.

Claim.—1. The arrangement of the vessels C C for containing water, with reference to the dasher B, substantially as shown and described.

2. The arrangement of cam-wheel E, shaft C, and dasher B, substantially as and for the purpose set forth.

95,213.—R. S. Elliott, Saint Louis, Mo.—*Hydraulic Dredging-Machine.*—September 28, 1869.

Claim.—The arrangement of the pipes B D E and nozzle H, all substantially as specified.

95,214.—Edward I. Eno, Springfield, Ill.—*Corn-Harvester.*—September 28, 1869.

Claim.—1. The fingers or pickers F, resting upon the fulcrum-pivot *x′*, and operated by means of the eccentrics *h*, connected to said fingers by the strap *h′*, substantially as herein shown and for the purpose specified.

2. The finger-guards or gatherers E and E′, in combination with the fingers or pickers F, said pickers being constructed and operated substantially as and for the purpose specified.

3. The shaft P, provided with the radial saw-plates K, and operated by means of the shaft H, in combination with the above-described gathering and picking devices, substantially as and for the purpose shown.

4. In combination with said gathering and picking devices, the endless belt M, operated by means of the rollers L and N, shaft H, and pulleys *n* and O, substantially as shown and for the purpose specified.

95,215.—William A. Farley, Saint Andrew's Bay, Fla.—*Construction of Vessels.*—September 28, 1869.

Claim.—1. The herein-described mode of producing patterns for shaping the timbers of vessels, substantially as specified.

2. The improved mode of producing the form required for the vessel, at any part, by means of the improved pattern herein shown and described.

95,216.—J. Ward Fifield, Franklin, N. H.—*Rat-Trap.*—September 28, 1869.

Claim.—The combination of the double walls, swinging doors, covered pins, and suitable conducting-ways, as and for the purpose specified.

95,217.—Ira Flanders, Paw Paw, Mich.—*Stump-Extractor.*—September 28, 1869.

Claim.—1. The sliding fulcrum *o*, with cogged rails *g g*, crank *k*, plates *f f*, roller *x*, and cogged wheels, on shaft *s*, as combined and operated, for the use and purpose as specified.

2. The crank-shafts L L, ratchet-wheels and pawls *k k*, pulleys *h h*, and ropes *j j*, as combined and operated, for the use and purpose herein specified and set forth.

3. A stump-extractor, as constructed, combined, and operated, for the use and purpose as specified and herein set forth.

95,218.—George P. Fuller, Philadelphia, Pa.—*Curtain-Fixture.*—September 28, 1869.

Claim.—1. The combination and arrangement of the spur-wheel G, roller E, and rack H, with the sash C, for maintaining the proper height of the lower end of the shade, substantially as described.

2. The arrangement of the pinion I, sheave K, shaft J, and cord L, in relation to the spur-wheel G, substantially as shown and specified.

3. The arrangement of the gum rollers M, on the brackets F, substantially as described.

95,219.—George P. Fuller, Philadelphia, Pa.—*Mode of Hanging Window-Shades.*—September 28, 1869.

Claim.—The combination and arrangement of the bands F F, staples *c*, brackets *b*, and slat *a*, with the shade D, sash C, and frame A, substantially in the manner above described.

95,220.—David W. George, Minnesota City, (town of Rollingstone,) Minn.—*Auger-Handle.*—September 28, 1869; antedated September 18, 1869.

Claim.—An improved auger-handle, formed by the combination of the handle A, made in two parts, tube or band B, cylindrical block C, and band or tube E, with each other, said parts being constructed and operating substantially as herein shown and described, and for the purpose set forth.

95,221.—A. F. GIBBONEY, Belleville, Pa.—*Harness-Mechanism for Looms.*—September 28, 1869.

Claim.—The levers J J′, double latches K K, pattern-cylinder F, horizontal levers I I′, cams D D, and shaft B, all constructed and arranged as and for the purpose specified.

95,222.—CHALKLEY GRISCOM, LEWIS GRISCOM, and JOHN P. GRISCOM, Mahanoy Plane, Pa.—*Pump.*—September 28, 1869.

Claim.—1. The yoke K, to which the steam-piston rod and the pump-plunger rod I are secured, when provided with the lips *a*, fitting around the upper and lower edges of the stationary guide L, and adapted to receive the crank-pins of the fly-wheel shaft M, all arranged as described, for the purpose specified.

2. The arrangement and combination, with each other, of the fly-wheel shaft M, crank-pins *b*, grooved sliding yokes K, stationary guides L, piston-rods H H, and plunger-rods I I, all arranged and operating substantially as herein shown and described, for the purpose specified.

3. A mining-pump, consisting of two steam-cylinders A B, of two pump-cylinders C D, which have clack-chambers E, with X-shaped partitions, both clack-chambers communicating with the suction and discharge pipes, as set forth, the piston and plunger-rods being connected by means of sliding-grooved yokes K, which drive the fly-wheel shaft M, the cranks *c* of which stand at right angles to each other, substantially as described, for the purpose specified.

95,223.—JONES HARDING, Detroit, Mich.—*Bedstead.*—September 28, 1869.

Claim.—1. The frame A, when provided with the longitudinal rods B and C, and diagonal rods E, the supports D, and hook-braces G, arranged and operating substantially as described, and for the purposes specified.

2. The combination and arrangement of the frame A, longitudinal rods B and C, supports D, diagonal rods E, hooks F, diagonal hook-braces G, spring-supports H and I, head and foot boards J J′, side-rails L L′, and arch-rods M M′, when constructed and operating substantially as herein described, and for the purposes specified.

95,224.—JOACHIM FRIEDRICH HARTMANN, Richmond, Ind., assignor to himself, HEINRICH W. MORNINGSTAR, and EUGENE MOVEL.—*Head-Block for Saw-Mills.*—September 28, 1869.

Claim.—1. The conical couplings, formed of the pinions H and cones U, in combination with the wheel F, pinion G, rack T, and lever R, with its support S.

2. The cones U U, when arranged to slide on the shaft Z, in combination with the screws I I and wheels 2 2.

3. The arrangement of the wheel F, vibrating piece I, pinion G, shaft P, pinions H H, and rack T.

95,225.—WILLIAM B. HAYDEN, Columbus, Ohio.—*Direct-Acting Steam-Engine.*—September 28, 1869.

Claim.—1. A balanced slide-valve, E, constructed with stems F F upon it, and arranged to operate in combination with independent plugs or pistons D D, substantially as described.

2. The ports O O, for admitting steam on the outer ends of the plugs D, in combination with ports P P, for admitting steam on the opposite sides of these plugs, arranged substantially as described.

3. The hollow piston R, provided with inwardly-opening valves L L, and with slots T, and adapted to operate a balanced side-valve, substantially as described.

4. Steam-spaces C C, as enlargements of the steam-chamber K, communicating with the ports X and I, substantially as described.

5. The ports O P, leading into the chambers H, containing the plugs D, substantially as described.

6. Chamber K, containing valve E, chambers H H, containing plugs D D, in combination with ports leading from said chambers into the steam-cylinder Y, and with a chambered piston, R, substantially as described.

95,226.—GEORGE HEIM, Naperville, Ill.—*Compound for Building-Purposes.*—September 28, 1869.

Claim.—1. The above-described compound, composed of the ingredients substantially as and in the proportions specified.

2. In combination with the above compound, the preparation composed of the ingredients substantially as specified, to form a coating, as described.

95,227.—GOTTFRIED AUGUST H. HERTZER, Waterford, Mich.—*Railway-Rail Chair.*—September 28, 1879.

Claim.—The chair B B′, provided with the stud E, in combination with the clamp I, provided with the stud H, and with the bolts D and G, provided with nuts *d* and *g*, and with the lock-plates F and J, and keys *e* and *j*, when the several parts are constructed and arranged to operate as and for the purposes above set forth.

95,228.—W. S. HILL, Manchester, N. H.—*Whip-Socket.*—September 28, 1869.

Claim.—1. The combination, in a whip-socket, of a clasp-lock B C E, when arranged for application to the dasher or other part of the carriage, in connection with the socket, substantially as specified.

2. The combination, with the parts B C, grooved as described, of leather or other similar guards F, for the protection of the whip, substantially as specified.

95,229.—HORACE R. HUIE, Haywards, assignor to LEONARD L. TREADWELL and GEORGE R. CARTER, San Francisco, Cal.—*Gang-Plow.*—September 24, 1869.

Claim.—1. Attaching the rear end of the plow-beam D to the rear end of the plow-frame, by means of a link, H, substantially as herein described.

2. The metal plate C, or equivalent device, secured to the axle B and pole D, in the manner above described, for the purpose set forth.

95,230.—Suspended.

95,231.—HENRY M. JONES, West Meriden, Conn.—*Door-Fastener.*—September 28, 1869.

Claim.—As an article of manufacture, the herein-described door-fastener, consisting of the two legs A and B, their inner edges inclined to each other, and formed upon a single base, substantially as and for the purpose herein set forth.

95,232.—EDWARD M. JUDD, Wolcottville, Conn.—*Spring Curtain-Roller.*—September 28, 1869; antedated September 11, 1869.

Claim.—1. The disk *h* and cap *k*, receiving between them the cam or ratchet *i* of the axle 3, as and for the purposes specified.

2. The metal block *e*, with its projecting points 2, for connecting the inner end of the spring to the roller, as set forth.

95,233.—AUSTIN KELLEY, Brooklyn, N. Y.—*Ruffle.*—September 28, 1869; antedated September 16, 1869.

Claim.—As a new article of manufacture, a machine-shirred, crimped, or gathered ruffle, whether provided with a band or not, having a selvage-edge formed from a fabric, substantially as herein described.

95,234.—J. B. KELLEY, Brandon, Vt.—*Hay-Tedder.*—September 28, 1869.

Claim.—The revolving frames or heads A *a* and B *b*, geared to the carriage-wheels W W, and carrying the teeth *t t t*, in combination with the adjustable eccentric shaft *s s*, carrying the curved arms *c c c*, and held in position by the clamp-box D, the whole constructed and operating substantially as herein set forth.

95,235.—J. EMERSON KENT, Philadelphia, Pa., assignor to WEBSTER J. EVERETT, same place.—*Shoulder-Brace.*—September 28, 1869.

Claim.—The arrangement of the parts A and B, provided with plates or pads P and P′, shoulder-pads R and R′, straps S and S¹, breast-plate B P, and straps

S^2, S^3, S^4, and S^5, for the purpose of supporting the intercostal muscles of the chest, and causing a pressure inward of the lower or protruding portion of the scapulæ, substantially as specified.

95,236.—Salem T. Lamb and George A. Rankin, New Albany, Ind.—*Peddlers' Wagon.*—September 28, 1869.

Claim.—1. The construction and arrangement of the wagon-body, viz, of the three sections or members, with their shelves and apartments protected, and accessible by means of hinged doors at the sides and ends, substantially as and for the purpose described.

2. In combination with the driver's seat, a rising and falling top that is connected through toggle-levers and bars to lifting-levers in convenient position to the occupant of said seat, so that said occupant may raise and hold up or let down said top at pleasure, substantially as described.

3. Hanging the doors E to the body of the wagon by hinges having curved leaves, so that said doors may swing close into the frame when shut, and entirely out of the way of the sliding drawers when opened, as set forth and explained.

4. In combination with the body of the wagon, the swinging counter, connected and suspended thereto, as and for the purpose described.

5. In combination with the body of the wagon and with a fold-up bench, the case or cage, or its equivalent for containing and carrying said hinged or fold-up bench, as and for the purpose described.

6. In connection with the seat and top, the apartment under or at *l*, for clothes, as described.

95,237.—James Lawton, Glenham, N. Y.—*Feeding-Attachment for Carding-Engine.*—September 28, 1869.

Claim.—As an improvement upon the Apperly and Clissola feed for carding-machines, the combination of the pronged rollers D, arranged on the same level, the toothed wheels *b b*, pinions *c c*, and shield E, all operating to move the roving to the card-cylinder, as and for the purpose specified.

95,238.—T. H. Leavitt, Boston, Mass.—*Machine for Dressing Stone.*—September 28, 1869.

Claim.—1. In a machine for dressing stone, having a reciprocating work-supporting table or carriage, a horizontally-axled grinding-cylinder, the grinding-surface of which is composed of a series of peripheral segments bolted together and confined between the cylinder-heads, substantially as described.

2. A horizontal disk-grinder, composed of sectoral blocks fastened to the lower face of a rotary head fixed to the foot of a vertical shaft, the sectors being so confined in position that any one or more may be removed for repairs or replacement.

3. In a grinding-machine, having a reciprocating work-supporting table or carriage, the combination of a cylinder-grinder, rotating on a horizontal axis, with a disk-grinder at the foot of a rotary vertical shaft, substantially as shown and described.

4. In a stone-dressing machine, a reciprocating carriage, having long side troughs for receiving the liquid and semi-liquid matter escaping from the stone, the troughs being fixed to or forming part of the table.

5. In combination with the sand-receiving hopper, a chute or conductor, so constructed and arranged as to convey the sand to the whole length of the grinding-cylinder, and having provision for controlling and regulating the feed of the sand.

6. In combination with a reciprocating work-supporting table or bed, mounting the bed upon curved rails or ways for lateral curvilinear movement, substantially as and for the purpose described.

95,239.—George A. Leigh, Springfield, assignor to himself and Samuel E. Leigh, Bloomington, Ill.—*Washing-Machine.*—September 28, 1869.

Claim.—1. The within-described washing-machine, consisting of the box A, the cover B, the screen C, the rubbers D and K, operated by means of the lever E, pitman F, crank G, shaft H, and rod N, the chain L, the springs M and M, and the levers O and P, all constructed and arranged substantially as and for the purpose specified.

2. In combination with the cover B, the devices used for raising and securing the lid in place, consisting of the lever O, the rod P, and the toothed rack R, substantially as herein specified.

95,240.—Bernard Levy, Boston, Mass., assignor to himself and William H. Slocum, same place.—*Muff.*—September 28, 1869.

Claim.—A lady's muff, when the interior is divided into two compartments, substantially as shown and for the purpose set forth.

95,241.—John S. Lewis, Elkader, Iowa.—*Seed-Planter.*—September 28, 1869.

Claim.—1. A seeding-machine, consisting of a long tubular box A, provided with apertures B B′, (either or both,) covered by slides C C′, and with discharge-perforations *b*, adapted for suspension from the person of the operator by straps E, and provided with handles F, by which to vibrate it, substantially as herein set forth.

2. In combination with seed-box A, constructed otherwise, and adapted to operate substantially as herein set forth, the partitions D, as and for the purpose explained.

3. The partitioned seed-box A D, composed of tapering sections *x*, as represented and described, for the purpose set forth.

95,242.—Daniel Locke, Geneva, Wis.—*Potato-Digger.*—September 28, 1869.

Claim.—1. The triangular shaft *g*, provided with notches upon its corners, spirally arranged, and with curved teeth *h*, spirally arranged thereon, in connection with the rods D, sleeved or pivoted to the stationary shaft *d*, when constructed, arranged, and operating as above shown and described.

2. In combination with the above, the slotted scoop, composed of the pointed slats C, secured to the axle B, and the transverse bar *c*, as herein specified.

3. The combination of the rotating shaft E, provided with curved teeth F, spirally arranged thereon, in connection with the scoop C, with the triangular shaft *g*, provided with notches and teeth, as above described, and with the grate B, and the cog-wheels *e*, *f*, and G, when constructed, arranged, and operating as above set forth.

4. In combination with the scoop C, the arrangement of the sliding standard H, provided with caster-wheels I, tooth-rack *i*, cogged pinion J, shaft *j*, hand-lever K, and spring-dog *k*, when constructed and operating as above mentioned.

5. The arrangement of the wheels A, the axle B, the scoop C, the rods D, the shafts E and *g*, the cogged wheels *e*, *f*, and G, the standards H, the caster-wheels I, rack *i*, cogged pinions J, shaft *j*, hand-lever K, and dog *k*, when constructed and operating as and for the purposes herein set forth, shown, and described.

95,243.—John Mair, Philadelphia, Pa., assignor to himself and Hazleton W. Cranmer, same place.—*Sail-Latchet.*—September 28, 1869.

Claim.—The application to sails of the curved hooks C H, provided with eyes *e* and *e′*, in combination with rope R, openings O, and rope F, for the purpose of readily fastening and releasing the bonnets of jibs and other sails, substantially as specified.

95,244.—Joseph Marshall, New York, N. Y.—*Cloth and Hat Brush.*—September 28, 1869.

Claim.—A cloth or hat brush, containing a cushion, B, which is entirely or partly surrounded by bristles, substantially as and for the purpose herein shown and described.

95,245.—G. B. Massey, New York, N. Y.—*Low-Water Detector for Boilers.*—September 28, 1869.

Claim.—The float F and valve E, constructed and arranged, with reference to the whistle D, cylinder C, and pipe B, substantially as herein shown and described.

95,246.—G. B. Massey, New York, N. Y.—*High and Low-Water Indicator.*—September 28, 1869.

Claim.—1. The combination, in a water-indicator,

A, of the float E, valve H, and pipes B, F, and G, all arranged and operating substantially as herein shown and described.

2. The turned-up pipe G, arranged within the floating valve-carrier of a water-indicator, substantially as herein shown and described.

95,247.—GERMAN J. MATSON, Alma, Mich., assignor to himself and SAMUEL F. JUDD, same place. —*Washing-Machine.*—September 28, 1869.

Claim.—The combination and arrangement of the gate G, the slides F, the spring I, the thumb-screw J, the treadle L, the ribs C, the rub-boards D and E, the connecting-rods R, the levers Q, the shaft O, the lever P, and the brackets N, in connection with the box A, provided with a sloping bottom and an outlet, S, when constructed and operating as aforesaid.

95,248.—HIRAM S. MAXIM and JAMES RADLEY, New York, N. Y.—*Head-Light.*—September 28, 1869.

Claim.—1. The combination of the vaporizer with a steam or hot-water chamber or passage, in such wise as to vaporize a small continuous stream of the carbon-oil, in the manner and for the purpose substantially as herein described.

2. The combination of the vaporizer with the steam-boiler of a locomotive for the purpose of making and supplying an illuminating-gas from gasoline or other hydrocarbon oils or fluids, for the head-light of such locomotive, constructed and operating substantially as herein described.

3. The combination of the induction and eduction pipes with the heating-chamber, around or at the vaporizer, by passing the induction through the return-pipe, substantially as herein described.

4. The combination of the heater and vaporizer with the air-trunk, which carries the chimney of a locomotive head-light, so as to secure sufficient heat to the vapor to maintain its gaseous form in its passage from the vaporizer to the burner, in the manner and for the purpose substantially as herein described.

5. The combination of the mixer with the gas-pipe and its contracted vent and air-holes, constructed and operating substantially as herein described.

95,249.—W. J. MCDERMOTT, Covington, Tenn. —*Press.*—September 28, 1869.

Claim.—The combination, with the screw and follower, of the wheel E, having a screwed hub and two sets of teeth, F G, the wheels H K, and their shafts, all arranged substantially as specified.

95,250.—J. B. MCINTOSH, Erie, Pa.—*Grate for Stoves and Furnaces.*—September 28, 1869.

Claim.—1. The star-center E, fixed in mortise C.

2. The construction of a grate, in a manner that the openings J may be enlarged, substantially as described, and for the purpose set forth.

95,251.—J. C. MCVUTT and A. B. FURMAN, Strattonville, Pa.—*Plow.*—September 28, 1869.

Claim.—Forming a groove, *c'*, in the part of the mold-board that is covered with the plow-point, substantially as herein shown and described, and for the purpose set forth.

95,252.—CHARLES METZER and G. R. RORABACK, De Soto, Mo.—*Mill-Pick.*—September 28, 1869; antedated September 17, 1869.

Claim.—1. The combination, with the holder-plates A B of a millstone-pick, of a band, E, having a threaded boss, *a*, and the coupling-nut F, working thereon, to actuate the part *b* of the shank G against the plate B, substantially as herein shown and described.

2. The spring-connection D, when employed in combination with holder-plates A B of a millstone-pick, substantially as and for the purpose herein shown and described.

3. The employment of a wedge-block *e*, located within a recess in the inner face of one of the holder-plates of a millstone-pick, to prevent the bit from slipping in the holder-plates, substantially as herein shown and described.

4. The recess in the holder-plate B of a millstone-pick, for the reception of the end of the part *b*, in combination with the said part, for the purpose of preventing the said plate from slipping in the band E, substantially as herein shown and described.

95,253.—CHARLES C. MORGAN, New York, N. Y.—*Mode of Fastening Buttons on Shoes, &c.*—September 28, 1869.

Claim.—The combined use of a strap and washer for uniting buttons to cloth, leather, or other material, when the ends of said strap are brought out, over, or on top of said washer, and between it and the cloth, leather, or other material, substantially in the manner and for the purpose described and represented.

95,254.—AMOS MORELY, Addison, Mich.—*Horseshoe-Nail Clincher.*—September 28, 1869.

Claim.—As a new article of manufacture, the horseshoe-nail clincher, above described, constructed, arranged, and operating as set forth.

95,255.—CHARLES L. OSBORN, New York, N. Y. —*Fernery.*—September 28, 1869.

Claim.—1. An air-tight fernery, comprised of two main parts or divisions, with a water-joint at the line of separation, and a close-shutting lid.

2. In combination with an air-tight fernery, the ventilating-apertures, having valves to shut off or admit the air to the interior as required.

3. In combination with an air-tight fernery, an earth-box, having a perforated bottom.

4. In combination with such earth-box, the space beneath it for fertilizers, or other purposes.

5. The perforations 7, in the sides of the earth-box, to allow the percolation of the water from the water-space, and the watering of the earth by overflow.

6. In combination with the water-spaces within the base, the application of the water-ways to the outside of the base communicating with the water-space at the bottom.

95,256.—A. L. OTIS, Normal Ill.—*Hot-Air Furnace.*—September 28, 1869.

Claim.—1. The arrangement of the hot-air passage D, substantially as specified.

2. The arrangement, with the side walls, of the plates F, substantially as specified.

3. The arrangement of the V-shaped flue and air-supplying pipe K, substantially as specified.

4. The arrangement of the grate I, as specified.

95,257.—JOHN S. PALMER, Providence, R. I.—*Instrument for Setting Button-Hooks.*—September 28, 1869.

Claim.—In combination with the jaws and handles of a pair of forceps, as described, a pair or set of jaws or gripers for holding the said button-hook, and a punch E, and sliding shell G, as described, the said devices co-operating as and for the purpose specified.

95,258.—CHARLES PARKER, Meriden, Conn.—*Vise.*—September 28, 1869.

Claim.—The auxiliary jaws A and B, provided respectively with the cheeks C and D, all constructed and applied to the jaws of a vise, substantially as described and in the manner set forth.

95,259.—H. C. PARSONS, Dexter, Me.—*Mop-Head.*—September 28, 1869.

Claim.—The combination of the toothed jaws B F, tubular parts *h i*, and double cam G, all constructed and arranged to operate as herein described, for the purpose specified.

95,260.—JOHN PATERSON, Troy, N. Y.—*Stop-Valve.*—September 28, 1869.

Claim.—1. A cam-block, adapted to be oscillated by an arm or lever, and arranged in combination with valves having cam-projections on their backs, substantially as specified.

2. The combination of the valves C and sockets *b* with pins *a* and sleeve K, substantially as set forth and shown.

3. The combination of the valves C, cam-stems D, block F, arm H, pins *a*, sockets *b*, sleeve K, and stem L, when constructed and arranged substantially as set forth and shown.

95,261.—Horatio L. Peirce, Taunton, Mass.—*Traveler for Spinning-Ring.*—September 28, 1869.

Claim.—The rounded formation, in a ring-traveler made of a flat metal strip, as described, of the bent ends, which hold the traveler upon the ring, substantially as and for the purposes shown and set forth.

95,262.—Thomas M. Pelham, New York, N. Y.—*Hod-Elevator.*—September 28, 1869.

Claim.—1. A hod-elevating platform, arranged to support the hods by the shanks at the edges on the bottom or floor, and by leaning the under side of the top and the upper part of the shanks against notched bars D or D′, substantially as specified.

2. The arrangement of the bars D D′, and the holding-devices for the lower ends of the shanks of the opposite sides in the order described; that is to say, the bowls of the row on one side above those of the other, with the shanks passing between the lower ones, substantially as specified.

95,263.—Joseph Phillips and Davis Keeley, Phœnixville, Pa.—*Furnace-Door.*—September 28, 1869.

Claim.—Producing a circulation of water through a furnace-door, by means of the partition A, substantially as described.

95,264.—George W. Plumb, Milford, Conn.—*Implement for Sighting Railroad-Tracks.*—September 28, 1869.

Claim.—The construction and arrangement of a hinged mirror, adapted, substantially as herein described, for application to the rails of railroads, for sighting the same for truing and adjusting, substantially in the manner set forth.

95,265.—P. F. Randolph, Jerseyville, Ill.—*Polishing-Machine.*—September 28, 1869.

Claim.—The wheel A, consisting of the inflated tube *a*, rim a^1, projection a^2, and clamps A^1, in combination with the belt E, driving-wheel B, and pulleys C, arranged and operating substantially as described.

95,266.—Thomas W. R. Rayner, New York, N. Y.—*Wash-Boiler Tube.*—September 28, 1869.

Claim.—1. A detached wash-boiler tube, having an internal tube, B, combined with an external tube, A, and a base, C, arranged and operating substantially as and for the purpose herein described.

2. The sliding cap D, in combination with the tubes A and B, arranged and operating as herein described.

95,267.—Henry Redlich, Chicago, Ill.—*Window.*—September 28, 1869; antedated September 22, 1869.

Claim.—1. The combination of the wedge-shaped strips E G, faced with elastic material, stops B C D, and sash H, the latter having grooves I I, corresponding to the form of said strips, as and for the purpose set forth.

2. The combination of the wedge-shaped strip K, strips J L, lever *m*, connecting-rod P, and sash H, as described and shown.

95,268.—Martin C. Remington, Weedsport, N. Y.—*Horse Hay-Rake.*—September 28, 1869.

Claim.—1. The adjustable guards, consisting of one or more fingers, *d d*, as arranged and combined with the cap-flanges C C, substantially as and for the purposes herein specified.

2. The combination and arrangement of the cap-flanges C C, constructed as described, notched standards E E, and the end cross-pieces G G, for adjusting the height of the rake-head F, as herein described.

3. The combination of the oblique braces I I, gathering-fingers or rake-teeth *j*, slotted standard *k*, spring *m*, and top button *n*, as and for the purposes herein set forth.

95,269.—James Rood, Beaver Dam, Wis.—*Grain-Cleaning Machine.*—September 28, 1869.

Claim.—1. The operative combination of the fans *c c e e*, with the screens D and F, the sieve E, the side spout C, and the gauged wind-board K, substantially in the manner and for the purpose described.

2. The manner of constructing and arranging the sieve E and the screen F with part-way bottoms, and in combination with the detached adjustable screen D, substantially in the manner and for the purposes described.

3. The operative combination of the spout C with the screens D and F and the sieve E, substantially in the manner and for the purposes described.

4. The operative combination of the index-gauged wind-board K with the fans *c c c c*, for the purpose of gauging with uniform certainty the exact depth and elevation of wind-current for the best results in each different kind of work to be done, and substantially in the manner described.

95,270.—John Rosencranz, Boston, Mass.—*Hat-Pouncing Machine.*—September 28, 1869.

Claim.—1. The combination of one or more sets of conical rollers, a reciprocating brush-carrier, F, and a grooved table, when arranged for pouncing the brims of hats, substantially in the manner herein described.

2. A hat-finishing block, M, arranged for rotation alternately in opposite directions, and adapted for pouncing hats, substantially in the manner herein described.

95,271.—Theodore O. L. Schrader, New York, N. Y.—*Thread-Guide for Spools.*—September 28, 1869; antedated September 15, 1869.

Claim.—The spool-thread guide, when constructed substantially as described, and shown in Figs. 1*a* and 1*b*.

95,272.—Albert Schuneman and Theodore Schuneman, Detroit, Mich.—"*Plug-Tobacco*" *Cutter.*—September 28, 1869.

Claim.—1. The metallic hollow tube B and the metal cylinders C C, connected by the knife E and adjustable bar D, the same being constructed and arranged together in the manner and for the purposes set forth and described.

2. The application of the lever-power to the semi-rotary movement of the knife within the inner chamber, in the manner and for the purposes set forth.

95,273.—Edmund Schwiedter, Hoboken, N. J.—*Coal-Stove.*—September 28, 1869.

Claim.—1. The vertical grate E, arranged in a heater above the main grate C, substantially as herein shown and described, and for the purpose set forth.

2. The heater, provided with the apertures *a*, *b*, and *e*, and containing the grates C and E, and the doors *a*, *c*, and *f*, all arranged substantially as herein shown and described.

95,274.—S. B. Sexton, Baltimore, Md.—*Base-Burning Fire-Place Stove.*—September 28, 1869.

Claim.—1. One or more segmental circularly-sliding covers, *c*, applied permanently to the top P, substantially as described.

2. Lips g^1 g^3 on the top P, in combination with one or more covers *c*, a feed-passage, and a door, *s*, substantially as described.

95,275.—Thomas Shaw, Philadelphia, Pa.—*Condenser.*—September 28, 1869.

Claim.—The construction of the described condenser on high-pressure engines, in the manner substantially as set forth.

95,276.—Charles J. Shepard, Brooklyn, N. Y.—*Laundry-Stove and Heating-Furnace.*—September 28, 1869.

Claim.—1. The grate and bed-plate, centrally situated, placed so as to allow the flame and gases to pass over and under the bed-plate and fuel, for the purposes specified.

2. The flue under the bed-plate, so arranged as to effectually heat the outer surface of the heater.

3. Taking the products of combustion from the flue, at one or more points, for the purpose of distributing the heat more beneficially.

95,277.—Edward G. Shortt, Carthage, N. Y.—*Shaft-Coupling.*—September 28, 1869.

Claim.—The combination, with the shafts provided with the pins E, of the eccentrically-bored wedges A and set-screws D, substantially as specified.

95,278.—Henry Edward Skinner, London, England, assignor to William Hopcraft, same place.—*Steering-Apparatus.*—September 28, 1869.

Claim.—1. The combination of a cylinder with internal flanges *d*, perforated rest to support the swiveled screw E, and removable cap B, all constructed to receive the operative-mechanism in the manner shown and described,

2. The combination, with swiveled vertical screw-lugged nut, and corresponding spirally-grooved cylinder, of the gears *e e*, horizontal shaft F, and steering-wheel G, all arranged to facilitate the management and control of the rudder, as set forth.

3. The combination of the rotating cylinder C, having couplings *b b* appended to its base, with the couplings *c c*, as and for the purpose specified.

95,279.—Thomas S. Sleeper, Binghamton, N. Y.—*Axle-Skein.*—September 28, 1869.

Claim.—An axle-skein, the socket of which is increased in diameter at a uniform angle from the outer end B to the collar C, and is expanded on two or more sides of its axial center, at an increased angle from the collar C to the mouth D, substantially as and for the purpose set forth.

95,280.—Charles E. Spaulding, Theresa, N. Y.—*Feed-Measure for Stock.*—September 28, 1869.

Claim.—The flanged feed-measure A *a* B, in connection with cleats D *d*, D *d*, substantially as and for the purpose described.

95,281.—B. F. Sturtevant, Jamaica Plains, Mass.—*Hot-Air Furnace.*—September 28, 1869.

Claim.—The process of utilizing heat by a forced and repeated circuit of the heated air of an apartment through a heater, substantially as described.

95,282.—Henry Sutcliffe, Brooklyn, N. Y.—*Numbering-Machine.* — September 28, 1869; antedated September 16, 1869.

Claim.—1. A numbering-machine, in which the table, frame, and numbering-wheels are arranged and applied in the manner specified, so that the sheets of paper on which the impression is being made can hang down between the table and the frame supporting the numbering-mechanism.

2. The revolving ink-distributing table *v*, set upon the axis 19, so that the same may be rocked by the contact of the inking-rollers *p* and *q*, as they swing, said table being fitted with ratchet-teeth, and acted upon by a pawl and spring, substantially as set forth.

95,283.—John B. Sutherland, Detroit, Mich.—*Railway-Car Seat.*—September 28, 1869.

Claim.—1. The compound levers, formed by the arms C and D, pivoted together at *a*, and the latter provided with slot *b* and pins *h*, in connection with seat-back B and seat-frame A, and seat E, substantially as herein set forth.

2. In seat-frames, the pins *k*, when engaged with the curved guides F, which are attached to the seat E and the lugs or rests *m*, when arranged and operating substantially as and for the purposes specified.

3. The arrangement of the seat-frame A, seat-back B, arms C and D, seat E, guides F, slot *b*, pins *d*, *h*, and *k*, and lugs or rests *m*, when combined, constructed, and operating substantially as and for the purposes herein set forth and shown.

95,284.—William A. Sweet, Syracuse, N. Y.—*Roll for Splitting Railroad-Rails.*—September 28, 1869.

Claim.—The combination of the rolls B and B′, constructed and arranged as described, brasses *e e*, set-screws *o o*, spur-wheels C C, pinion and hand-wheel D, substantially as described, and for the purposes set forth.

95,285.—William A. Sweet, Syracuse, N. Y.—*Steam-Valve.*—September 28, 1869.

Claim.—The supplemental bearings or saddles C, substantially as described and set forth.

95,286.—G. L. Swett and B. F. Drake, Leominster, Mass.—*Apple-Corer.* — September 28, 1869.

Claim.—The apple-corer B C D E F, made substantially as described, and for the purpose set forth.

95,287.—Alexander B. Thornton, Berlin, Ill.—*Corn-Plow Fender.*—September 28, 1869.

Claim.—The fender E, when constructed as described, in combination with the slotted standard D and D′, or its equivalent, I and K, shown in Fig. 2, substantially as and for the purpose specified.

95,288.—B. W. Tuthill, Oregon City, Oregon.—*Wheelbarrow.*—September 28, 1869.

Claim.—Wheelbarrows having metallic tubular frames, and sheet-metal boxes or trays, when constructed and arranged substantially as specified.

95,289.—Oscar Van Tassell, Naperville, Ill.—*Bolt-Feeder.*—September 28, 1869.

Claim.—1. The wings or semicircular disks G and shaft C, in combination with the cylinder or spout, through which the flour or meal is conducted to the bolt, when said parts are constructed and operated substantially as herein shown and described, and for the purpose set forth.

2. The combination of the lever H, sliding collar I, connecting-rods J, pivoted wings or semicircular disks G, and shaft C, with each other, and with the cylinder or spout, through which the flour or meal is conducted to the bolt, substantially as herein shown and described, and for the purpose set forth.

95,290.—Adolph Velguth, Milwaukee, Wis.—*Hinge.*—September 28, 1869.

Claim.—The swinging stop C, pivoted to the leaf of a hinge, as and for the purpose described.

95,291.—R. B. Wakefield, Springfield, Mass., assignor to himself, James F. Chamberlain, and E. B. Haskell, same place.—*Brazier.*—September 28, 1869.

Claim.—A brazier, consisting of the shell A, having the openings *i*, *d*, and *m*, therein, and partially lined with the fire-brick *b*, or its equivalent, the grate C, back-board *c*, and the movable rim B having the curtain *h* thereon, all constructed and operating substantially as herein described and set forth.

95,292.—C. B. Walsh, Waupacca, Wis.—*Turbine Water-Wheel.*—September 28, 1869.

Claim.—The construction and arrangement of the hoops B C, concave flanges E F, rim A, and buckets H I and H J, as set forth.

95,293.—John E. Weaver, Nether Providence Township, Pa.—*Bran-Duster for Flour-Mills.*—September 28, 1869.

Claim.—The brushes herein described, when arranged upon the cone, at an angle with the line of the shaft, as and for the purposes specified.

95,294.—John A. Wells, Holly Springs, Miss.—*Machine for Cutting Sheet-Metal.*—September 28, 1869.

Claim.—The frame, composed of the stands A B and cross-piece C, the screw G, with its cranks J and K, the cutter L, the bed D, and the lever E, the whole constructed, arranged, combined, and operating substantially as described.

95,295.—James D. Whelpley and Jacob J. Storer, Boston, Mass.—*Process of Obtaining Wrought Iron Directly from the Ore.*—September 28, 1869; antedated September 16, 1869.

Claim.—The process of obtaining wrought iron and its alloys direetly from the ore, in the manner, and with the manipulations, and order of manipulation, substantially as described.

95,296.—Daniel H. Whitney, Black Rock, N. Y., assignor to Ira P. Hathaway, Augustus F.

BARTLETT, and GEORGE MORRIS, East Saginaw, Mich.—*Machine for Making Shingle-Bolts.*—September 28, 1869.

Claim.—1. In combination with the sash H, the racks O and the feed-mechanism, consisting of counter-shaft C, pulleys E and R, belts S and P, shafts Q and U, friction-wheel T, disk V, provided with friction-hub *v* and flange *v'*, the sliding box *q*, lever *a*, rod *b*, and the pinions *w'*, the whole arranged and operating in the manner and for the purposes specified.

2. In combination with the foregoing parts, as herein described, the standards A, shaft F, pulleys G, N, K, and D, saw-table W, spindle X, and treadle Y, when constructed. arranged, and operating substantially as and for the purposes set forth.

95,297.—EPHRAIM S. WILLIAMS, Cambridge, Mass.—*Chuck.*—September 28, 1869.

Claim.—The chuck-screw, when provided with a slot, *e f* or *l m*, substantially as described and for the purpose set forth.

95,298.—ELI WILLS, Winslow, N. J., assignor to himself and CHARLES P. WESTCOTT, same place. —*Medical Compound.*—September 28, 1869; antedated September 13, 1869.

Claim.—The medical compound herein described.

95,299.—CHARLES W. WILSON, Norfolk, Va.—*Miter-Vise.*—September 28, 1869.

Claim.—The right-angled slide D and ribs E, in combination with the screw F, nut C, slot B, and bed A, substantially as described and for the purpose specified.

95,300.—WILLIAM E. WORTHEN, New York, and TOBIAS NEW, Brooklyn, N. Y.—*Mode of Protecting Plastered Walls against Dampness.*—September 28, 1869.

Claim.—The incorporating into these above mixtures, when applied as a coat to the surface of walls, of gravel, sawdust, chips, bagging, or like substances, for the purpose of roughening the surface sufficiently for the retention of plaster or mastic.

95,301.—NICHOLAS ALLSTATTER, Hamilton, Ohio.—*Harvester.*—September 28, 1869.

Claim.—1. A bevel-wheel C', constructed as described, and combined with the pinion A', in the manner and for the purpose set forth.

2. The pinion A', constructed with a long sleeve, as described, to form a bearing within it for the end of the pinion-shaft Q.

3. The arrangement of the pinion-shaft Q, with its bearing in the sleeve of the pinion A', and the stop-screw *h* set into an annular channel in said shaft, as described.

4. In combination with the clutch-lever *k*, the lever *n*, link *o*, and notch *s*, in the rim of the wheel C', operating together to prevent the rake from being thrown out of gear, except at a certain point of its circuit.

5. The combination of the clutch-collar N', clutch-lever *k*, stop-device *n o s*, and pinion A', constructed with a sleeve and clutch-teeth at the end thereof, as described.

6. The yoke G', constructed with the arm I' and guide *r*, in combination with the rake E'.

7. In combination with the yoke G' and rake E', the spring M and pin L', for the purpose set forth.

95,302.—CASIMIR AMSLER, Saint Louis, Mo.—*Sawing-Machine.*—September 28, 1869.

Claim.—The pitman I, arranged with a sliding head, *i*, and combined with a rock-bar, K, substantially as set forth.

95,303.—JOHN E. ANDERSON, Boiling Springs, Pa.—*Grain-Screen.*—September 28, 1869.

Claim.—1. The hood D, constructed substantially as and for the purpose specified.

2. The combination of the conduit C', the hood D, and exhaust-passage *a*, substantially as and for the purpose specified.

3. The arrangement of the rods D' D', with reference to the hood D and aperture *a*, substantially as and for the purpose specified.

4. The arrangement of the apertures *f f* in the screen C, substantially as and for the purpose specified.

5. The arrangement of a crank, connecting-rod, and rock-shaft, for giving the compound motion to the screen, substantially as and for the purpose specified.

95,304.—JOHN BARNES, Rockford, Ill.—*Harvester.*—September 28, 1869.

Claim.—1. The combination of the main frame, driving-wheel, oscillating yoke-frame F, and links *g*, all constructed and operating as set forth.

2. The combination of the grain-wheel and its spindle with gears and a rack, substantially as set forth.

3. The combination of the vertically-moving grain-wheel yoke with the adjusting-bolt on the spindle, as set forth.

95,305.—W. G. BECKWITH, Lowndesborough, Ala.—*Ox-Yoke Bow.*—September 28, 1869.

Claim.—The bows B B, so constructed that their lower portion will swing open, substantially as and for the purpose described.

95,306.—W. G. BECKWITH, Lowndesborough, Ala.—*Hoe.*—September 28, 1869.

Claim.—The hoe A, when constructed with a contracting or expanding eye, substantially as and for the purpose described.

95,307.—ARTEMAS BIGELOW, Newark, N. J., assignor to HENRY MARTIN, Baltimore, Md.—*Process for Utilizing the Sulphur Fumes from Copper-Ores.* —September 28, 1869.

Claim.—The process herein described of utilizing, for the production of sulphur or sulphuric acid, the sulphurous-acid gas evolved from pyritous copper-ores during the process of converting the same into copper or copper matt, or copper regulus, whereby the two several products, sulphur or sulphuric acid and copper, are manufactured in a commercial condition, substantially as described.

95,308.—T. BRIGHAM BISHOP, New York, N. Y. —*Measuring-Faucet.*—September 28, 1869.

Claim.—1. The devices employed for operating the plug H, consisting of the arm I, fitted loosely upon the rod E, the cord or chain K, the pulleys L and N, and the segment O, or their equivalents, shown in Figs. 4, 5, and 6, substantially as shown and described.

2. The within-described measuring-faucet, consisting of the cylinder A, the head B, the three-way cock C, provided with the branches F and G and the plug H, the piston or plunger D, the rod E, provided with the handle *e*, in combination with the above-described devices for operating the plug H, substantially as described and for the purpose specified.

95,309.—JOHN H. BLAKE, Westbrook, assignor to himself and J. M. TODD, Portland, Me.—*Meat-Chopper.*—September 28, 1869.

Claim.—The described arrangement of gears *a* and *b*, shaft *c*, wheel *d*, projection *o*, rod *e*, joint *y*, toothed wheel *l*, parts *t* and *v*, arm *i*, spring *j*, projection *h*, on the shaft *c*, upon the frame A, as herein described.

95,310.—LEVERETT BRADLEY, Jersey City, N. J.—*Electric Clock.*—September 28, 1869.

Claim.—1. The combination of one or more rotating circuit-closers D with the conical pendulum B of the primary or governing-clock A, substantially as specified.

2. The combination, with the wheel J and armature H, carrying the operating-pawl I, of the pawls L K and spring *m*, essentially as and for the purpose or purposes herein set forth.

95,311.—WILLIAM M. BRAYTON, Rochester, N. Y., assignor to himself, WILLIAM S. THOMPSON, and H. S. MACKIE, same place.—*Thill-Coupling.*—September 28, 1869; antedated September 17, 1869.

Claim.—The combination of the spring B and wedge E with the jack or thill-strap D, operating conjointly for the purposes set forth.

95,312.—Everette R. Breed, Farmington, Ill. — *Soap or Detergent-Compound.* — September 28, 1869.

Claim.—The chemical composition, or detergent-soap, prepared and compounded, and to be used, substantially as described, or of ingredients substantially the same, and which will produce the required result.

95,313.—Adolphus Brown and Felix Brown, New York, N. Y.—*Lubricator for Journal-Boxes.*—September 28, 1869.

Claim.—1. The inclined channel E, contained from the journal-box A, extending inwardly and upwardly, and beyond the journal-box and the groove *a* of the collar F, in order to convey the spread oil back to the reservoir C, in the manner substantially as described.

2. The mud-receptacle G, in combination with the oil-reservoir, lifting-chain, and journal-box, substantially as set forth.

3. The waste-channel E, in combination with the oil-reservoir C, lifting-chain D, journal-box A, and shaft B, substantially as described.

4. The depression or cavity *a*, in the collar F, in combination with the waste-channel E, oil-reservoir C, lifting-chain D, journal-box A, and shaft B, substantially as described.

95,314.—William Henry Burns, Grafton, assignor to Jonathan Luther, Worcester, Mass.—*Roller-Jaw Temple for Looms.*—September 28, 1869.

Claim.—The combination, with the jaws A B, of the grooved rollers C D, the latter arranged to reciprocate laterally on its journal, and toothed lip G of the jaw B, when constructed as and for the purpose described.

95,315.—F. M. Buckmaster, Galesburgh, Ill.—*Horse-Rake.*—September 28, 1869.

Claim.—1. The lever V, with pawl W and catch X, in combination with pawl Y and catch O, constructed and operating substantially as described.

2. The combination of lever V, pawl W, and catch X, pawl Y and catch O, pawl P and catch R, constructed and operating substantially as described.

3. The combination and arrangement of lever H, rods S and L, pawls P and Y, lever V, with pawl W, arms A A″, and revolving rake-head B, with catches R, X, and O, substantially as described.

95,316.—Daniel Bull, Amboy, Ill.—*Clothes-Line Holder.*—September 28, 1869.

Claim.—The pulley-wheel A, notched as at *a*, combined with the hanger B, as and for the purpose above specified.

95,317.—Hugh Burgess, Royer's Ford, Pa.—*Extract of Hops.*—September 28, 1869.

Claim.—1. The new product or extract from hops, herein described.

2. Treating hops in the mode and with the material substantially as specified.

95,318.—Sanford S. Burr, Dedham, Mass.—*Extension-Crib.*—September 28, 1869.

Claim.—1. A child's crib, in which the divided crib-frame proper is combined with the tongued and grooved side rails *c c′*, substantially as and for the purposes herein described.

2. In a crib or bedstead, made as herein explained, combining therewith the bed-bottom, substantially in the manner described, so that the bed-bottom shall automatically accommodate itself to the variations in length of such crib or bed, for the purposes essentially herein set forth.

95,319.—Cornelius L. Campbell, Binghamton, N. Y., assignor to Washington W. Wheaton, same place.—*Device for Fitting Axle-Spindles to Skeins.*—September 28, 1869.

Claim.—The guide-plate L, constructed and operating as herein shown and described, for the purpose set forth.

95,320.—William Carpenter, Fairbury, Ill.—*Button-Holing Attachment for Sewing-Machines.*—September 28, 1869.

Claim.—1. The grooved sliding bar D, moving from side to side on the bar C, and provided with projections *c*, cam *d*, and spring F, all substantially as and for the purposes herein set forth.

2. The plate J, constructed as described, with a vertical groove or recess on the rear side, and sliding on the presser-foot connecting-plate H, substantially as and for the purposes herein set forth.

3. The movable cam *f*, forked rod *e*, and reversible finger K, all constructed and combined with the plate J, to operate in the manner and for the purposes herein set forth.

4. The adjustable bar L, constructed as described, on the sliding plate J, to regulate the backward and forward motion of the needle, substantially as herein set forth.

5. The sliding plate J, connecting with the presser-foot connecting-plate H by means of a spring, *h*, so as to hold the said plate J up to the head of the machine, substantially as and for the purposes herein set forth.

95,321.—Hugh C. Carrigan, New York, N. Y.—*Portable Fire-Escape.*—September 28, 1869.

Claim.—1. The combination of the reels C D, either or both, shaft B, sliding bolts E, ratchet-wheels F, and pawls G, with each other and with the frame A, said parts being constructed and operating substantially as herein shown and described.

2. The ladder M N O, provided with the weight P, iron basket Q, and the straps R S, either or both, in combination with the reel C, shaft B, and frame A, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the chain I, provided with the ring J and hook K, with the reel D, shaft B, and frame A, substantially as herein shown and described, and for the purpose set forth.

4. The ring or eye-bolt Y and chain Z, when used in connection with the frame A, to which the operating-mechanism of the fire-escape is attached, substantially as herein shown and described, and for the purpose set forth.

5. The extension-frame T U V W, constructed as described, in combination with the frame A, ladder M N O, and chain I J K, either or both, substantially as herein shown and described, and for the purpose set forth.

6. An improved portable fire-escape, constructed, arranged, and operating substantially as herein shown and described, and for the purpose set forth.

95,322.—Edwin Carter, Norwalk, Conn.—*Fastening for Attaching the Ends of Bands, Clamps, &c.*—September 28, 1869.

Claim.—The combined arrangement of the slotted coupling-plates A A, studs D D, handle F, and connecting-screw E, in the manner substantially as herein described, and for the purpose set forth.

95,323.—William Chesley, Cincinnati, Ohio.—*Steam-Gauge.*—September 28, 1869.

Claim.—1. The construction of the spring-disk of a steam-pressure gauge with the circumferential rim or flange F, for the purpose set forth.

2. The oscillating segment-rack whose jointed connection with the spring-disk or diaphragm is made adjustable by means of the vibratable plate R, and conical-necked setting-screws, substantially as and for the purpose set forth.

95,324.—John Cochran, Purdy's Station, N. Y.—*Milk-Can.*—September 28, 1869.

Claim.—The bottom of the can, having its edge extended between the lower edge of the body A and the top of the external ring C, in connection with the internal ring D, secured to said external ring, and supporting the bottom, substantially as described.

95,325.—William H. Coleman, New Orleans, La.—*Velocipede.*—September 28, 1869.

Claim.—The wheels K, or their equivalents, the segments L, the levers N, pawls *d*, and springs O, in combination with the loose driving-pinions D, when the latter are provided with projections E, fitting into recesses in the hub of the driving-wheel A of a velocipede, pawls *b* to take into clutches *a*,

and all the parts are constructed, arranged, and operate substantially as described, for the purpose set forth.

95,326.—DANIEL COMPTON, Newport, N. J.—*Ice-Breaking Boat.*—September 28, 1869.

Claim.—The combination of the saws I I, upon the paddles J, with the ice-breakers E F G, arranged upon the under part of the hull H, and all constructed to operate substantially as set forth.

95,327.—S. A. CUMMINS and A. J. CUMMINS, Vienna, N. J.—*Sled-Brake.*—September 28, 1869; antedated September 18, 1869.

Claim.—1. The combination of the angular levers D, pivoted to the runners, and provided with dogs *i* and projections *h*, the cross-bar C, the slotted tongue B, and the rock-bar, with hounds *a*, all constructed, arranged, and operating substantially as herein described.

2. The combination of the swinging dogs F, clevis G, pivoted plates E, cross-bar C, the slotted tongue B, and the rock-bar, with hounds *a*, all constructed, arranged, and operating substantially as herein described.

95,328.—JOSEPH K. DAVIS, Monticello, S. C.—*Cotton and Hay Press.*—September 28, 1869.

Claim.—1. The bars m^2 n^2, combined with the hooked rods J J, metallic plates I I, and end flanges *i i*, in the manner and for the purpose set forth.

2. The hinged cover O, in combination with the removable bars W W, confined at one end, when in use, by the pins and staples *w w*, and at the other end by the cross-bar A^1, substantially as and for the object set forth.

95,329.—JOHN DECAMP, Cincinnati, Ohio.—*Bed-Bottom.*—September 28, 1869.

Claim.—The combination of the slats A D, the spring B, screw C, and dish-formed or concave nut E *e*, provided with wings *e'*, all constructed and arranged as and for the purpose set forth.

95,330.—N. T. DRAKE, High Point, N. C.—*Medical Compound.*—September 28, 1869.

Claim.—1. The mode of compounding the several ingredients into a liniment, and applying and administering the same as described above.

2. The medical compound produced by combining carbolic acid with an essential oil and one or more tinctures, such as above named, or their medicinal equivalents.

95,331.—WILLIAM DUESLER, Saint Joseph, Mo.—*Trip-Hammer Saw-Set.*—September 28, 1869.

Claim.—The machine for setting saws herein described, having frame A, blocks B and K', hammer D, trip G, and spring F, when constructed and arranged substantially as specified.

95,332.—EDGAR F. EATON, Northford, Conn.—*Buckle.*—September 28, 1869; antedated September 17, 1869.

Claim.—The frame A, loop B, and tongues *a a*, all constructed and united, as herein set forth.

95,333.—PRIMUS EMERSON, Carondelet, Mo.—*Feathering Paddle-Wheels.*—September 28, 1869.

Claim.—1. The circular segments E, arranged to support the paddles D, and to allow the feathering thereof in the wheel-rims C, substantially as set forth.

2. The segments E, their journals *e*, and the eccentric F *f* F', when combined with the bearing G and rollers *h*, substantially as set forth.

95,334.—JEROME FASSLER, Springfield, Ohio.—*Blank for Harvester-Guard Fingers.*—September 28, 1869.

Claim.—Shearing or punching blanks from solid plates or bars of iron or steel, substantially as shown in Fig. 1, whereby the forging or forming of harvester-guard fingers is greatly facilitated in their manufacture, as herein set forth.

95,335.—COLIN T. FINLAYSON, Albany, Oregon, assignor to himself and ALFRED C. LOND, San Francisco, Cal.—*Propeller-Wheel.*—September 28, 1869.

Claim.—1. The method, herein described, of propelling ships and raising water by means of the direct action of side currents, drawn by a vacuum, upon the buckets of a wheel working within an inclosing case, and the reaction of the dense outside water upon the volumes thrown out of such case by the wheel, substantially as described.

2. The radial buckets *c*, inclined across the periphery of the wheel, and provided with concave front and rear faces, and side cutting-edge, as and for the purpose set forth.

95,336.—C. C. FOSTER, Odessa, Del.—*Fertilizer-Attachment.*—September 28, 1869.

Claim.—The arrangement, upon an adjustable shaft under the bottom of the hopper of a fertilizer-attachment, of one or a series of rollers of any suitable shape and material, substantially as and for the purposes herein set forth.

95,337.—GEORGE W. GOULDEN, Waverly, N. Y.—*Clamp.*—September 28, 1869.

Claim.—The clamping-device herein described and shown, having platform A, with cylindrical mortises B and screw-posts D, with clamp-screws E and cylindrical tenons C, all constructed substantially as specified.

95,338.—THOMAS J. HALL, Bryan, Texas.—*Cultivator.*—September 28, 1869.

Claim.—1. The cultivator-beams A, arranged either singly or in pairs, and suspended, by the adjustable rods B, from the levers C, vibrating laterally, and arranged to be operated by the feet, substantially as specified.

2. The combination of the levers C, transverse beam I, and springs H, when arranged substantially as specified.

95,339.—WILLIAM HALLAM, Cheltenham, Mo.—*Brick-Kiln.*—September 28, 1869.

Claim.—1. The bridge-wall B, arranged with distributing-flues *b*, and combined with the furnaces D D', substantially as set forth.

2. The arrangement of flues, furnaces, and bridge-wall in such manner that the heated gases shall rise in the annular chamber, without the bridge-wall, then pass down the center of the kiln to the base thereof, to be carried to the circumference, and rise to the chamber between the double crown, and from there pass to the chimney, substantially as described.

3. The steam-passages I, arranged at the base of the kiln, substantially as and for the purposes set forth.

95,340.—ROBERT HAM, Troy, N. Y., assignor to PHILO P. STEWART, same place.—*Stove-Pipe Damper.*—September 28, 1869.

Claim.—The damper B, having cast or otherwise attached thereto the pivots *c* and *c'*, so constructed as to permit of their insertion into the pivot-holes from within the pipe, and provided with shoulders or their equivalents, against which the inside of said pipe shall press, substantially as and for the purpose herein shown and described.

95,341.—HENRY W. HARPER, Berlinsville, Pa.—*Machine for Grinding and Polishing School-Slates.*—September 28, 1869; antedated March 29, 1869.

Claim.—1. The two horizontal grinding-disks J and H, revolving in contrary directions, in combination with the bars *d*, or their equivalents.

2. The disk H, and its band *d*, in combination with the movable disk J and its slots *f*.

3. The revolving wheel K or M, constructed substantially as described, for holding the slates, in combination with a grinding or polishing wheel or disk.

4. The wheel K, its band, the split ring *p*, and bolt *r*.

5. The combination of a revolving wheel, K or M, for holding the slates, with one or more horizontal revolving, polishing, or grinding disks, arranged to overlap the said wheel, as set forth.

6. The combination of the two vertical polishing-wheels T and R with the bar V, for the purpose specified.

95,342.—Henry W. Harper, Berlinsville, Pa.—*Machine for Grinding and Polishing Slate.*—September 28, 1869; antedated March 29, 1869.

Claim.—1. The screw *m*, arranged on the machine substantially as described, for regulating the extent of the reduction of the slates.

2. The combination of the said screw with a pointer and graduated plate, for the purpose specified.

95,343.—Henry W. Harper, Berlinsville, Pa.—*Machine for Grinding Slate, Stone, Marble, &c.*—September 28, 1869; antedated March 29, 1869.

Claim.—1. The revolving disk H, or its equivalent, to which are secured a number of grinding or polishing blocks, arranged apart from each other, in combination with a rotating disk or reciprocating bed for containing the object to be ground or polished.

2. Rendering the said blocks adjustable to and from the center of the disk H, or its equivalent, by means of slots *f f* in the latter for the reception of the stems of the blocks, as set forth.

95,344.—B. B. Hill, Springfield, Mass.—*Method of Manufacturing Type-Wheels.*—September 28, 1869.

Claim.—1. As an improvement in the method of forming, by compression, the letters or figures on the periphery of type-wheels, and to avoid thickening or displacement of the metal during such compression, except along the angles which separate the circumferential surface from the lateral surfaces, tightly compressing said wheel between two circular plates or disks, which completely cover and compress the two lateral surfaces of said wheel, excepting only a narrow rim or margin thereof, allowed for lateral extension under the action of the die, substantially as described.

2. As a new article of manufacture, a type-wheel, having characters or figures formed or produced upon its periphery by the process substantially as herein described.

95,345.—Martin V. B. Hill, Bridgeport, Conn.—*Cartridge-Loading Machine.*—September 28, 1869.

Claim.—1. The combination of the spur-wheels A, B, and C, the spring *c*, and the pin *a*, substantially as and for the purpose hereinbefore set forth.

2. The combination of the ratchet-wheel *h*, the pawl *v*, the arm *i*, the spring *x*, the connecting-rod *q*, the pin *w*, and the cam *z*, substantially as and for the purpose hereinbefore set forth.

3. The combination of the pawl *v*, the wires *o* and *f*, the angle-lever *s*, and the knob *e*, substantially as and for the purpose hereinbefore set forth.

95,346.—M. T. Hitchcock, Springfield, Mass.—*Eduction-Ventilator for Railroad-Cars.*—September 28, 1869.

Claim.—An eduction-ventilator for railroad-cars, composed of the shell A, draught-opening D, and angular portions C and C′, and the base B, for attaching the ventilator to the car, the whole constructed, arranged, and applied substantially as set forth.

95,347.—D. L. Holden, New Orleans, La.—*Ice-Machine.*—September 28, 1869.

Claim.—1. The well K, provided with a space below the inlet-pipe J, having a cock, K, through which to draw off the impurities, and also provided with a strainer, *n*, between the ends of pipes J and L, when arranged in an ice-machine, to operate in the manner and for the purpose specified.

2. The arrangement of the sprayers G, in connection with the plugs *a a*, pipe E, and tubes C C, or tubular connections, with the chambers B B, substantially as shown and described.

95,348.—William R. Hollingsworth, Mount Pleasant, Iowa.—*Harrow.*—September 28, 1869.

Claim.—1. The metallic harrow-head, herein described, constructed and arranged to operate substantially as specified.

2. The combination of the metallic head B and wedges *c′*, when arranged to operate substantially as and for the purpose described.

95,349.—George B. Holzach, New Orleans, La.—*Window-Shade Fixture.*—September 28, 1869.

Claim.—The means herein described, consisting of an endless cord, *f*, in connection with its attachment to the roller C and the cord *b c*, and its connection with the cross-bar B, for winding and unwinding the shade upon its roller, simultaneously with the raising and lowering of the supporting and carrying bar, substantially as before described.

95,350.—R. B. Hugunin, Cleveland, Ohio.—*Sash-Holder.*—September 28, 1869.

Claim.—The arrangement of the elastic roller D and D′, combined with the smaller roller F, compressed into the elastic covering of the former, and secured in that position between the plates A B, &c., substantially as described herein.

95,351.—William Hull and Charles W. Hammond, Baltimore, Md.—*Grain-Drier.*—September 28, 1869.

Claim.—The screen *c*, combined with the inclosing-cylinder B, dirt-space *e*, and spiral flanges *b*, substantially as and for the purpose set forth.

95,352.—Almon Hunt, Macomb, Ill.—*Cultivator.*—September 28, 1869.

Claim.—The cultivator herein described, having frames C, bars D, equalizing-bars K, clamps P, and plates *c*, arranged, with reference to the beams O, as described, constructed and arranged substantially as set forth.

95,353.—Jakob Husnik, Tabor, Austria, assignor to Heinrich Pollack and Albert Edwin Schmidt, Hamburg, Germany.—*Rotating Hook for Sewing-Machines.*—September 28, 1869.

Claim.—The tail or projection T, upon the rotating hook of a sewing-machine, constructed and adapted to operate substantially as herein set forth.

95,354.—J. J. Kendall, Troy's Store, N. C.—*Washing-Machine.*—September 28, 1869.

Claim.—The boxes or pressers B B, provided with the slats *i*, in combination with the perforated plates D D, as and for the purpose set forth.

95,355.—Jefferson Kindleberger and William Augustus Arnold, San Francisco, Cal., assignors to "The Inventors' Association of San Francisco, California."—*Machine for Wiring Blinds.*—September 28, 1869.

Claim.—1. The above-described rod-wiring device, consisting of the conductor O, with the guard R, and the sliding-bar N, lever M, and sliding-bar L, operated by the lever B, substantially as described.

2. In combination with the above-claimed device, the pawl E, pivoted upon the bent lever B, for feeding forward the rods, substantially as described.

3. The combination, with the rod-wiring device above claimed, of the device for wiring the blind-slats to the rods, substantially as herein set forth.

95,356.—Philip Kneipp, Philadelphia, Pa., assignor to James S. Earle & Sons, same place.—*Ornamental Transfer.*—September 28, 1869.

Claim.—The decorating of surfaces by the process substantially as herein set forth.

95,357.—Carl Künstler, Brooklyn, N. Y.—*Blacking-Fount.*—September 28, 1869.

Claim.—The blacking-fount A, provided with the necks B and D, the latter being made so as to admit a sponge E, covered or not covered, and the neck B to admit the blacking, in combination with the caps C and F, constructed and operated substantially as and for the purposes set forth.

95,358.—Louis La Breche-Viger, Montreal, Canada, assignor to William Woods Averell, Bath, N. Y.—*Manufacture of Cast Steel.*—September 28, 1869.

Claim.—1. The use of the admixture of plumbago and iron-ores, iron-sand, wrought iron, iron scraps, shavings, chips, and sponge, in a clay crucible or other non-melting pot, substantially as set forth, to produce cast steel at one operation.

2. The use of the said admixture of plumbago and iron-ores, iron-sand, wrought iron, iron scraps, shavings, chips, and sponge, in a reverberatory furnace, the said mixture covered with a flux of glass or blast-furnace cinders, or with glass-making materials, or with thin slabs of soapstone, or with those substances combined during reduction, carburization, and fusion, to produce cast steel at one operation.

3. The use of the admixture of powdered charcoal, compressed or not with iron-ores, iron-sand, wrought iron, iron scraps, shavings, chips, and sponge, in a reverberatory furnace, the said mixture covered with a flux of glass, or glass-making materials, or blast-furnace cinders, or thin slabs of soapstone, or with those substances combined, to make cast steel at one operation.

95,359.—SALEM T. LAMB, New Albany, Ind.—*Pitman-Joint for Harvesters.*—September 28, 1869.

Claim.—1. Forming a pitman-joint by means of the eye D E, and hook G, in connection with a pressure-block, J M, or its equivalent, to compensate for wear and take up lost motion, as described.

2. The nut I, constructed with a sleeve and spring-pawl L, substantially as described, in combination with the ratchet K, on the end of the pressure-block J, as and for the purpose set forth.

95,360.—JOHN LARIMORE and J. M. WILLIAMS, Connersville, Ind.—*Railway-Car Coupling.*—September 28, 1869.

Claim.—1. The bumper A, provided with pivoted jaws B B, having shoulders *i i*, constructed substantially as described, and for the purpose set forth.

2. The combination of the pivoted jaws B B, stop E, and springs D D, all substantially as and for the purpose set forth.

3. The stop E, constructed substantially as described, and for the purposes set forth.

4. In combination with the bumper A, the slotted tube G and cap I, substantially as and for the purpose set forth.

5. The combination of the bumper A, pivoted jaws B B, springs D D, coupling-bolt C, projection F, slotted tube G, and cap I, all constructed and operating substantially as and for the purposes herein set forth.

95,361.—ANDREW S. LAZIER, North Parma, N. Y.—*Horse-Rake.*—September 28, 1869.

Claim.—The combination and arrangement of the pendant *f*, stirrup *g*, and oscillating bar *e*, having staples or levers *n*, and rods *h h'*, substantially as and for the purpose set forth.

95,362.—DAVID R. LEWIS, Manchester, Iowa.—*Cloth-Holding Guide for Sewing-Machines.*—September 28, 1869.

Claim.—The combination, with the guide-bar A and stand B, of the spring clamping-bars F and H, having long arms F' and I, when all are constructed and arranged to operate as set forth.

95,363.—TYLER C. LORD, Chicago, Ill.—*Hinge for Blinds.*—September 28, 1869.

Claim.—When forming a part of a window-blind hinge, the circular plate B, when provided with a central pivoting-pin D, cogs or teeth C, and lips or flange F, in combination with the support E and bevel-wheel H, when all are constructed and arranged substantially as and for the purposes specified.

95,364.—HENRY C. MARCH, Limerick Station, Pa.—*Base-Burning Stove.*—September 28, 1869.

Claim.—1. A movable grate and fire-pot, combined substantially in the manner described.

2. A coal-reservoir or feeder, consisting of two cylinders, K and K', one of which is so arranged to slide on or to be adjusted upon the other, that the length of the reservoir can be increased or diminished as required.

3. The spiral ribs or threads *e* and *e'*, formed on the two sections of the reservoir, and adapted to each other substantially as herein set forth.

4. The throttle-valve L, when arranged in the lower adjustable portion of the reservoir, as described.

5. The combination of the scoop M, and its lug or lugs *h*, with the hinged lid M', and its rod or rods *h'*, all substantially as herein set forth.

6. The arrangement of dampers I and I', in combination with the scoop M, substantially as described.

7. The combination, with the corrugated or channeled ledge *a*, of the movable perforated fire-pot F, all substantially as herein set forth.

95,365.—GEORGE E. MARSHALL, Laurel, Ind.—*Bleaching Paper-Stock.*—September 28, 1869.

Claim.—1. Gathering the escaping gases evolved from the bleaching-solution, and conveying them away by an inflowing current of air, produced by a fan or equivalent means, substantially as described.

2. The utilization of said gases, by returning them to the tub or reservoir, substantially as described.

3. The combination of a bleaching-tub or reservoir, a receiver or cover, and a fan or its equivalent, substantially as and for the purpose set forth.

4. The adjustable delivery-pipes *a*, arranged to receive and deliver the gas, either within or above the fluid or solution, as set forth.

95,366.—GEORGE MARTZ, Pottsville, Pa.—*Hoisting and Dumping Apparatus.*—September 28, 1869.

Claim.—1. The center-drop *c'*, in combination with the curved recesses *a* and the catch *a''*, in the manner and for the purpose specified.

2. In a hoisting-apparatus for mines, the combination of a water-bucket and coal-car holder, substantially as described.

3. The dumping-apparatus, consisting of the quadrantal side-pieces C', provided with means for the retention of a car, and with trunnions or other axial devices, in combination with the concave deflectors D, substantially as set forth.

4. The combination of the counterweight H' with the bucket C and slotted guide-ways H, arranged and operating in the manner explained.

5. The guard F'', in combination with the side-pieces F', arranged and operating substantially as specified.

95,367.—LE ROY MCWHINNEY, Winterset, Iowa.—*Hand-Plow.*—September 28, 1869.

Claim.—As an article of manufacture, a hand-plow, composed of parts A, B, and C, constructed substantially as set forth.

95,368.—HENRY D. MEARS, New York, N. Y.—*Sealing Boxes, &c.*—September 28, 1869.

Claim.—Cording and sealing boxes, and other similar articles to be transported, by means of a metal cord, or wire, passing through said article, and securing the ends thereof by a metallic seal, as and for the purpose herein described and represented.

95,369.—JOHN MOESSINGER, New York, N. Y.—*Reading-Desk.*—September 28, 1869.

Claim.—1. The reading-desk G, constructed of two parts, united by a balance-lever, H, substantially as shown and described.

2. The end slides *f*, carrying the cover-holders *j* and friction leaf-holders *k*, either or both, in combination with the desk G, substantially as set forth.

3. The lateral slides *n*, carrying the surface leaf-holders *l*, in combination with the adjustable cover-holders *j*, and with the desk G, substantially as described.

95,370.—WILLIAM F. MOODY, Auburn, N. Y.—*Carriage-Wheel.*—September 28, 1869.

Claim.—1. A cap and oil-box or chamber on the point of the hub, and screwed to the journal-box, as and for the purpose herein described and represented.

2. In combination with an oil-box or chamber on the end of the hub, and a journal-box, and journal projecting therein, the division-plate in the chamber, and the hole or holes through the journal-box, for directing and passing the oil or other lubricator from the chamber to the journal, as and for the purpose described.

3. Securing the hub or wheel to the axle or journal, by the combined use of the groove and split ring, and the nut or follower bearing against said ring, as and for the purpose described.

95,371.—James O. Morse, Englewood, N. J.—*Screw-Cutting Die.*—September 28, 1869.

Claim.—1. The improved screw-cutting die herein described, consisting essentially of the rim or frame A, solid and in one piece, and thread-cutting dies, abutting against the inner surface of said rim, and held firmly in such position by screws, or other equivalent means, substantially as described.

2. In combination with the rim or frame A, the cutters C, constructed substantially as described, that is, with a body-portion, *a*, by means of which the cutter is fitted to its seat, and a spindle, *b*, and nut *n*, or other equivalent and easily-removable fastening by means of which it is secured in its place upon the frame.

95,372.—Frederick Nishwitz, Brooklyn, N. Y.—*Harvester.*—September 28, 1869.

Claim.—1. The combination of a gear-frame, vibrating on the main axle, a tongue, or draught-frame, vibrating on the gear-frame, finger-beam hinged to the tongue, or draught-frame, and a lifting-lever, connected with the rear end of the tongue by a link, which allows the finger-beam to rise, but limits its descent below a given point, substantially as set forth.

2. The combination of a main frame vibrating on the driving-axle, and a tongue, or draught-frame vibrating on the gear-frame, with a cutting-apparatus hinged to the tongue, or draught-frame, by one end only, substantially as set forth.

3. The combination of a vibrating gear-frame and a vibrating tongue, or draught-frame, with a down-hanger attached to the tongue, and to which the finger-beam is hinged, substantially as set forth.

4. The combination of a gear-frame, vibrating about the main axle, with a tongue, or draught-frame vibrating on an axis coincident with that of one of the down-hangers or coupling-arms to which the finger-beam is pivoted.

5. The arrangement, as set forth, of the vibrating gear-frame, vibrating draught-frame, or tongue, finger-beam hinged to the tongue, and the pitman, arranged nearly in line of the joint of the tongue, to allow the cutting-apparatus to vibrate without injuriously disturbing the relation of the cutters to the guards.

6. The combination of the hinged cutting-apparatus with the vibrating tongue-plate, in the manner described.

7. The combination of a hinged cutting-apparatus, pivoted to down-hangers, vibrating with the tongue, or draught-frame, with a brace secured to the tongue, or draught-frame, and forming the pivot of the hinge, substantially as set forth.

8. The combination, with a hinged finger-beam and tongue, or draught-frame, vibrating in unison, of a thrust-link, and a lever, mounted on the tongue, or draught-frame, substantially as and for the purpose set forth.

9. The combination of the hinged finger-beam with the tilting-lever pivoted on the front coupling-arm, and connected with the shoe by a link, to lift the divider-end of the finger-beam, substantially as set forth.

10. The combination, with the hinged finger-beam, of the tilting-lever, mounted on the tongue, or draught-frame, with the restraining-cord or chain secured to the gear-frame, as set forth.

11. The combination of the pivoted shoe and its link with the tilting-lever and friction-roller, for the purpose specified.

12. The combination, with the shoe to which the finger-beam is fastened, of the supplementary spring-shoe, pivoted concentrically with the supporting-shoe in front, and adjustable at its heel-end, as set forth.

13. The arrangement, as set forth, of the vibrating gear-frame, vibrating tongue, or draught-frame, and hinged finger-beam, with the down-hangers and long shoe.

14. The combination of the gear-frame, tongue, and driver's seat, all vibrating on parallel pivots, with a link connecting the driver's seat and tongue, or draught-frame, substantially as set forth.

95,373.—Frederick Nishwitz, Brooklyn, N. Y.—*Harvester.*—September 28, 1869.

Claim.—1. The combination, with the main frame and removable shafts, of gear-wheels revolving loosely on the shafts, all constructed as described, to permit the gearing to be removed or replaced without removing any portion of the frame.

2. The combination of the spur-wheel on the main axle, the loose spur-gears on the counter-shaft, the loose spur-gears on the shaft *f'*, the bevel-wheel on the same, and the crank-shaft crossing the main axle, all constructed and arranged for joint operation, as set forth.

3. The combination of the shipping-lever, constructed as described, and operated by a foot-lever sliding on the rod which connects the tongue and driver's seat, substantially as set forth.

4. The arrangement on the counter-shaft, as described, of the gear-wheels, the shipping-lever, and the platform-cover.

5. The combination, with the shoe, of the pivoted spring-stop, operating, as described, to prevent the cutter from dropping out when the divider-end of the finger-beam is elevated.

6. The combined foot-board and gear-cover, arranged to vibrate about the counter-shaft, as set forth.

95,374.—G. E. Noyes, Washington, D. C., assignor to himself and E. N. Gray, same place.—*Clay-Tempering Machine.*—September 28, 1869.

Claim.—The construction of the pinion D, substantially as and for the purpose set forth.

95,375.—Henry D. Palmer, Volena Township, Mich.—*Combined Grain-Drill and Land-Roller.*—September 28, 1869; antedated September 22, 1869.

Claim.—In a combined land-roller, grain-drill, seed and plaster sower, the construction and arrangement of the reciprocating bar C, in combination with the spring S, pins 3, 3, 3, and grooved feed-bars *x x x*, as specified.

95,376.—John Pool, Hermon, N. Y.—*Compound for the Cure of Cholera-Morbus.*—September 28, 1869.

Claim.—The compounding of roots of blackberry, golden jewel, buckthorn-brake, crane's-bill, wandering milk-weed, water-nettle, and sumach, with the barks of green ozier and choke-cherry, substantially in the manner as above specified.

95,377.—W. P. Pugh, High Point, N. C.—*Medicated Soap.*—September 28, 1869.

Claim.—The foregoing combination as a whole, and its application, in said combination, to the cure of disease in man or beast, and to the destruction of parasitic insects or vegetables on man or beast.

95,378.—Evander W. Ranny, New York, N. Y.—*Composition for Roofing, Pavements, &c.*—September 28, 1869.

Claim.—The combination of these materials and their use, for the purposes and in the manner substantially as set forth.

95,379.—T. M. Richardson, Stockton, Me.—*Auger.*—September 28, 1869.

Claim.—The method herein described for attaching a removable lip and screw to the body of an auger, consisting of the dovetail-groove and recess *c* in said body, and the dovetail-form of the lip, with the projection therein adapted to said recess, substantially as specified.

95,380.—John Robson, Chicago, Ill.—*Newspaper-File.*—September 28, 1869.

Claim.—The combination and arrangement of the bar A, the rod or bar B, with the pivotal sliding bolt *b*, spring *s*, and fastening *d*, substantially as and for the purposes specified.

95,381.—Edward P. Roche, Bath, Me., assignor of one-half to E. A. Potter, same place.—*Chafing-Iron for Wagons.*—September 28, 1869.

Claim.—A chafing-roller, applied to the body of a vehicle in such a manner as to present its axis of revolution at right angles to the plane of revolution of the wheel at the point of incidence of the two,

when combined with the anti-friction balls *d d*, the spring *f*, and the bar *a*, as and for the purposes herein described.

95,382.—Ferdinand Rochow, New York, N. Y.—*Safety-Valve for Steam-Generators.*—September 28, 1869.

Claim.—1. A valve-box of a safety-valve, having an interior cylinder, A^1, which is, at its upper end, in direct and unobstructed communication with the opening in the valve-seat D^2, and, at its lower end, in permanent free communication with the interior of the boiler only, while the escape-opening, with which its upper end communicates, is also in free and unobstructed communication with the interior of the boiler, when the valve is made to form a piston, closed at its lower end, constructed and arranged substantially as before described.

2. The combination of the annular sleeve E with the cylindrical portion D^1 of the valve, and the inner cylinder A^1 of the valve-box, substantially as before described.

3. The inner cap L, constructed with a left-hand screw-thread, V, and the inclosing-chest P, with a right-hand screw-thread, W, in combination with the forked lever R, whereby the said cap and chest are securely locked together, substantially as before described.

4. The inner inclosing-cap L, constructed with legs *f f*, and an annular screw-ring, L^2, in combination with the lever R, constructed so as to embrace one of the said legs, thus constituting the lock, substantially as before described.

5. The inner cap L, for inclosing the spring G, and the outer chest P, for inclosing said cap, constructed and arranged substantially as before described.

6. The inner cap L, for inclosing the spring G, constructed with a cylindrical hollow guide, *l*, projecting within the spring, so as to form a guide for the spindle K, substantially as before described.

7. The guard *d*, arranged above the bottom of the cap L, and with reference to the exterior of said cap, and the escape-pipe Q, so that, in connection with the cap, a double protection is afforded to the adjusting-devices of the spring, substantially as before described.

8. The construction and arrangement of the chest P, forked lever R, bolt S, eye-splint *i*, and flange M, with the cap L, valve-box A, and valve D, constructed and arranged substantially as before described.

95,383.—Isaac S. Russell, New Market, Md., and Henry R. Russell, Woodbury, N. J.—*Caster-Wheel for Harvesters.*—September 28, 1869.

Claim.—1. The combination and arrangement of the braeket F, having a cam, *a*, with the swinging caster-bar D, substantially as and for the purpose set forth.

2. The bracket F, having cam *a*, and supporting the swinging caster-bar D, in combination with the vibrating axle of the caster-wheel C, substantially as shown and described.

3. The arrangement of the stop or projection *h*, in combination with the vibrating axle of the caster-wheel C, substantially as and for the purpose set forth.

95,384.—Milton Satterlee, Foreston, Ill.—*Wagon-Brake.*—September 28, 1869.

Claim.—1. A "shoe" for wagons, composed of two or more plates, P, Q, &c., joined together, substantially as and for the purposes specified.

2. In connection with a shoe constructed of two or more joined plates, the spur-wheels *n n*, applied in the manner and for the purpose set forth.

3. The combination of hub-brake *e'* with a shoe, G, by means of a curved supporting-arm E, substantially as and for the purposes set forth.

4. The arrangement of the lever L, supports B D D', shaft A, rod or chain F, arm E, and shoe G, when the several parts are constructed and applied in connection with each other, substantially as and for the purposes set forth.

95,385.—Francis Scherb, San Francisco, Cal.—*Spring-Wagon.*—September 28, 1869.

Claim.—1. The reaches C C, in combination with the cross-bars E E and bent wooden jacks D, the whole arranged substantially as herein described.

2. The combination of the split strap-bolt H and shoulder I, for securing the ends and regulating the tension of the thoroughbraces, substantially as described.

95,386.—Henry Selick, Lewistown, Pa.—*Plow.*—September 28, 1869.

Claim.—1. The slots or holes *e e'*, arranged in the rear end of the mold-board and landside of a plow, in the arc of a circle described from the pivoted point *a*, at which the handles are attached, as and for the purpose set forth.

2. The attachment of the handles D to the mold-board and landside of a plow, in the manner and for the purpose specified.

95,387.—Noah Shaw, Eau Claire, Wis.—*Steam-Generator.*—September 28, 1869.

Claim.—1. Passing a continuous current of water through suitable devices, from a steam-boiler under and at the side of the fire, converting it into steam, and returning the steam and water into the boiler, substantially as herein set forth.

2. Passing a continuous current of water through suitable devices from a steam-boiler, between the bridge-wall and said boiler, converting it into steam, and returning the steam and water into the boiler, substantially as herein set forth.

3. Providing the fire-box of a steam-boiler with hollow grate-bars on the bottom and sides, and the space between the bridge-wall and the boiler with a tortuous pipe, all connected with the boiler, substantially as herein set forth.

4. The auxiliary grate-bar *d*, provided with ribs *e e*, constructed substantially as herein set forth.

5. Providing the fire-box B with one tortuous pipe, or several pipes connected together, so as to form the bottom inclined upward from the center toward the sides, and extending up the sides, substantially as herein set forth.

6. The combination of the boiler A with pipes C and D, connecting said boiler with the inclined pipe or pipes running along the bottom and sides of the fire-box B, substantially as herein set forth.

7. One or more tortuous pipes connected together in an inclined position in the space between the bridge-wall and the boiler, substantially as herein set forth.

8. The combination of the boiler A, and the pipes E E connecting said boiler, with the inclined pipe or pipes running back and forth in the space between the bridge-wall and the boiler, substantially as herein set forth.

95,388.—Frederick Shickle, Saint Louis, Mo., assignor to Shickle, Harrison and Company.—*Molding-Pipe.*—September 28, 1869.

Claim.—1. The flask L L', supported vertically upon sliding tables M M', substantially as set forth.

2. Supporting the pattern-frame Q by the center-plate O and spindle P, substantially as set forth.

95,389.—Gerard Sickels, Boston, Mass.—*Counting-Register.*—September 28, 1869.

Claim.—1. The combination and arrangement of springs *i* on plate B, with the notched rings C, substantially as and for the purposes set forth.

2. The segmental annular cams *g*, in combination with rims *f* on plate B, substantially as and for the purpose set forth.

3. The combination and arrangement of springs *m* with rings C and cams *g*, substantially as and for the purpose described.

95,390.—John Siddons, Rochester, N. Y.—*Metallic Roof.*—September 28, 1869.

Claim.—In combination with the ribs B, sheets *a*, and *a'*, and double-locked seam *b*, the fibrous packing *r*, as shown and described, and for the purposes set forth.

95,391.—William S. Spratt, Cincinnati, Ohio.—*Apparatus for Sharpening and Gumming Saws.*—September 28, 1869.

Claim.—1. The swinging frame J, sliding frame

H, and swiveling adjustable frame C, constructed and arranged substantially in the manner and for the purpose described.

2. The combination of the adjustable gauge U with the cutter A, sliding spindle D, and retracting-spring F, substantially as shown and described.

95,392. — W. X. STEVENS, East Brookfield, Mass.—*Vise.*—September 28, 1869.

Claim.—The combination of the vise and shank, substantially as described, for the purposes specified.

95,393.—JOB SWEET, Decatur, Mich.—*Hinge for Gates.*—September 28, 1869.

Claim.—A gate, constructed with a rod-hinge, the lower end of which is made in a spiral form, and operating in a slotted plate, as and for the purpose set forth.

95,394.—HENRY T. TAPLIN, South New Market, N. H.—*Combined Rotary Cultivator and Harrow.*—September 28, 1869.

Claim.—1. The combined cultivator and harrow-teeth M *n'*, constructed substantially as herein shown and described, and for the purpose set forth.

2. The reversible teeth M and adjustable radial arms L, in combination with the revolving-plate *k*, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the teeth M, adjustable arms L, revolving-plate *k*, shafts H and F, gear-wheels E and D, axle B, wheels A, and frame C, with each other, substantially as herein shown and described, and for the purpose set forth.

4. The combination of the detachable circular cutter N *n'* with the shaft H, plate *k*, adjustable arms L, and teeth M, substantially as herein shown and described, and for the purpose set forth.

5. The combination of the bent lever O and lever Q with the shaft H, plate *k*, adjustable arms L, and teeth M, substantially as herein shown and described, and for the purpose set forth.

95,395.—A. L. VARNEY, Watertown, assignor to A. B. ELY, Newton, Mass.—*Breech-Loading Fire-Arm.*—September 28, 1869.

Claim.—1. The construction and arrangement of the parts, substantially as described, by which the breech is opened, the shell extracted, and the hammer cocked by the same operation, substantially as set forth.

2. The swinging breech-block, and opening and closing-rod or lever, constructed, arranged, operated, and operating in combination with and in relation to each other, substantially as described.

3. The breech-block and hammer, constructed and arranged, in relation to and in combination with each other, substantially as described.

4. The breech-block, opening and closing and cocking-rod or lever and hammer, constructed and arranged, in relation to and in combination with each other, substantially as described.

5. The swinging breech-block, opening and closing-rod or lever, and extractor, constructed, arranged, operated, and operating in combination with and in relation to each other, substantially as described.

6. The combination and arrangement of handle, cocking-rod or lever, and hammer, substantially as and for the purposes described.

7. The breech-blocks, constructed, as to their several parts, substantially as described, and arranged and operated substantially as set forth.

8. The hammers, constructed and arranged substantially as described, and manipulated substantially as set forth.

9. The combination of breech-block, firing-pin, opening, cocking, and closing-rod or lever, hammer, handle, and ejector, when the several parts are constructed and arranged substantially as and for the purposes described.

10. The combination of sliding guard, pendent hook or lever, with swinging breech-block, substantially as and for the purposes described.

95,396.—DAVID WEIMER, Gettysburg, Ohio.—*Grinding-Mill.*—September 28, 1869.

Claim.—1. The springs E, and their arrangement, with reference to the spring-head D, spindle C, and pinion H, substantially as and for the purpose described.

2. The spring-adjusting device, composed of the band F, block G, and arranged, in connection with the spring E, substantially as and for the purpose described.

95,397.—WILLIAM N. WHITELY, Springfield, Ohio.—*Harvester-Dropper.*—September 28, 1869.

Claim.—1. The independent hinged dropper-slats G G, substantially as and for the purpose set forth.

2. The plate E, hinged to the finger-bar B, and provided with lugs C C, in combination with the independent dropper-slats G G, for the purpose of raising said slats simultaneously, and supporting them, as set forth and described.

3. The shield-plate K, to cover the joint between the finger-bar and dropper, as set forth.

4. In combination with the sliding head T and reel-shaft box P, the L-hook screw-rod S, as and for the purpose set forth.

95,398.—WILLIAM WILLHIDE, Fetterman, West Va.—*Tire-Bender.*—September 28, 1869.

Claim.—The combination and arrangement of the levers C G, having the cams and pins, with the supporting-frame A B, when the several parts are constructed to operate together, substantially as and for the purposes specified.

95,399.—SAMUEL H. WILLIAMS, Baltimore, Md.—*Coal-Stove.*—September 28, 1869.

Claim.—1. The combination of the coal-chamber F, elliptical case or body B, and base A, all constructed and arranged to operate substantially as and for the purpose set forth.

2. The base A, when constructed with the upright flanges D and plate K K', to form an ash-pit and flues, for directing the draught to the flue L, when the damper H' is closed, substantially as shown and described.

95,400.—L. R. WITHERELL, Galesburgh, Ill., assignor to himself and CHARLES F. CALKINS, same place. — *Dish-Washing Machine.* — September 28, 1869.

Claim.—The stationary rack L, constructed as described, in combination with box A, wings X X'', spout W, crank T, and frame H, I, and K, when arranged to operate, as herein described, for the purpose specified.

95,401.—TRAVIS P. YORK, Terre Haute, Ind.—*Churn-Dasher.*—September 28, 1869.

Claim.—The combination of the metallic conical-shaped open plate C with the solid metallic inverted dished-shaped plate B, placed directly on the open space of the top of the plate C, by means of the three standards D D, all arranged substantially as shown and described.

95,402. — EDWARD WILLIAM YOUNG, New Street, Spring Gardens, Great Britain.—*Bridge.*—September 28, 1869; patented in England, February 19, 1868.

Claim.—A bridge having two cantilever portions, and an intermediate suspended portion, all constructed substantially as described.

95,403. — JAMES GOULD, Lexington, Mass. — *Paint-Compound.*—September 28, 1869.

Claim.—The improved composite material, compounded of ingredients and under the process hereinbefore set forth and explained.

95,404.—Canceled.

95,405.—ROBERT A. ADAMS, New York, N. Y. —*Composition for Making Types for Printing Wall-Paper, Oil-Cloth, and other Fabrics.*—October 5, 1869

Claim.—1. The employment of flock as an element in a composition for printing surfaces, in the manner and for the purpose herein set forth.

2. The employment of gum-camphor in a composition for printing surfaces, in the manner and for the purposes herein set forth.

3. The compound for printing surfaces, composed of flock, camphor, shellac, alcohol, and benzoin, in

about the proportions, and applied substantially in the manner herein described.

4. The employment of fine cork, in combination with gummy material, for a composition for printing surfaces, as herein set forth.

95,406.—W. A. ALLEN, Baltimore, Md.—*Sawing-Machine.*—October 5, 1869.

Claim.—1. In a sawing-machine having the table B, carriers C C, and knees K K, in connection with a set of saws F F^1, arranged in two converging lines, the dividing-saw F^2, arranged at the open end of the triangle formed by the two converging lines, substantially as and for the purpose specified.

2. In a sawing-machine having the table B, carriers C C, and knees K K, the arrangement of the saws F F^1, in two converging lines, with no two saws laterally opposite to each other, but each saw on one side of the table so disposed that it will cut into the log just after or just before a saw on the opposite side of the table, substantially as and for the purposes set forth.

3. In a sawing-machine having the table B, carriers C C, and knees K K, the arrangement of the saws in two converging lines, each pair of saws being obliquely disposed, as hereinabove set forth, together with the single saw F^2 at the open end of the converging lines, being the precise arrangement shown in Fig. 2, substantially as and for the purpose described.

95,407.—JOSEPH AMBROSE, Nashville, Tenn.—*Medical Compound or Cordial.*—October 5, 1869.

Claim.—The manufacture or preparation of a compound, which I denominate as Ambrose Cordial, of the ingredients, in the proportions, and for the purposes set forth.

95,408.—ISAAC ANDERSON, Poland, Ohio.—*Hay-Loader.*—October 5, 1869.

Claim.—The wheel G and trip H, as arranged, in combination with yoke M, block B, and block I, substantially as and for the purpose set forth.

95,409.—E. F. ANGELL, Chicago, Ill.—*Binding-Guide for Sewing-Machine.*—October 5, 1869.

Claim.—The bar G, recessed in plate B, the bar E, the plate I J, fastened to the bed-plate, projecting upward, and serving as a guide for the plate A, the plates A B, and the screw-bolt H, and nuts R S, for operating the binding-guides D D′, and loops C C, when all are constructed and arranged as described.

95,410.—HARRISON W. AUSTIN and EDWIN C. PERRY, Portage Township; EDWIN C. PERRY, assignor to GUY T. NASH, Kalamazoo, Mich.—*Hames-Fastener.*—October 5, 1869.

Claim.—The bar C, provided with the ridge *m*, when so arranged as to shut into the slotted bar B, and, in connection with the latter, to swing its inner end through the bar A, and, moving inside the line of draught, thus make itself self-locking, the whole being constructed and arranged as described.

95,411.—AUGUSTINE BALDWIN, New York, N. Y.—*Cotton-Press.*—October 5, 1869; antedated September 22, 1869.

Claim.—1. The external rods E E, when provided with the toggle-joint *y y*, or its equivalent, the slot, connected with the lower platen B, for the purpose of securing the co-operation of said lower platen toward the conclusion of the operation of compression, substantially as set forth.

2. The combination of the jointed or slotted rod E E with an upright shaft, having a removable threaded collar, and with segments, having removable threaded faces, encircling said threaded collar, the whole being constructed substantially as and for the purposes specified.

3. The halves or V-shaped groove and tenon, for the purpose of guiding the segments in the line of the threaded shaft, substantially as above set forth.

95,412.—ARTHUR BARBARIN, New Orleans, La.—*Apparatus for Carbureting Air and Gas.*—October 5, 1869.

Claim.—1. The rod R, when constructed, arranged, and operating substantially as herein described, for the purposes set forth.

2. The pipes H and T, in combination with each other, and with a receiver, A, and a tank, B, and a carbureter, K, that is enveloped by a vessel, S, when the parts are constructed, arranged, and operate substantially as herein described, for the purpose set forth.

3. The above combination, in combination with the rod R and its indicating-appliances, substantially as and for the purpose set forth.

95,413.—SOLOMON BARBER, South Coventry, Conn.—*Device for Steaming Rovings.*—October 5, 1869.

Claim.—The reservoir C and damper D, combined with the inclined roofed chamber E through which the roving passes, the roof deflecting the steam on the roving, substantially as described.

95,414.—WESLEY C. BARR and EDGAR J. HUNKINS, Macon City, Mo.; said HUNKINS assignor to said BARR for his right.—*Band-Cutter.*—October 5, 1869; antedated September 22, 1869.

Claim.—1. The combination, in a band-cutting machine, of the carrier D and elliptical cutting-disks G, one or more, arranged across and over the carrier, substantially as described, with the vibrating tines *n n n n′*, arranged to operate as described, and the accessory belts and pulleys for driving the same, all as set forth.

2. The combination, in a band-cutting machine, of the inclined chute E, having sloping sides *c c*, substantially as described, with the carrier D and cutting-disks G, all as set forth.

3. Vibrating tines *n n n n′*, arranged to operate substantially as described, in combination with the carrier D of a band-cutting machine.

4. The combination of the frame A, side-boards C, carrier D, and cutting-disks G, either plane or helical, when operating together, substantially as described.

5. The adjustable bearing-plates *f*, substantially as described, for adjusting the height of the cutting-disks over the carrier D, all as set forth.

6. A band-cutting machine, constructed and operating substantially as shown and described, and for the purpose set forth.

95,415.—BRUNSON B. BEERS and NATHAN COUCH, New Fairfield, Conn.—*Washing-Machine.*—October 5, 1869.

Claim.—The combination and arrangement of the standards B B, rollers C, H, and I, yokes G G, side and cam E, working between the rollers F F, all substantially as described for the purpose set forth.

95,416.—JOHN BERKELEY, Washington, Texas.—*Hay and Cotton Press.*—October 5, 1869.

Claim.—1. The combination of the sweep-shaft N, drum N^1, shaft O, spirally-grooved drum O^2, and follower, when arranged substantially as specified.

2. The arrangement of the spirally-grooved drum O^2, shaft O, and guide R, all substantially as specified.

3. The arrangement of the sweep N, loose drum N^1, button N^2, withdrawing-cord Q, and follower M, all as specified.

95,417.—ALBERT BETTELEY, Boston, Mass.—*Shaft-Coupling for Carriages.*—October 5, 1869.

Claim.—Shaft-connections for vehicles, made with spherical pieces, to be fixed to the shafts, and split screw-threaded bolts, provided with open spherical jaws, made capable of pinching said spherical pieces, by means of nuts, substantially as described.

95,418.—JOHN G. BORDEN, Brewster Station, N. Y.—*Machine for Soldering Tin Cans.*—October 5, 1869.

Claim.—1. In combination with the heating-stove A and the reservoir B, the pivoted soldering-iron C and rod D, all arranged and operating substantially as described.

2. The bent levers H, grooved collar *p*, or its equivalent, the collar *m*, the rod *o*, and the collar *r*, combined, arranged, and operating substantially as described.

3. In combination with the mechanism described,

for holding and revolving the can or other article to be soldered, the soldering-iron C, whereby solder is melted on the inside of the can, substantially as described.

95,419.—Edward Brady, Philadelphia, Pa.—*Purifying Iron and Steel, or other Metal.*—October 5, 1869.

Claim.—Mixing the sulphates of the alkalies or alkaline earths, &c., and calcium, in the form of lime, or other available form, with melted iron, or any other metal or mineral, whereby the impurities of sulphur, silicon, phosphorus, &c., are set free, substantially as above described and set forth.

95,420.—J. H. Britton, Painesville, Ohio.—*Rim-Press and Tire-Heater.*—October 5, 1869.

Claim.—A combined heating and expanding apparatus, consisting of the former A, cap B, campins C, clamps E, slots F and G, furnace H, or its equivalent, and pins I, all constructed as described, and for the purpose set forth.

95,421.—Aaron Brower, Rochester, N. Y., assignor to himself and C. S. Hall, same place.—*Table-Slide.*—October 5, 1869; antedated September 18, 1869.

Claim.—An extension-slide, A, when provided with the groove B and roller C, when constructed with or without a flange, as and for the purpose set forth.

95,422.—Isaac W. Burch, Fayette, Miss.—*Cotton-Thinning Machine.*—October 5, 1869.

Claim.—1. The combination, with the frame A, axle and wheels C, of the vibrating frame H, rotary shaft G, operated as described, and the disk L, either arranged for the application of rotary cutters N′, or vibrating cutters, all substantially as specified.

2. The combination, with the frame E and shaft G, of the block or frame F, posts E′, bar N, arm O, cutter-stock and guiding-block M, all substantially as specified.

3. The combination, with the arm O, disk L, and grooved block M, of the cutter-stock and cutters, substantially as specified.

95,423.—Duncan Campbell, Indian Town, Ill.—*Thrashing-Machine.*—October 5, 1869.

Claim.—1. The hinged or pivoted gatherer E, when provided with a revolving apron, G, and operating independently of the thrashing-cylinder or straw-carrier, substantially as specified.

2. The platform P, in combination with a thrashing-machine, substantially as and for the purposes described.

3. The arms *j* and lever L, when secured to a shaft, and arranged and operating substantially as specified.

4. The fingers I and rod *m*, in combination with the lever H or weight *w*, for depositing the straw in heaps, as described.

95,424.—Frederick Catlin, New York, N. Y.—*Safety-Pin for Securing Clothing.*—October 5, 1869.

Claim.—1. The tubular back A, studs B B′, spring *k*, spring-bolt *h*, slotted tube D, slotted knob E, and pin C, combined and operating substantially as described, for the purposes set forth.

2. In combination with the above, the pin L, substantially as herein described, for the purpose specified.

95,425.—H. Champenois, New York, N. Y.—*Dyers' Vat.*—October 5, 1869.

Claim.—The new article of manufacture, of a dyers' vat, made substantially as herein specified; that is to say, the combination, with the interior surface of the body of a dyers' vat, made of plastic earth, of an incorrodible coating or enamel, substantially as herein specified.

95,426.—S. N. Chapin, New Britain, Conn.—*Attachment for Window-Sash Cords.*—October 5, 1869.

Claim.—The button A of the bars *a a* and *a′*, of malleable metal, arranged so that the bar *a′* may be forced down upon the cord, to retain it, without the use of a knot, substantially as and for the purpose set forth.

95,427.—Daniel S. Chapman, Conneaut, Ohio—*Stump-Extractor.*—October 5, 1869.

Claim.—1. The perpendicular lever A and yoke B, in combination with stump-chain C and guy-chain D, substantially as and for the purpose set forth.

2. The perpendicular lever A, as described, with yoke B, handles E, staples *e e′*, or their equivalent, in combination with stump-chain C, guy-chain D, and anchor-chains F F′, purchase-blocks and tackle *a a′ a″*, luff-blocks and tackle *b b′ b″*, and running-block and tackle *c c′*, substantially as and for the purpose described.

3. The construction and operation of the apparatus as a whole, in the manner and for the purpose herein specified.

95,428.—A. J. Chase, Boston, Mass., assignor to B. F. Horn, same place.—*Refrigerator.*—October 5, 1869.

Claim.—An "air-tight" refrigerator, so called, composed of the two chambers *f g*, separated by the partition *b*, and communicating with each other through the cold-air aperture *h*, and the conduit *e* for the ascent of the warm air, the latter passing up through the non-conducting material which forms the walls of the refrigerator, and the whole being arranged for joint operation, as herein shown and described.

95,429.—Benjamin F. Clement, Saint Louis, Mo., assignor to Charles H. Buck and Wiley S. Wright, same place.—*Cooking-Stove.*—October 5, 1869.

Claim.—The combination of a hollow perforated bridge, E, with the two passages, *a* and *b*, arranged, with respect to the oven G, fire-chamber B, and ash-pit A, substantially as and for the purposes described.

95,430.—J. Clendening, Rockford, Ill.—*Hames-Fastener.*—October 5, 1869.

Claim.—A hames-fastening, composed of the parts A, B, and C, when the parts A and C are secured to the hames, as herein described, and the latch-lever B is hinged to the piece A, and provided with the adjusting-hooks *a′ a″ a‴*, the whole constructed and operating substantially as and for the purpose set forth.

95,431.—Michael Connelly, Baltimore, Md., assignor to himself and Henry W. Rogers, same place.—*Railway-Car Coupling.*—October 5, 1869.

Claim.—1. In combination with the two pawls C D, the lever L, having the double cam-head G G′, the latter being arranged to operate directly upon the pawls, substantially as and for the purpose described.

2. In combination with the lower pawl D, having the spur *s*, the weighted and slotted plate W, pivoted at *w*, when the several parts referred to are constructed to operate in connection with each other, substantially as and for the purposes set forth.

95,432.—David J. Cooper, New Orleans, La.—*Hernia-Truss.*—October 5, 1869.

Claim.—1. A continuous spring of a hernia-truss, having its ends crossed and locked by a fastening, in such manner as to prevent pivotal motion of the joint, and readily admit of the separation of the parts, while at the same time maintaining the pads at equal and uniform distances apart, substantially as before described.

2. The enlarged opening *b* in the overlapping end of the spring A, in combination with the locking-pin *c* and pivoted spring-toothed locking-arm C, substantially as before described.

95,433.—David J. Cooper, New Orleans, La.—*Truss and Supporter.*—October 5, 1869.

Claim.—1. A ventilated supporting and protecting strap arranged beneath the spring of a truss, substantially as before described.

2. Making the connections between the ventilated supporting-band and abdominal supporter, by

means of the compound connections G and H, substantially as before described.

3. The combination of a continuous spring-truss, the ventilated supporting and protecting strap E, the perforated abdominal supporter F, with the compound connecting-straps G H and the inelastic strap K, substantially as before described.

95,434.—William Cottrell, Bordentown, N. J., assignor to himself and Frederick G. Wiese, same place. — *Railway-Car Coupling.* — October 5, 1869

Claim.—As an improvement upon ear-couplings, the recessed draw-head A and spring E, in combination with the spring-slide F, all operating together to drop the pin and retain the link in a horizontal position, in the manner shown and described.

95,435.—George N. Creamer, Trenton, N. J.—*Lathing-Machine.*—October 5, 1869.

Claim.—1. The combination, with the frame, of the clamping-dogs H H, operating as set forth.

2. The combination of the parallel sliding bars with pins to clamp the edges of the lath, as set forth.

3. The combination, with the frame, of the sliding bars A B, levers C, and link-rod D, and its spring, the combination being and operating substantially as set forth.

4. The combination of the laterally-adjustable frame and adjustable bridge with the grasping-hooks and their lever mounted on the bridge, as set forth.

5. An adjustable clamping and holding frame for applying laths to the joists or studding of buildings, substantially as described.

6. The combination, with the clamping and holding-frame, of the guides for adjusting the parallel bars, substantially as and for the purpose described.

95,436.—L. H. Critchfield, Shreeve, Ohio.—*Bee-Hive.*—October 5, 1869.

Claim.—1. Two or more hives, A A, united by means of hinges and hooks, and provided with removable partitions B′ B′, and sash K, substantially as and for the purpose set forth.

2. The combination of the inclined bottoms D D, with two or more hinged hives, A A, provided with removable partitions and sashes, substantially as and for the purpose set forth.

95,437.—H. N. Dalton, Pacheco, Cal.—*Spring for Gang-Plows.*—October 5, 1869.

Claim. — The combination of a coiled or other spring with the axle and frame of a gang-plow, substantially as herein shown and described, and for the purpose set forth.

95,438. — Asa B. Davis, Pleasantville, Pa. — *Wrench.*—October 5, 1869.

Claim.—The lower jaw B, limb G, hinge E, and spring F, in combination with the hinged jaw A and the handle K, constructed substantially as above set forth.

95,439. — Winfield Denton, Iowa City, Iowa.—*Hay-Derrick.*—October 5, 1869.

Claim.—1. In combination with the base A and standard B, the beam E, rod G, pulleys J and K, and rope M, whereby, by means of the hoisting-rope H and rod G, the derrick is made self-supporting and self-adjusting, substantially as and for the purposes described.

2. In combination with the hay-derrick, constructed as described, the hoisting-rope, the guide-rope M, and the arrangement of the self-adjusting pulleys J and K, substantially as described.

95,440. — Joseph Diffendal and Samuel Hughes, Westminster, Md.—*Horse-Power.*—October 5, 1869.

Claim.—1. The arrangement, in the horse-power frame herein described, of the wheels H C, and the short hollow shaft *a* and solid shaft B, with relation to each other, as shown, whereby they are adapted to rotate together in the same direction, for the purpose specified.

2. The described arrangement of the wheels C H, hub G, pinions E E, and spur-wheels F F, whereby the journals of the latter have an even bearing, as and for the purpose specified.

3. In combination with the frame A of the construction shown, the short tubular shaft *a*, solid shaft B, large spur-wheel C, large bevel-gear wheel B and its hub G, the large spur-wheels F F, and pinions E E, all constructed, arranged, and operating together, as herein described.

95,441. — Joseph Dill and Edward Rice, Grand Rapids, Mich. — *Method of Forming Moldings.*—October 5, 1869.

Claim.—As a new article of manufacture, straight moldings for picture and other frames, &c., formed of two or more strips, in the manner and for the purposes hereinbefore set forth.

95,442.—David Dryburgh, Philadelphia, Pa.—*Band for Booms and Gaffs.*—October 5, 1869; antedated September 20, 1869.

Claim.—The combination and arrangement of the parts A and B, saddle D, provided with lugs *l* and *l′*, keys *k* and *k′*, and clew C, so as to operate substantially in the manner and for the purpose set forth.

95,443.—P. J. Dwyer, Elizabethport, N. J.—*Railroad-Spike.*—October 5, 1869.

Claim.—The railroad-spike, constructed as described with the extended head A B C, having the ledges G, and the short, inflexible stud E, formed upon the underside, in such a manner as to enter the wood at some distance from the shank D, whereby two separate openings are made in the wood, as herein described for the purpose specified.

95,444. — James William Ebert and Eli C. McCloy, Zanesville, Ohio.—*Boiler-Feeder Alarm-Device.*—October 5, 1869.

Claim.—1. The combination of the balanced valves C C, water-supply pipe *b f*, floats, and float-lever, substantially as specified.

2. The combination of the balanced valves C C, water-supply pipe *b f*, valves C′ C′, steam-pipe and floats, and float-lever, substantially as specified.

3. The arrangement of the link N, screw-rod M, screwed extension E′ of the lower valve C, and rod H′, all substantially as specified.

4. The arrangement of the extension M′ or the steam-chest L′, cap K′, and rod H′, all substantially as specified.

95,445.—Albert Eckstein, Vienna, Austria, assignor to "Zdenks Ritter Von Wessely," same place.—*Apparatus for Evaporating and Decomposing Liquids.*—October 5, 1869.

Claim.—An apparatus for evaporating and concentrating liquids of the means described, substantially as and for the purpose herein shown.

95,446.—Lloyd W. Emmart and Edward D. Griffith, Washington City, D. C.—*Turn-Table.*—October 5, 1869.

Claim.—1. The combination, as described, of the hinged locking-lever, and its hinged support, both revolving with the table, for the purpose set forth.

2. The combination, substantially as described, of a locking-lever revolving with the turn-table, a hinged support attached to the lever, a fixed tripping-block, and a locking-catch, whereby the table is automatically locked by its own revolution, and securely held from moving in either direction when the rails are in line with the track.

95,447.—Charles J. Emmett, New York, N. Y.—*Baling-Press.*—October 5, 1869.

Claim.—1. The end screws D^1 D^2, and the overhanging parts B^1 B^2 on the follower B, arranged to operate relatively to each other and the casing or framing A, and to the ratchets d^1 d^2 and operating-means N^1 N^2, substantially in the manner and for the purposes herein set forth.

2. The long lever M, connections m^1 m^2, sub-levers N^1 N^2, changeable pawls n^1 n^2, and ratchets d^1 d^2, arranged as represented, in combination with the screws D^1 D^2, and the movable follower B, having the overhanging parts B^1 B^2, and press-framing A.

3. The means represented for moving the follower and its connections out of the way; that is to say

the screws D^1 D^2, to turn on their lower ends and assume an inclined position, substantially as herein set forth and described.

95,448.—WILLIAM EPPELSHEIMER, San Francisco, Cal., assignor to himself and EDWARD A. TRAPP, same place.—*Hoisting-Machine.*—October 5, 1869.

Claim.—The system of gearing, as shown, in combination with the brakes and brake-wheels, and the shafts and levers connected therewith, for the purpose of operating a hoisting-reel.

95,449.—CHARLES L. ERICZON, Salt Lake, Utah Territory.—*Snow-Plow.*—October 5, 1869.

Claim.—The snow-plow above described, consisting substantially of the inclined plane A^4, plow B, dumping-platform a^3, with their attachments, vertical cutters b^2, wings b^3, connecting-rod C, cord *c*, and pulleys c^2, shaft D, and pulleys c^1 c^3, arranged and operated substantially as described, and for the purpose set forth.

95,450.—MORGAN Z. EVANS, Ormsby, Pa.—*Fixing Puddling and Boiling Furnaces.* — October 5, 1869; antedated October 1, 1869.

Claim.—In combination with a puddling or boiling furnace, the curved plates A A, substantially as and for the purposes herein shown and described.

95,451.—NEWTON FARLOW and JOHN A. HAM, Sullivan, Ill.—*Hay-Raker and Loader.*—October 5, 1869.

Claim. — 1. The combination of the gathering-rake D, guards O, revolving rakes P, and discharger S, when all arranged substantially as specified.

2. The arrangement of the rake D, runners E, rollers H, arm N, connecting-rod M, lever K, and chains G, all substantially as specified.

3. The discharging-teeth S, hinged to the platform, and provided with the yielding rollers U, and combined with the finger P, substantially as specified.

4. The gravitating-dogs Q, pivoted to the wheels, and arranged for action upon the studs R in the axle, substantially as specified.

95,452. — RUBIN FINK and REUBEN DAVELER, Lancaster, Pa.—*Device for Supporting the Shafts of Vehicles.*—October 5, 1869.

Claim.—The combination and arrangement of the elbowed lever L E, fulcra A B, springs S, and rod *l*, when attached to the shafts of vehicles, substantially in the manner and for the purpose specified.

95,453.—SAMUEL FISHER, Hightstown, N. J.—*Wheeled Cultivator and Plow.*—October 5, 1869.

Claim.—In combination with a main axle, a pair of carrying-wheels, and a main frame that can be widened or narrowed, and adjustable beams and plows thereon, the hub, pulley, lever, and chain, and their appliances, for raising or lowering, or holding the plows or cultivators on the main frame or axle, substantially as described.

95,454.—CHARLES FORSCHNER, New York, N. Y.—*Sausage-Stuffer.*—October 5, 1869.

Claim.—The arrangement and combination of the frame D with the cylinder A, by means of its bolt *a* and catch *w*, in combination with the projection *m*, on the cylinder, substantially as and for the purpose hereinbefore set forth.

95,455.—HENRY FOULKES, Utica, N. Y.—*Toy-Top.*—October 5, 1869.

Claim.—A toy-top, with a hook, A″, or pin F F, on its upper surface, also the ring B″, or the loops G G on the operating-string, said hook and ring or loops and pin to be so arranged that when the top is set whirling, and placed on the floor, said ring or loops will be thrown off by their centrifugal force, and thus leave the top to revolve freely, the whole to be constructed and operated substantially as described.

95,456. — JIM B. FULLER, Norwich, Conn. — *Bearing for Spindles in Spinning-Machines.*—October 5, 1869; antedated September 16, 1869.

Claim.—1. The combination, with the tube *b* and step-bearing *f*, serving as an upper and lower bearing for the spindle, of the case *c*, when constructed and arranged substantially as and for the purpose specified.

2. In combination with the above, the whirr *d*, having its lower side made to conform to the top of the case, as and for the purpose set forth.

95,457.—JOSEPH W. GARDNER, Shelburne Falls, Mass., assignor to "LAMSON AND GOODNOW MANUFACTURING COMPANY," same place. — *Attaching Handles to Cutlery.*—October 5, 1869.

Claim.—Holding or uniting handles to cutlery, by extending one of the bolsters to and around the rear of said handle, as and for the purposes herein described and represented.

95,458.—DAVID L. GARVER, Hart Township Mich.—*Harrow.*—October 5, 1869.

Claim.—The circular-shaped harrow-tooth *d*, constructed and used in the manner and for the purpose herein specified.

95,459.—WILLIAM GIBSON, Cambridge, Mass.—*Manufacture of Coal-Gas.*—October 5, 1869.

Claim.—A gas-apparatus, in which dip-pipes are dispensed with, and the retorts operated, without pressure, by the introduction of one or more valves, or cut-offs, at any convenient point between the gas-producing material in the retort and the liquid contents of the hydraulic main, substantially in the manner and for the purposes set forth.

95,460.—EDWARD L. GILMAN, Somerville, Mass., assignor to himself and F. HOUGHTON, same place.—*Lamp-Burner.*—October 5, 1869.

Claim.—The combination of the deflector D, having openings *d′*, the bonnets E, and perforated plate C, with the wick-tube A and opening *b′* in the base B, all constructed and arranged as herein shown and described, for the purpose specified.

95,461. — BARTHOLOMEW GOMMENGINGER and CHARLES W. TROTTER, Rochester, N. Y.—*Hot-Air Furnace.*—October 5, 1869.

Claim.—The double bottom *a a*, space or flue *d*, communicating with perforated flue *c c c* by two perpendicular air-chambers *f f*, in the manner and for the purpose herein specified and set forth.

95,462.—JOHN GOOD, Brooklyn, E. D., N. Y.—*Machine for Drawing Flax, &c.*—October 5, 1869.

Claim.—The combination of the two or more endless belts of combing or heckling pins, arranged one before the other, and running at different velocities with the mechanism, substantially as herein described, for presenting their operating-points in or nearly in a plane, substantially as herein specified.

95,463.—E. A. GOODES, Philadelphia, Pa., assignor to the PHILADELPHIA PATENT AND NOVELTY COMPANY, same place. — *Knife-Guard.*—October 5, 1869.

Claim.—The wire guard A C D E, constructed as described, whereby it may be adjusted laterally from the knife B, as herein shown, for the purpose specified.

95,464.—S. A. GOODWIN, Buffalo, N. Y.—*Wash-Boiler.*—October 5, 1869.

Claim.—A corrugated false bottom, in combination with a wash-boiler, substantially as and for the purposes set forth.

95,465. — CHARLES GRAEB, Frankfort on the Main, and CHARLES LIEBERMANN, Berlin, Prussia. —*Process of Preparing Alizarine.*—October 5, 1869.

Claim.—The within-described process for the production of alizarine, by first preparing bibromanthrakinon or bichloranthrakinon, and then converting these substances into alizarine, substantially as above set forth.

95,466.—SIMON P. GRAHAM, Columbus, Ohio.—*Carriage-Seat.*—October 5, 1869.

Claim.—1. The carriage-seat herein described, as an article of manufacture, composed of the metal back and sides F, bottom E, handle and angle-iron

G, flange H, and fillet I, all constructed in the manner substantially as described.

2. The fillet I, in combination with the rim H of the seat-back, substantially as and for the purpose specified.

3. The combined handle and double-corner iron G, constructed with or without a groove, *e*, as and for the purpose set forth.

95,467.—P. S. GRAVES and P. B. PARCELL, Ashmore, Ill.—*Harrow.*—October 5, 1869.

Claim.—The combination of a triangular frame, A, and two converging continuous rods, D, with a series of pivoted shifting-lever teeth, arranged at any angle thereto, as shown and described.

95,468.—JOHN TYNDALE GREENFIELD, Dover, England.—*Cleaning-Brush for Ordnance.*—October 5, 1869.

Claim.—A cylindrical brush for cleaning ordnance-bores, in which the bristles are set helically into a central support, with a uniform inclination, not only slightly rearward, but also inclined to the axis of the central support, substantially as herein set forth.

95,469.—LOUIS H. GUNNERMAN, Pittsburgh, Pa., assignor to himself and WILLIAM G. HOOVER, same place.—*Ruffling Attachment for Sewing-Machines.*—October 5, 1869.

Claim.—The two plates A B, the former having slots *b b*, *e e*, *d*, and needle-notches *f f* therein, and the latter upwardly-projecting lugs *a a c* thereon, when the said plates are constructed and arranged, with respect to each other, and operated as and for the purpose specified.

95,470.—M. E. HALL, Spring, Pa.—*Shoe-Knife.*—October 5, 1869.

Claim.—The triangular slot H in head B, in combination with knife E and arc C, substantially as and for the purpose described.

95,471.—DAVID HARRISON, Fayette, Miss.—*Railway.*—October 5, 1869.

Claim.—1. The combination of the raised rails I, grooved longitudinally upon their lower sides, with the ordinary track of the railroad, substantially as herein shown and described, and for the purpose set forth.

2. The wheels F, attached to the engine or cars, when used in connection with the rails I, substantially as herein shown, and for the purposes set forth.

3. The combination of the toothed rails J, with the rails I, grooved longitudinally upon their lower sides, and with the ordinary track B of a railroad, substantially as herein shown and described, and for the purpose set forth.

4. The toothed wheels K, attached to the engine or cars, when used in connection with the toothed rails J, grooved rails I, wheels F, and the ordinary track of the railroad, substantially as herein shown and described, and for the purpose set forth.

5. The wires L and levers M, arranged and operating in connection with the wheels F, grooved rails I, and the ordinary track of the railroad, substantially as herein described and set forth.

95,472.—DANIEL FRANKLIN HAWKES, Timbuctoo, Cal.—*Apparatus for Separating Gold from Sand.*—October 5, 1869.

Claim.—1. The tank B, with the adjustable sliding gate C, having its lower edge rounded or beveled, and standing beneath the surface of the mercury, the whole constructed and arranged substantially as herein described.

2. In combination with the quicksilver-tank B, and the beveled adjustable gate C, the curved adjustable discharge-pipe F, for regulating and maintaining the height of the mercury, substantially as described.

95,473.—THEODORE W. HEINEMANN, New York, N. Y.—*Process of Seasoning Wood.*—October 5, 1869.

Claim.—Extracting the sap from the green timber, and then submitting it to the usual and natural drying-process, as described.

95,474.—THEO. W. HEINEMANN, New York, N. Y.—*Process and Apparatus for Preserving Wood.*—October 5, 1869.

Claim.—1. Exhausting the sap from the wood within a suitable tank, and then warming the wood and opening the pores by the application of steam and steam-heat, substantially as described.

2. Then exhausting the steam, (while the heat is maintained,) and supplying the melted rosin from an auxiliary chamber to the sap-exhausted and heated wood, substantially as described.

3. As new, the employment, in the apparatus, in connection with a suitable steam-supplier, of a series of jacketed tanks or chambers, so connected and provided with the means for exhausting each, that the sap-exhausting, wood-heating, rosin-melting, and the saturating operations, may be successively carried on, in the manner substantially as hereinbefore explained.

95,475.—ALEXANDER W. HENDRICK, Batavia Ill.—*Press for Making Coffin-Tops.*—October 5, 1869.

Claim.—The within-described press, for making coffin-lids, consisting of the frame A, the horizontal pieces E, the T-shaped bolts E′, the vise-jaws F, the screws G, and the former-boards H and K, all constructed and arranged substantially as shown, and for the purpose specified.

95,476.—EDMUND H. HEWINS, Boston, Mass.—*Valve-Device for Steam and other Enginery.*—October 5, 1869.

Claim.—1. The two valves *j* and *g*, with their respective openings, ingress and egress passages pertaining thereto, with the co-ordinate elements thereof, constructed, combined, and arranged substantially as above made known.

2. The combination and arrangement of the two valves *j* and *g*, when combined with suitable ports of entry and discharge for steam or other fluid, and with a proper actuating-mechanism, substantially as explained.

3. The duplex arrangement of the valves *j* and *g*, and the ports *l l′*, and passages *d d′*, and ports *h h′*.

4. The valves *j* and *g*, as suspended from a point above the apex of the former, as represented, by which means one or both are retained upon the port closed by them until the roller *r* has passed over and beyond such apex, when the valve is suddenly shifted, the quantity of fluid which escapes in the interim being very slight, and of practically like amount under all conditions.

5. In combination with the above-described arrangement of valves and ports, a spring for effecting the reciprocations of the two valves *j* and *g*, for the purpose explained.

95,477.—WILLIAM HINMAN, Elkhart, Ind.—*Milk and Provision Safe.*—October 5, 1869.

Claim.—The sliding doors A, provided with the guard-arms E, in combination with the standard, having elastic packing F, all constructed and arranged to operate as herein described, for the purpose specified.

95,478.—JOHN C. HINTZ, Cincinnati, Ohio.—*Cigar-Machine.*—October 5, 1869.

Claim.—1. The combination of the forming-roller O, O′, O″, with band N and the platform K, all constructed and operating as shown and described, for the purpose set forth.

2. Operating the feeding-belt *b″*, by means of the friction-lever B‴, hinged to the swinging arm *b*, in combination with the pulley *b′*, spring *b⁗*, and *b‴*, all arranged as shown and described.

3. Alternately loosening and tightening the band N, by the combined operation of the crank-arm *a*, roller *a‴*, spring *a″*, and pin *x*, as and for the purposes specified.

4. Reciprocating the platform K, by means of the cam C, lever J′, arms J″ and J‴, and stop *j*, all combined as and for the purposes set forth.

5. The combination of the presser *i* i with the knife R, when operated as set forth, for the purposes described.

6. The combination of the gate *i* iii, carrying the crib Q′ with the slide *i* iiii, carrying the cover *i i′*, when operated as and for the purposes set forth.

7. The arrangement of the several gates or frames carrying the presser-bar, knife, crib, and its cover, with their operating-cams, levers, and springs, as shown, for the purposes described.

8. The crib Q′, operating by means of the pinion Q and the rack Q″, as and for the purposes set forth.

9. The crib Q′, in combination with the detached cover *i i′*, constructed as described, for the purposes stated.

10. Operating the hinged cover *i i′*, by means of the slide *i* iii, cam-shaped lever *k*, pin *k″*, and spring *k′*, as and for the purposes described.

11. The sliding bed H L L′, constructed as shown, in combination with the eam C, platform K, band N, crib Q′, and forming-roller O, when operated as described, for the purposes specified.

12. The feeding-device P, when constructed, arranged, and operated as shown and described, for the purpose set forth.

13. The apparatus for cutting wrappers, consisting, essentially, of frame Ax, knife Bx, block Ex, roller Fx, bar Dx, and spring Cx, all combined, arranged, and operating as shown and described.

14. The cigar-machine above described, as a whole, when its parts are all combined, arranged, and operated as shown and described.

95,479.—George Jackson, Albany, N. Y.—*Tile-Machine.*—October 5, 1869.

Claim.—The laterally-sliding shaft K and driving-pinion *e*, in combination with shaft G, pinion *c*, spur-gear *b*, shaft F, pinion *a*, and rack E, all arranged and operating as set forth, to reciprocate the piston in the manner described.

95,480.—Clark Jillson, Worcester, Mass.—*Machine for Cutting Tapers.*—October 5, 1869.

Claim.—1. In a machine for turning tapers, the employment, substantially as herein shown and described, of a divided spindle, the front or removable portion of which constitutes not only the pattern after which the blank is to be shaped, but also the support in which said blank is held during the turning-operation, as set forth.

2. The combination of the longitudinally-moving divided pattern-spindle and the rest or eye 7, upon the prolongation of the axis of said spindle, with the arms N and Q, capable of vibrating upon a common fulcrum, and carrying the cutting-tool M and friction-roll G, for operation, substantially as herein shown and described.

3. The combination of mechanism, constructed as described, for moving the spindle longitudinally with the devices for holding the cutting-tool and directing its motions, substantially as herein described, as shown in the accompanying drawings.

95,481.—William Johannes Kesselmeyer and Charles Augustus Kesselmeyer, Manchester, England, and Emil Hermann Nacke, Als-Schoenfeld, Saxony.—*Governor for Steam and other Enginery.*—October 5, 1869.

Claim.—The combination, with a governor, of the vessel F, which communicates with a reservoir, G, so as to be emptied or filled, as it rises and falls, substantially as herein shown and described.

95,482.—Albert W. Johnson, New York, N. Y.—*Whip-Holder.*—October 5, 1869.

Claim.—1. The web *k*, having the curved slots *o*, one on each side, when used, arranged, constructed, and applied as described, for the purpose set forth.

2. The combination of the slotted web *k*, having the curved slots *o o*, one on each side, with the arms *m m*, the whole being arranged, constructed, and operating as described, for the purpose set forth.

3. The band-fastening *b*, whose rivet, or its equivalent, pierces the leather of the dash, when constructed, arranged, and applied as set forth.

4. The combination of the band-fastening *b*, constructed and arranged as set forth in the preceding clause, with the barrel *f*, the whole being constructed as set forth, for the purpose set forth.

95,483.—William J. Johnson, Newton, and George Tainter, Watertown, Mass.—*Boring-Tool.*—October 5, 1869.

Claim.—1. The boring-tool, constructed and arranged, as to its several parts, substantially as described.

2. The screw-tube, constructed substantially as set forth, in combination with the screw-nut and case, when constructed and arranged substantially as shown and described.

3. The screw-tube, with its screw-nut, spiral spring, and borer or bit, severally constructed and arranged to operate substantially as shown and described.

4. The screw-tube, nut, spiral spring, and guide-rod, severally constructed and arranged to operate in combination, substantially as shown, and for the purposes described.

95,484.—Richard Jones, Mount Holly, N. J.—*Manufacture of White Oxide of Zinc.*—October 5, 1869.

Claim.—Introducing atmospheric air into the gaseous products of the furnaces after complete oxidation has taken place, and before such products enter the collecting-chambers, for the purpose of cooling said products, substantially as set forth.

95,485.—Charles H. Keniston, Somerville, and J. H. Sawyer, Boston, assignors to John T. Prince, Boston, Mass.—*Hulling-Machine.*—October 5, 1869.

Claim.—The adjustably-journaled serrated wheel *c*, in combination with the yielding and adjustable segmental stripper-plates *f*, provided with metal teeth, substantially as described, and arranged together and operated as and for the purpose herein set forth.

95,486.—Alden Kilby, Boston, Mass.—*Steam-Engine.*—October 5, 1864.

Claim.—1. A duplicated piston, constructed substantially as above described, thereby securing double the power for the same-sized cylinder.

2. The manner of operating the valve, by means of the pin F, through the piston-shaft or journal H.

3. The device L, in Fig. 4, for reversing the valve.

95,487.—Henry Killam, Mendon, Mich.—*Plow.*—October 5, 1869.

Claim.—1. The combination of the wing L, the point I, and the flange D, when all are constructed and arranged as and for the purposes aforesaid.

2. The combination of the beam A, mold-board B, landside C, handle E, washer G, point I, and wing L, when constructed, arranged, and operating substantially as and for the purposes described.

95,488.—John W. Kingsbury, New Bedford, Mass.—*Carriage-Axle Connection.*—October 5, 1869.

Claim.—The arrangement of the helical spring D and its cap-nut E with the king-bolt C, its cheek-nut F, the axle A, and the spring-block B, as specified.

95,489.—Martin Kintzback, Philadelphia, Pa.—*Doll.*—October 5, 1869.

Claim.—The "fastening the leather arm to the porcelain hand, by means substantially as shown and described."

95,490.—Robert M. Lafferty, Three Rivers, Mich., assignor to himself and J. E. & J. P. Prutzman, same place.—*Sawing-Machine.*—October 5, 1869.

Claim.—1. The method herein described of transferring motion from one part of a machine to another part of the same machine, by the use of a loose pulley upon an independent shaft.

2. The arrangement of the saws G, and their arbors F, upon the drum B, rotating upon fixed shaft *b*, in connection with pulley H upon an independent shaft, when constructed and operating as and for the purposes above set forth.

3. The arrangement of the pulley H upon the independent shaft, provided with cutter-head *g*, the pulley I, and the belt T, in connection with the saw-shafts F, when constructed and operating as and for the purposes above set forth.

4. The arrangement of the thimble C, the cog-wheel L, the worm-screw *e*, the shaft D, and the crank E, in connection with the belt T, when constructed as described, and operating to tighten said belt T, as above set forth.

5. The combination and arrangement of the parts A, *a*, B, *b*, C, *c*, D, *d*, E, *e*, F, *f*, G, *g*, H, *h*, I, *i*, J, *j*, K, *k*, L, *l*, M, *m*, N, *n*, O, *o*, P, *p*, R, *r*, S, *s*, and T, as and for the purposes herein set forth, shown, and described.

95,491.—Allen Lapham, Paterson, N. J.—*Chair.*—October 5, 1864.

Claim.—An improved chair, the parts of the frame of which are connected to each other by tenons and mortises, dovetailed upon one side, and locked together by wedges driven in upon the other or straight side of said tenon and mortise, substantially as herein shown and described, and for the purpose set forth.

95,492.—L. F. Leger, New York, N. Y.—*Chocolate-Paste.*—October 5, 1869.

Claim.—The chocolate-paste, made substantially in the manner and of the ingredients herein specified.

95,493.—J. C. Leonard, S. B. Holcomb, and W. B. Wright, Clinton, Mo.—*Hay-Raker and Loader.*—October 5, 1869.

Claim.—The combination of the hinged rake, elevator, spring-dischargers, and guide C, when arranged upon a truck, substantially as specified.

95,494.—William H. Lewis, Boston, Mass., assignor to himself and John B. Folger, same place.—*Marine Paint.*—October 5, 1869.

Claim.—1. The employment of a solution of caoutchoue or gutta-percha, in tar-naphtha, or other naphtha containing benzole and its cogeners, as a basis in the production of a marine paint.

2. As a new manufacture, or composition of matter, an improved marine paint, composed of a solution of caoutchoue or gutta-percha, in tar-naphtha, or other naphtha containing benzole and its cogeners, in combination with oxide of copper, or other poisonous mineral substance, which is slowly soluble in water, containing alkaline chlorides in solution.

95,495.—William J. Linton, Detroit, Mich.—*Combined Try-Square, Caliper, &c.*—October 5, 1869; antedated September 20, 1869.

Claim.—The combination of a try-square, rule, caliper, and instrument for determining the angles of six-sided work, into one tool, constructed as herein substantially shown and described.

95,496.—Louis Joseph Frederic Marguéritte, Paris, France.—*Manufacture and Refining of Sugar.*—October 5, 1869; patented in France, October 16, 1867.

Claim.—1. The direct dissolution (without the aid of any acid) of the molasses by the aid of wood-spirit, together with the washing and purification of raw sugars by the same agent.

2. The treatment of any saccharine matter (a mass concreted by coction, of either sugar-cane or beet-root, as resulting from Fryer's concretor,) by the aid of non-acidulated wood-spirit, for the purpose of obtaining a supersaturated sugar-solution, and determining the crystallization of the latter by the addition of sugar-crystals, if the undissolved sugar will not suffice for effecting such crystallization.

3. Adding sulphuric acid, either previously or not, to the wood-spirit, for the purpose of decomposing the molasses, properly so called, in the manufacture and refining of sugar, for the purpose of separating the sugar and allowing it to crystallize.

4. The treatment of dried beet or any concentrated sirups by means of wood-spirit, either acidulated or not, for the purpose of extracting the sugar contained in a free state, as well as that from molasses, as also the employment of sugar for effecting the desupersaturation of the liquor, as above described.

5. The following combination of operations: First. The washing of raw and impure sugars, by means of wood-spirit, (methyl.) Second. Adding sulphuric acid to the solution of molasses resulting from the above treatment, for the purpose of afterwards extracting the sugar by crystallization by the addition of sugar-crystals or powder.

95,497.—James R. Mathews, New London, Conn.—*Car-Spring.*—October 5, 1869.

Claim.—A spring, formed of radially-corrugated plates B B Bx, having their top and bottom surfaces of contact parallel to each other, and arranged alternately with plain, flat plates A A Ax, substantially as herein described.

95,498.—Hiram S. Maxim and James Radley, New York, N. Y.—*Locomotive Head-Light.*—October 5, 1869.

Claim.—1. The combination of the elevated tank with the steam gas-generator and the burner of the lamp, substantially as described.

2. The arrangement of the perforated metallic conducting-plate F, between the generating-chamber G and the superheating-chamber Q, substantially as described.

3. The lining R R, which incases the stem of the valve D, in the manner and for the purpose substantially as described.

4. Inclosing the regulator-chamber or case C and the carbureter B within the pipe S S, so as to heat the atmospheric air in the passage thus formed, which goes to the carbureter B, and to support the combustion of the gas at the burner A, substantially as described.

5. The tangential arrangement of the steam and exhaust pipes with the steam-jacket, by which a rotary motion of the steam is produced within the steam-jacket, around the superheating-chamber and the conducting-plate of the generator, substantially as described.

6. The arrangement of the return-pipe *o* with the tank and pipe H, below the cock *n*, in the manner and for the purpose substantially as described.

7. The combination of the steam-valve N and spring *l*, with the eduction-pipe L and waste-pipe O, in the manner and for the purpose substantially as described.

8. The combination of the sliding tube *f* and its spiral spring and sliding rod *e*, with the diaphragm *g g*, in the manner and for the purpose substantially as described.

95,499.—Thomas L. Melone, Mount Gilead, Ohio.—*Sewing-Machine.*—October 5, 1869.

Claim.—1. The wheel E′, arranged about the needle-bar and supporting the feed-foot, when provided with pins *y*, for the purpose of operating automatically the pawl *w*, and reversing the direction of rotation of that wheel, as specified.

2. The combination of the friction-cap D′ with the wheel E′, rod B², and slotted arm A′, on shaft *f*, all constructed and operating as and for the purpose set forth.

3. The mechanism described, for effecting the feed, by having the cloth at all times between a rough and a smooth surface, said surfaces being in contact alternately with the upper and lower surface of the cloth, and operating alternately to free the cloth while being fed, and to fix it while the stitch is being made, and the feed-foot retracted, preparatory to a renewed impulse, in the manner specified.

4. The vertically-reciprocating, smooth, circular tablet K, operated as described, in combination with the circle of stationary points *i*, and the reciprocating feed-foot *t*, arranged and operating as set forth.

5. The combination of one or more braid-spools with the revolving feed-mechanism, for the purpose of maintaining the proper relation between the braid-supply and the braiders, during the revolution of the feed, as specified.

6. The combination of the cam G′, lever H′, collar I′, and rod *n*, in the manner described, for the purpose of operating the braiders *o p*, as set forth.

95,500.—F. C. Mende and T. F. Mende, Philadelphia, Pa.—*Manufacturing German Hand-Cheese.*—October 5, 1869.

Claim.—1. The within-described process of manufacturing what we term "German hand-cheese," by subjecting the milk and curd to the various successive manipulations above set forth.

2. The product obtained by subjecting milk to the various successive manipulations herein specified, as a new article of manufacture.

95,501.—Bernard H. Menke, Cincinnati, Ohio.—*Cooking-Stove.*—October 5, 1869.

Claim.—1. A stove-plate with a crack or opening, substantially as described, and for the purpose set forth.

2. The combination of the collar-piece C with the plate A A, for the purpose set forth.

95,502.—Suspended.

95,503.—George Murray, Jr., Cambridgeport, Mass.—*Water-Gauge.*—October 5, 1869.

Claim.—1. The glass tube D, constructed as described, in combination with the pipe E, substantially as and for the purpose specified.

2. The socket A, provided with the stuffing-box and gland, in combination with the tube D and pipes E and F, substantially as shown and for the purpose described.

3. The within-described water-gauge, consisting of the socket A, provided with the stuffing-box and gland, the glass tube D, and the pipes E and F, all constructed and arranged substantially as and for the purpose set forth.

95,504.—J. O. L. Murray and D. A. Mullane, New Orleans, La.—*Device for Holding Together the Different Parts of Bureaus and other Articles of Furniture.*—October 5, 1869.

Claim.—The fastening-device, herein described, consisting of the elbow-bracket A, the pin B, and the key C, when these parts are constructed and conjointly operate, substantially as and for the purpose hereinbefore set forth.

95,505.—A. S. Perrigo, Sandwich, Ill.—*Cultivator.*—October 5, 1869.

Claim.—1. The two-part clevises Q, pivoted to the beams A′, and to the clips M, and provided with slotted ends T, for adjusting the depth which the shovels are to run in the ground, as set forth.

2. The combination of the clevises Q, clips M, and standards K, as described.

3. The combination of the clevises Q, standards K, clips M, and rods B′ E, as and for the purpose set forth.

4. The combination of the rods *d c*, standards V, shovels U, and cam *e*, for holding the shovels the required distance apart, as specified.

5. The two-part clamp Y Y, in combination with the standard V, bolt and nut Z X, angular bar O, and shovel U, for holding and adjusting said shovel, as described.

95,506.—N. Petré, New York, N. Y.—*Combined Latch and Lock.*—October 5, 1869.

Claim.—The combination of the bolt A, its attachment C, and arm or arms E, with the hub D and eccentric F, when so arranged as that the bolt may have motion longitudinally, independent of the part C or arm E, one or both, to prevent the cramping of said bolt in the frame, substantially as herein described and represented.

95,507.—N. Petré, New York, N. Y.—*Combined Latch and Lock.*—October 5, 1869.

Claim.—1. The combination of the bolt and knob-levers, with a raising-mechanism, operated by a key from the exterior of the lock, so that the raising of the bolt-lever shall disconnect it from the knob-lever, and move the latter out of the reach of the tappets on the hub that the knob-shank passes through, substantially as and for the purpose described.

2. The combination of the stop E with the open or slotted bolt-lever, and the cam-opening F leading therefrom, so that the raising up of the bolt-lever shall project the bolt further from the lock-case than it is when simply acting as a latch, substantially as described.

95,508.—N. Petré, New York, N. Y.—*Latch.*—October 5, 1869.

Claim.—1. In combination with a bolt, yoke, and eccentric, when so arranged as that the bolt moves directly toward and from the eccentric, and operated from the exterior by a knob or key, and controlled by a spring, a recess, *i*, in the front of said bolt, that allows it to be forced into the lock, as in the act of shutting the door to pass over, without moving the eccentric, as and for the purpose substantially as described.

2. In combination with the spindle H and its recess *c*, the key-barrel L and its spring *b*, so that the insertion of the key shall form a connection between said spindle and barrel, and cause them to move together by the turning of the key, to move the bolt, substantially as described.

95,509.—N. Petré, New York, N. Y.—*Lock.*—October 5, 1869.

Claim.—The combination of the yoked bolt and eccentric, with its barrel, containing the movable and immovable parts *h h* and *f e*, through which the key must pass to press down the locking-pins, and turn said eccentric, when arranged and operating substantially as described.

95,510.—Hugh M. Phinney, Cambridge, Mass.—*Hot-Air Register.*—October 5, 1869.

Claim.—In combination with a hot-air register, the wheel or lever *o*, when applied to the outer side of the plate *a*, and in a plane parallel therewith, to operate the valve-actuating slide, substantially as described.

95,511.—Anthony Pirz and Manuel Pirz, East New York, N. Y.—*Window-Blind.*—October 5, 1869.

Claim.—1. The internal shutter or panel C, mounted within the main shutter A, and adapted to swing outward therefrom, as specified.

2. The triple frames or parts A, B, and C, when the part A forms the main frame or body of the shutter, the part B forms a sub-frame, swinging on a vertical axis, outward, and covering only a portion of the surface of the main frame, and the part C forms an internal shutter or panel for the second frame B, all the parts being combined and arranged for joint operation, as and for the purposes herein set forth.

95,512.—James W. Prendergast, New York, N. Y.—*Air-Pressure Water-Reservoir.*—October 5, 1869.

Claim.—The cylinder A, gauge-tube B, and ball-valve *e*, together with admission and discharge pipes C D, combined and arranged substantially as and for the purpose herein shown and described.

95,513.—W. F. Quinby, Wilmington, Del.—*Flying-Machine.*—October 5, 1869.

Claim.—1. The side wings A, provided with the upper system of stay-cords, and supported from the shoulder and the arms, substantially as specified.

2. The side wings A, provided with the lower system of stay-cords, and connected to the ring L^2, when the latter is suspended from the belt and connected to the feet, substantially as specified.

3. The dorsal wing, hinged to the waist, supported from the points of the shoulders, and connected to the feet, substantially as specified.

4. The cuirass, constructed and adapted for supporting the wings and protecting the body, substantially as specified.

5. The combination, with the rods B and the cuirass, of the double hinge I, swiveled to the said cuirass, substantially as specified.

6. The rods C and N, hinged to the long rods, and provided with the slides F P, and connecting-rods, and arranged for spreading the wings, substantially as specified.

95,514.—Gustav Radbruch, Hoboken, N. J.—*Churn-Dasher.*—October 5, 1869.

Claim.—The dasher herein described, consisting of the central shaft C, arms *b b*, and straight tubes D, the latter being inclined inwardly, from bottom to top, and having an elbow formed at their lower ends, as and for the purpose specified.

95,515.—John Reinhart, New York, N. Y., assignor to Andrew Christian, same place.—*Velocipede.*—October 5, 1869.

Claim.—1. The combination, with the cranked axle of a velocipede, of the levers H H′, constructed,

arranged, and operating substantially as herein specified.

2. The combination, to produce an improved velocipede, of the frame A, seat G, steering-mechanism D *a b c* E, and actuating-mechanism C C D I H H′, constructed, arranged, and operating substantially as herein specified.

95,516.—JOHN W. RICHARDSON, South Braintree, Mass.—*Machine for Making and Wrapping Webbing Boot-Straps.*—October 5, 1869.

Claim.—1. The combination of mechanism for feeding the paper with mechanism for feeding the webbing and wrapping it with the paper, substantially as described.

2. In combination with the feeding and wrapping mechanism, the mechanism for cutting the paper and the mechanism for cutting the webbing, substantially as described.

3. In combination with the mechanism for feeding, cutting, and wrapping the webbing, mechanism for folding the strap, substantially as described.

4. In combination with the mechanism for feeding, cutting, and wrapping the webbing, mechanism for applying cement to the ends of the strap, substantially as described.

5. The details of construction and arrangement of the feed-rolls *b c*, a^2 *h*, and a^3 b^3, the paper-folding plate *o*, the mechanism for working the paste-brush, and the folding-tongue r^3 and mechanism for working it, substantially as described.

95,517.—JOHN RILEY and CHARLES W. BISSELL, Troy, N. Y., assignors to CHARLES W. BISSELL, TERRANCE RILEY, and MARY C. FRAZER.—*Composition for Covering Steam-Boilers, &c.*—October 5, 1869.

Claim.—1. A composition or cement composed of "lime-putty," combined, as described, with the ingredients herein named, or their equivalents, when used for the purposes specified.

2. A composition or cement composed of "paper-pulp," made in the manner set forth, combined, as described, with the ingredients herein named, or their equivalents, when used for the purposes specified.

95,518.—SMITH RILEY, Kenton, Ohio.—*Fence.*—October 5, 1869.

Claim.—The rails A, pickets E, and connecting-links D, combined and arranged substantially as specified.

95,519.—WASHINGTON B. ROSS, Keene, N. H.—*Staging for Roofs.*—October 5, 1869.

Claim.—The combination of staging B, (in one or more pieces, jointed, as described,) braces *c′ c′*, having arms *c c* and pins *d d*, pulleys F F, and cords E E, all arranged and operating substantially as herein set forth.

95,520.—SIDNEY A. SABINE, Pecatonica, Ill.—*Cultivator.*—October 5, 1869.

Claim.—1. The sliding attachment described, by means of which the lifting-chains and the shovel-beams are united, consisting essentially of the clevises *j* and irons K, or their equivalents, as and for the purpose described.

2. The shield P, having the arms *p p*, in combination with the bar p^1, as and for the purpose described.

3. The machine described, consisting essentially of the frame B B C D, lifting-devices *h* h^1 h^2 h^3 I, clevis *j*, irons K, beams L, bar M, standards N, and shields P, the whole being combined and arranged as described.

95,521.—THEODORE SEARING, New York, N. Y.—*Sleigh-Attachment for Velocipedes.*—October 5, 1869.

Claim.—1. The combination, with the wheels of a velocipede, of the runners A, clamps C, and brakes F, when all constructed and arranged substantially as specified.

2. The combination, with a velocipede provided with runner-attachments, of the vibrating propellers G H, arranged for attachment to the crank-pins I, substantially as specified.

3. The combination, with the vibrating propellers G H, of the segmental spiked bars O, links P, heels Q, and springs S, substantially as specified.

4. The combination, with the driving-wheel of a velocipede, of vibrating propeller-arms G, when arranged for adjustment as to height, by shifting the wheel on the runner, substantially as specified.

95,522.—ALLEN SHERWOOD, Auburn, N. Y.—*Harvester.*—October 5, 1869.

Claim.—1. The combination of the coupling-arm with the hinged supporting-piece F, whereby said coupling-arm can swing with, and also roll independent of said supporting-piece, as and for the purpose described.

2. The combination of the clutch-plates K with the hubs of their respective wheels, when united thereto by recesses 1 and projections 2, and when said plates form one of the inclosing ends of the spring-pawl and ratchet-chambers, as described and represented.

95,523.—ABRAM H. SHOCK and HARRISON ROCK SHIRK, Lancaster, Pa.—*Manure-Drag.*—October 5, 1869.

Claim.—1. The construction and arrangement of the hooks 1, 2, and 3, in combination with the central beam A and brace or fulcrum R, operating substantially in the manner and for the purpose described.

2. In combination with the central hook A^2, with its head *h* and flange *f*, also the lever L, with its foot or toe *l*, and rounded heel, when constructed and operating in the manner jointly and for the purpose set forth.

3. The mode of constructing the handle-supports *s s*, so that their lower ends come in contact with the sides of the hooks 1, 2, and 3, as side-bearings, in combination with the brace or fulcrum-rod R, made and applied in the manner and for the purpose shown and described.

95,524.—DANIEL SHOCKEY, Waynesborough, Pa.—*Farm-Gate.*—October 5, 1869.

Claim.—1. The construction and arrangement of the slotted iron plate T on the side of the rear post, the single post B, and the lower rail J lying against the side of post B, and provided with a lateral-headed pin *w*, which projects through the slot *t* in the plate, but not through the post, when said parts are adapted to operate in connection with each other, as and for the purposes specified.

2. The latch M, having the hook *m*, vertical shank *n* and nearly horizontal shank n^1, and pivoted to the gate at *g*, when arranged and employed in connection with the cords N N, spring *o*, and notch *r*, substantially in the manner and for the purposes described.

95,525.—JOHN SIMS, Liverpool Road, England, assignor to WILLIAM SPARKS THOMSON.—*Mode of Attaching Trimming to Articles of Dress.*—October 5, 1869.

Claim.—The process above described for attaching trimmings to dresses or other garments, by a combination of the three steps specified.

95,526.—WILLIAM D. SLACK, Lewisburgh, Pa.—*Harvester.*—October 5, 1869.

Claim.—1. The arrangement of the lever *l*, roller *j*, pawl-lever M, and rack *o*, for raising, lowering, and holding at any suitably-adjusted height the frame G, to which the drag-bar that carries the finger-bar and cutters is attached, substantially as described.

2. In combination with the rake-driving head L, and the pinion-supporting spring-bearer *y*, a bent and pivoted lever, M, for throwing the pinion out of gear with said head, while it is thrown in by a spring, substantially as described.

3. In combination with the semi-clutches 2 3, one on the drive-wheel and the other on the main axle, the clutch-bar or rod *p*, constructed and operating as described, and connected therewith, and extending to near the driver's seat, so that the driver from his seat may clutch and unclutch the driving-connection, as and for the purpose described.

95,527.—LEBBEUS W. SMITH, Boston, Mass.—*Manufacture of Soap for Medicinal and for other*

Purposes.—October 5, 1869; antedated September 16, 1869.

Claim.—The composition as made of the mineral oxide and soap, as described.

95,528.—THOMAS SMITH, Baltimore, Md.—*Pipe-Coupling.*—October 5, 1869.

Claim.—1. The valves C, seated by means of the springs F, and provided with the projecting stems c', in combination with the pipe-coupling A B, substantially as and for the purpose set forth.

2. The combination of the sections or members A B, constructed respectively with the hollow tenon or arm A′ and socket B′, and the clamping-screw F, substantially as and for the purpose described.

3. The adjustable bars D, in combination with the valves C c c' and springs E, as and for the purpose specified.

4. The combination, in the coupling A B, of the stems a b, passages a' a'' b'' b', valve-seats a''' b''', bearings D D, valves C c c', C c c', springs E E, the tenon or arm A′, socket B′, clamping-screw F, and plate G, all constructed, arranged, and operating as represented and described, for the purposes set forth.

95,529.—ASA SNYDER, Richmond, Va.—*Fire-Place.*—October 5, 1869.

Claim.—The described arrangement of the basket-grate A, concave perforated radiator E, and damper F, with relation to each other and the chimney C, jambs B, as and for the purpose specified.

95,530.—AUGUSTUS SPIEGEL, Indianapolis, Ind.—*Cradle.*—October 5, 1869.

Claim.—The hook C and metal stop G, in combination with the rocking part and base of the cradle, substantially as and for the purpose herein set forth.

95,531.—FISHER A. SPOFFORD and MATTHEW G. RAFFINGTON, Columbus, Ohio.—*Water-Velocipede.*—October 5, 1869.

Claim.—A water-velocipede, consisting of the lever G, rods c, segments F, pinions D, pawls b, ratchet-wheels a, and paddle-shaft B, all combined and operating substantially as herein shown and described.

95,532.—SAMUEL STANTON, Newburgh, N. Y.—*Steam-Generator.*—October 5, 1869.

Claim.—The arrangement of the serpentine pipe C in the rear part of the furnace, below the boiler, its upper straight and perforated portion entering the rear end of said boiler in an inclined direction, below the water-level, as herein described, for the purpose specified.

95,533.—LEOPOLD STEIGERT, Cincinnati, Ohio.—*Boiler Water-Regulator and Alarm.*—October 5, 1869.

Claim.—1. The arrangement, with the shaft c^2, provided with the wipers h h, of the whistle-valve G, lever H, and set-screws g and g', substantially as and for the purpose described.

2. The arrangement of the water-plug I, connecting-arm E, and shaft c^2, substantially as and for the purpose described.

95,534.—ROBERT S. STENTON, New York, N. Y.—*Manufacture of Pigments for Paints.*—October 5, 1869.

Claim.—1. The use of the aforesaid black magnetic oxide of iron-ore or other primitive formations of iron-ore, either alone or in combination with other suitable substances, for the manufacture of pigments for paint, substantially as set forth.

2. The use, either alone or in conjunction with other suitable substances, for the manufacture of pigments for paint, of the aforesaid iron or steel scales, the same being an oxide of iron, produced substantially as herein set forth.

95,535.—S. STOW, East Enterprise, Ind.—*Seed-Drill.*—October 5, 1869.

Claim.—1. The straps m and n, in combination with wheel E, when constructed and arranged as and for the purpose described.

2. The straps m and n, in combination with wheel E, rods f and h, adjustable block e, and slide g, the whole constructed and arranged substantially as specified.

3. The plow A, in combination with seed-box D, slide g, seed-stop k, lever I, rest j, rods f and h, adjustable block e, wheel E, and straps m and n, the whole being arranged as and for the purpose substantially as described.

95,536.—SIMEON TAYLOR, Worcester, Mass.—*Organ and Melodeon.*—October 5, 1869.

Claim.—1. The combination, with the hinged coupler-bar F, of the crank H and coupling-lever E, said parts being constructed and arranged substantially as and for the purpose set forth.

2. The combination, with the coupling-lever E, of the upright slotted key-rods a, substantially as and for the purposes set forth.

3. The construction and arrangement of the draw-stop valve-levers M M′ and their respective hinged arms or levers I and J, provided with the projections 2 and 3, substantially as and for the purposes set forth.

95,537.—T. H. TAYLOR, Jeffersonville, Ill.—*Harvester.*—October 5, 1869.

Claim.—1. The combination of the driving-wheel, having the projections arranged as described, with the connecting-rods, suspended relatively thereto, substantially as specified.

2. The cutter-bar supports, formed of two parts, grooved for the reception of the cutter-bars, and united, substantially as described.

95,538.—HENRY THOMPSON, Mobile, Ala.—*Life-Boat.*—October 5, 1869.

Claim.—1. The combination of the levers, crank-shaft, and propelling-wheels, when arranged on a bed-plate, A, substantially as specified.

2. The shaft-levers and pumps, combined and arranged upon a bed-plate, A, all substantially as specified.

3. The wheel-houses or guards L, detachably connected to the boat, and adapted to be disconnected for rolling over the ground, substantially as specified.

4. The herein-described improved life, surf, or pleasure boat, provided with propelling and pumping devices, air-cells, and detachable wheel-guards, when all arranged substantially as specified.

95,539.—J. N. THOMPSON and WILLIAM KENADY, Belpassi, assignors to D. W. FRARY, Portland, Oregon.—*Gang-Plow.*—October 5, 1869.

Claim.—The levers A and B, the swivel-joint D, nut and screw E, link F, fulcrum G, beam H, and hook I, together with the adjusting-keys J, or their equivalents, substantially as described, and for the purpose set forth.

95,540.—HENRY H. TRENOR, New York, N. Y.—*Automatic Passenger-Register.*—October 5, 1869.

Claim.—1. In combination with a step or platform, so constructed as to descend by pressure upon it, and ascend or move back when the pressure is removed, the arrangement of the perforating-points c c', one or more, and of the paper or other ribbon, to receive the perforations, when combined and operating substantially as and for the purposes set forth.

2. In combination with a yielding step or platform and perforating-mechanism, as described in the last claim, the arrangement of the inclined slotted plate F, or its equivalent, and the anchor-pallets and escapement-wheel, substantially as and for the purposes set forth.

95,541.—CHARLES IMMANUEL VOIGT, West Salem, Ill.—*Double-Shovel Plow.*—October 5, 1869.

Claim.—1. The beam A, brace or gauge-rods I, standards B, round D, bolt or round F, handles E, keepers or staples G, and bolt H, in combination with each other, when said parts are constructed and arranged substantially as herein shown and described, and for the purposes set forth.

2. The cutters J, constructed and adjustably secured to the standards B, substantially as herein shown and described, and for the purposes set forth.

3. The fender K, constructed as described, and adjustably connected to the plow-beam A and standards B, by means of the long bolt H, washers N,

hook and links L, and adjustable slide M, substantially as herein shown and described, and for the purposes set forth.

95,542.—William H. Walton, Philadelphia, Pa.—*Bath-Tub Eduction-Tube.*—October 5, 1869.

Claim.—The combination of the bath-tub A with the socket H secured to it, as shown, and fitting upon the spigot E, secured to the floor B, and outlet pipe D, nut K, and stop M, all constructed and operating substantially as shown and described.

95,543.—William Wickersham, Boston, Mass.—*Steam-Engine Governor.*—October 5, 1869.

Claim.—1. The combination of the valve O with the time-keeper and shaft *h*, whereby the valve-movement shall be regulated by the time of the time-keeper, substantially as herein set forth.

2. The combination of the valve O, slide P, and time-keeper, whereby the movement of the valve shall be controlled by the time-keeper, while the movement of the cut-off slide may be controlled by the main shaft of the engine, substantially as set forth.

3. The combination of the slide *f*, pin *e*, and groove *j*, substantially as herein described.

4. The construction and arrangement of the fan and its immediate co-operative parts, as herein set forth, whereby the effective surface of the fan shall automatically vary in accordance with the unequal expansion of the metallic bars, as herein made known.

5. The construction and arrangement of the fans and their co-ordinate devices, whereby the respective leaves of the fans may occupy more or less of the spaces, and thereby increase or diminish the effective surface, substantially as herein described.

6. The combination of the ring *w* with the spring *c*, in the manner and for the purpose set forth.

95,544.—John T. Wightman, Charleston, S. C.—*Chair, Cradle, Cot, &c.*—October 5, 1869.

Claim.—The convertible article of furniture hereinbefore described, capable of being used as a chair, cradle, cot, or shelter-tent, by altering the relative positions of the rockers A, braces B C, and sacking D, in the manner described and shown.

95,545.—J. W. Wheeler, Cleveland, Ohio.—*Water-Elevator.*—October 5, 1869.

Claim.—1. The tilting-bar M and roller O, in combination with the rib D and shoulder *b* around the inner edge of the bucket, in the manner as and for the purpose set forth.

2. The roller O, in combination with the bucket I, arranged and operating in relation to each other, in the manner and for the purpose substantially as set forth.

3. The combination of the pawl and wheel G D, brake H, pin *a*, and wheel E, arranged to operate conjointly in the manner as and for the purpose specified.

95,546.—Joseph C. Wilson, Appleton, Wis.—*Railway-Car Coupling.*—October 5, 1869.

Claim.—The draw-head A, with its cheeks or filling C, constructed with the incline G, and having the tumbler F *e* fitted to it, and confined loosely in proper relation to the coupling-pin, so as to operate as set forth, all substantially as described.

95,547.—Charles V. Woerd, Waltham, Mass.—*Watch.*—October 5, 1869.

Claim.—1. A watch-plate or movement-frame made of a single solid plate, recessed, to contain the running-mechanism, and having a wall formed from such plate, and surrounding such mechanism, substantially as described.

2. A pivot-bridge having a steady-pin struck up from its under surface, substantially as described.

3. The described arrangement of the barrel, ratchet-pawl or click, and click-spring, all within the same cavity in the bed-plate, the click and spring lying in recesses in the bottom of the cavity, and the barrel covering them, substantially as set forth.

95,548.—Rufus C. Wood, Le Roy, Kansas.—*Pitman-Connection for Harvesters.*—October 5, 1869.

Claim.—The seat C c^1 c^2, constructed as described, loop D, and screw E, in combination with the sickle-bar A *a'* and pitman *b'*, substantially as herein shown and described, and for the purposes set forth.

95,549.—Daniel Woodbury, Rochester, N. Y.—*Horse-Power.*—October 5, 1869.

Claim.—1. The arrangement of the main frame A B C, shaft *i*, and tumbling-rod *o*, with reference to the carrying-axle and leveling-bar, substantially as herein shown and described.

2. The arrangement of the supporting-box *n*, within or upon the leveling-bar F, for the purposes set forth.

3. Providing the leveling-bar F with a detachable extension G, in the manner and for the purposes set forth.

4. The angle-arms *s*, having the spur *v*, constructed substantially as shown, for the purpose set forth.

5. The within-described arrangement of the hooks *j* and sockets *p* upon the gallows-frame and bridge-tree *b*, whereby the strain upon these latter is communicated directly to the outrigs.

6. Providing the gallows-frame with the extensions *c*, to which the braces *f* are attached, whereby the strain upon the former is communicated directly to the leveling-bar F.

95,550.—David H. Young, Manchester, N. H.—*Furnace-Door Frame.*—October 5, 1869.

Claim.—1. The device A, having hinge-ears E E and E' E', and latches L and L', for the face of a furnace-door frame, substantially as described.

2. The box D, having flanges F, F', and F'', as an improved setting-box to a furnace-door frame, substantially as set forth.

3. The combination of box A, constructed as described, and face A, constructed as shown, substantially as set forth.

95,551.—William Allchin, Newburgh, N. Y.—*Stove-Drum.*—October 5, 1869.

Claim.—The smoke-flue A, constructed of elliptical-shaped elbows, and arranged within a drum, having parallel sides, so that the greatest diameter of said smoke-flue shall be close to the sides of the drum, and, in combination with the partition G, form zigzag air-passages F F, as shown and described.

95,552.—Daniel Arndt, Toledo, Ohio.—*Washing-Machine and Table.*—October 5, 1869.

Claim.—1. In combination with a washing-machine, the stationary plate G and adjustable plate I, constructed as described, and operating substantially in the manner and for the purposes herein set forth.

2. In combination with the stationary plate G and adjustable plate I, the rubber rings K K, and hooks L L, all substantially as and for the purposes herein set forth.

3. In combination with the stationary plate G, adjustable plate I, rings K K, and hooks L L, the roller E, made in sections, with longitudinal corrugations along its entire surface, the end-plates F F, and journals *f f*, all substantially as and for the purposes herein set forth.

4. The combination of the box A with a hinged and extended cover, C, legs B D, roller E, plates F, journals *f*, rings K, plates G I, and lever M, all as herein shown and described.

95,553.—Lyman M. Bates, Jackson, Mich.—*Spring for Bed-Bottoms.*—October 5, 1869.

Claim.—The spring B, constructed with a quadrangular base, when used in combination with the disk E, substantially as described.

95,554.—Silas Barker, Hartford, Conn.—*Manufacture of Sheet-Iron.*—October 5, 1869.

Claim.—1. The process, herein set forth, of making imitation "Russia" sheet-iron.

2. The rolls, made by the process and in the manner described, and used for the purpose set forth.

3. The oven, made as described, with the sliding rods, or their equivalents, and used for the purpose set forth.

95,555.—Robert C. Blackall, Albany, N. Y.—*Railway-Rail Chair.*—October 5, 1869.

Claim.—The joint-chair *e*, formed with the lips 2 2 and flanges 3 3, in combination with the bridge-plank *b*, substantially as set forth.

95,556.—William Blakey, Baltimore, Md.—*Grain-Drier.*—October 5, 1869.

Claim.—1. The feeding-hopper A, constructed of tapering form, and provided with the space a^2, and perforated lining a^1, to admit of the passage of steam or dry heat to the coffee or grain in its passage therethrough, to deodorize or dry it, substantially as described, in combination with the self-feeding and self-discharging cleaning and polishing cylinder B, substantially as set forth.

2. The combination, with the cylinder B, of the longitudinal strips H and flaps I, substantially as described, for the purpose set forth.

95,557.—Righter W. Bowman, Orangeville, Pa.—*Grinding-Mill.*—October 5, 1869.

Claim.—1. The disk or spreader *d*, secured at or upon the top of the spindle C, and provided with post or stirrer *e*, all arranged in the manner and for the purpose described.

2. The arrangement, herein described, of the roller *m*, rods or arms *h*, tube *g*, and funnel G, in combination with the disk *d*, having post *e*, all constructed and operating as set forth.

95,558.—Asa Brooks, Tolland, Conn.—*Cider-Press.*—October 5, 1869.

Claim.—1. The combination of the pillar-gear *h*, the gear-wheels i^1 i^2 i^3 i^4, the screws *z z z z*, and the sliding platform *k*, the whole being arranged, constructed, and operated as described, for the purpose set forth.

2. The combination of the adjustable cog-wheel *b*, the swinging cog-wheel *n*, the cog-wheel *c*, the bevel-gear wheels *e* and *f*, and the parts specified in the preceding clause, the whole being arranged, constructed, and operated as described, for the purposes set forth.

95,559.—Orlando F. Bryant, Carver, Minn.—*Wagon-Tongue Holder.*—October 5, 1869.

Claim.—The arrangement of the frame A, with flanges *g* K, socket *h*, braces *d f*, loop *p*, and tongue X, all constructed and operating substantially as and for the porposes set forth.

95,560.—Francis Burdick, South East, N. Y., and Lodowick Burdick, Lockhaven, Pa.—*Churn.*—October 5, 1869.

Claim.—The combination and arrangement of the cylinder F, beaters E, wire-gauze dashers or wings C, and standards G, constructed and operated in the manner and for the purposes above set forth.

95,561.—Jesse Burgess, Richmond, Ind.—*Combined Straw-Cutter and Feed-Box.*—October 5, 1869.

Claim.—1. The knife C, having an arm, *c*, extending in a direction at right angles to the blade, when said arm is about equal in length to the cutting-edge of the blade, substantially as and for the purpose set forth.

2. The combination of the cutter-box A, feed-box B, and knife C, when constructed and operated substantially as herein shown and described.

95,562.—Morgan Burton, Darlington, Pa.—*Refrigerator.*—October 5, 1869.

Claim.—The combination of the vessels A B, with intervening space between, pipes *a a*, spigot D, and hollow cover C, all substantially as and for the purposes set forth.

95,563.—C. A. Caldwell, Concord, N. C.—*Cotton-Press.*—October 5, 1869.

Claim.—The improved arrangement, in the cotton-press above described, of the parts herein shown, consisting of the frames A B, gates M, adjustable bars N, press-beam G, screws H H, bearings *g g*, friction-rollers *z z*, and nuts *j j*, when said parts are constructed and arranged to operate in the manner and for the purpose described.

95,564.—Charles L. Chadeayne, Yonkers, N. Y.—*Spring-Bed Bottom.*—October 5, 1869.

Claim.—The combination, with the slats F, the transverse flat springs E, and the spiral springs C, arranged in relation to each other as described, of the spirally-grooved lower clamping-disk D, and upper disk D′, with their intervening packing or packings *d d′*, substantially as and for the purpose or purposes herein set forth.

95,565.—E. Hall Covel, New York, N. Y.—*Washing-Machine.*—October 5, 1869.

Claim.—1. In combination with the shaft D, disk E, and inclined dashers F, the stationary sleeve *o*, substantially as and for the purpose hereinbefore described.

2. In combination with the dashers F F and disk E, the funnel-shaped thimbles, substantially as shown and described.

95,566.—Z. S. Cracraft, Lacon, Ill.—*Post-Auger.*—October 5, 1869.

Claim.—The plate B, constructed as described, in combination with the stem A, substantially in the manner and for the purpose described.

95,567.—John Crampton and William H. Pangborn, Plainfield, N. J.—*Washing-Machine.*—October 5, 1869.

Claim.—The tub, contracted at the top, and receiving the removable frame of vertical adjustable squeezing-slats set in grooves, as specified, in combination with the swinging dasher of vertical slats, constructed and operating as specified.

95,568.—Norman Cutter, Cincinnati, Ohio, and Elliot Savage, West Meriden, Conn.—*Manufacture of Iron and Steel.*—October 5, 1869.

Claim.—1. An alloy of iron, manganese, and potassium or sodium, or both of the latter, substantially as herein described.

2. The manufacture of such an alloy as we have described from iron, the oxides of manganese, fusible compounds containing cyanogen, combined with one or more metals, and one or more compounds of sodium or potassium, substantially in the manner herein set forth.

3. Deoxidizing, purifying, and improving iron or steel, by treating it in a molten state, substantially as specified, with an alloy such as herein described.

95,569.—Charlton H. Davis, San Francisco, Cal.—*Rock-Drill.*—October 5, 1869.

Claim.—1. The arrangement of the sliding frame A, bed B, operating-wheels D, shafts C F, and rotating and feeding shafts T T′, substantially as specified.

2. The combination of the spring L, arranged as specified, for adding or removing leaves or plates for varying the power; the clamp N, adjusting-screw and the drill-rod, all substantially as specified.

3. The ratchet-wheel W, lever X, pawl J, and spring *l*, when constructed and arranged as described, with reference to the cam V, all operating together, as and for the purpose set forth.

4. The arrangement of the pawl-levers X X′, relatively to the ratchet-wheels, the springs *l l′*, and pawls *j j′*, whereby the said springs have the effect to keep the pawls in contact with the wheels, and to restore the pawl-levers, substantially as specified.

5. The arrangement, with the ratchet-wheel W′ and feed-screw, of the jaws *r* and springs, substantially as specified.

95,570.—Calvin R. Densmore and Jacob A. Vroorman, Oil City, Pa.—*Car-Coupling.*—October 5, 1869.

Claim.—The combination of the springs F and G with the hook H A and draw-heads B C, all constructed and arranged substantially as described, as and for the purposes described.

95,571.—Auguste Destouy, New York, N. Y., assignor to Charles Goodyear, Jr., same place.—*Sewing-Machine for Boots and Shoes.*—October 5, 1869.

Claim.—1. The last-holder, adjustable by the

means and in the manner substantially as herein shown and described.

2. The needle, having a movement away from its center of motion, after it has been drawn out of the work, substantially as herein shown and set forth.

3. In combination with the device for drawing out the loop, or for producing the movement of the needle away from its center of motion, a shield or needle-guard, operating concentrically with said needle, substantially as herein shown and described.

95,572.—HENRY A. DIRKES, New York, N. Y.—*Table-Caster.*—October 5, 1869.

Claim.—The arrangement, within the bow of the handle of a caster, of the gong A and its operating-lever, whereby the latter are entirely exposed to view, removed from the bottles, and adapted to be operated without rotating the caster, as and for the purposes set forth.

95,573.—CHARLES F. DODGE, New York, N. Y.—*Washing-Machine.*—October 5, 1869.

Claim.—The combination, with the box or barrel D of the machine, and cross-bar B, of the thumb-screws *f' f'*, arranged to enter from above, and made to fit boxes or nuts connected with said bar, substantially as shown and described.

95,574.—JOSHUA ELLINGWOOD, Owensborough, Ky.—*Process of Distilling Spirits.*—October 5, 1869.

Claim.—1. The introduction and use of water-slaked lime in the wort or beer during fermentation, at the stage of that process, in the proportions and for the purposes substantially as described and set forth.

2. The introduction and use of muriate of ammonia, in the wort or beer during fermentation, at the stage of that process, in the proportions and for the purposes set forth, and substantially as described.

3. In combination with the use of water-slaked lime and muriate of ammonia, each in the manner and for the purpose described, the introduction of hydrogen, by any suitable mechanical means, in quantity sufficient to unite with and take up any surplus carbon and oxygen evolved, which might otherwise escape during alcoholic fermentation, and thus form alcohol, substantially as described and set forth.

4. The introduction and use of carbonate of potassa in the singlings during the process of distilling alcoholic liquors, at the stage, in the proportions, and for the purpose set forth, substantially as described.

5. The described process of conducting alcoholic fermentation and distillation as a whole, substantially as described and set forth.

95,575.—CHARLES W. EMERSON, Hartford, Conn., assignor to himself and JOHN C. ABBOTT, same place.—*Lamp-Shade Supporter.*—October 5, 1869.

Claim.—Securing the arms *b* to the spring-clasp band *a* by means of the rivet *e*, as an improved manufacture of lamp-shade supporters.

95,576.—BENJAMIN F. FIELD, Beloit, Wis., and ROBERT D. O. SMITH, Washington, D. C., assignors to BENJAMIN F. FIELD.—*Fabric for Roofing and for other Purposes.*—October 5, 1869.

Claim.—A fabric, suitable for roofing, sheathing, and other purposes, saturated with a compound of bituminous matter and solution of silica, substantially as described.

95,577.—DAVID FOSTER, Sheffield, England.—*Manufacture of Anvils, and the Top and Bottom Parts of Hammers, &c.*—October 5, 1869; patented in England, June 14, 1868.

Claim.—Forming the wearing or resisting surfaces of parts of anvils, hammers, projectiles, railway-crossings, dies, or other articles, of the combination or mixture of metal herein described, when such articles are cast partly in iron and partly in steel, substantially as herein shown and described.

95,578.—ARTHUR L. FREEMAN, South Boston, Mass.—*Apparatus for Transmitting Power.*—October 5, 1869.

Claim.—1. The combination, with the frame B, arranged to swing on or in horizontal bearings, of the weight E, in radial connection with a cross-shaft, C, hung to freely rotate within said swinging frame, and to intersect the axial line of the same, substantially as specified.

2. The combination of the shaft G, in gear with the cross-shaft C, the weight E, carried by the latter, and the swinging frame B, essentially as herein set forth.

3. The combination of the shaft K with the swinging frame B and weight E, in radial connection with the cross-shaft C, carried by said frame, substantially as specified.

4. The catch-lever R, in combination with the lever Q, connected to the swinging frame B and shaft K, in gear by crank or cranks with the latter, essentially as and for the purpose herein set forth.

5. The combination, with the independently-rotating shaft C and weight E, carried by the swinging frame B, of a brake to arrest the motion of said weight at any desired point, and irrespective of the motion of the swinging frame, substantially as described.

95,579.—JOSEPH GILMER, Monticello, Fla.—*Platform for Railway-Car.*—October 5, 1869.

Claim.—The combination of one or more auxiliary platforms with a railroad-car, so as to form a gangway for aid in entering or leaving the car, substantially as described.

95,580.—JOHN GOULDING, Worcester, Mass.—*Machine for Drawing and Spinning Wool, &c., from the Carding-Machine.*—October 5, 1869.

Claim.—1. In combination with a carding-cylinder or main card, and with draw-rolls, and twister-tubes, and main twisting-fliers, the mechanism or devices for intermittently griping the roving between the two sets of draw-rolls, so as to uniformly stretch or draw and spin the yarn, substantially as described.

2. In combination with the bobbin-frame, the mechanism for producing the rise and descent of the frame, substantially as described.

3. In combination with the bobbin-frame, the mechanism for varying the movement of the bobbins while they are filling at the heads, substantially as described.

4. In combination with the bobbin-frame, the mechanism for gradually effecting the descent of the bobbin-frame to fill the bobbins evenly, substantially as described.

95,581.—JOSHUA GRAY, New York, N. Y.—*Sewing-Machine.*—October 5, 1869.

Claim.—1. The double-faced wheel on the shaft C, provided with two cams, H *a'*, in combination with the looper and take-up bars F and I, substantially as and for the purpose described.

2. The reciprocating feed-operating bar G, in combination with the pivoted looper-bar F, pin *o*, and cam *a'*, substantially as and for the purpose described.

95,582.—WILLIAM P. HALE, Ionia, Mich.—*Machine for Sawing Lath.*—October 5, 1869.

Claim.—1. The hollow collars *d d d*, when constructed as and for the purpose substantially described.

2. The collars *d d d*, in combination with saws *c c c*, when the said saws are so constructed as to admit of a free circulation of air between their inner edge and the shaft B, substantially as set forth.

3. The platform P, when provided with springs *p p*, in the manner substantially as described.

95,583.—IRA HAYFORD and JOSEPH F. PAUL, Boston, Mass.—*Process of Treating Wood, to Preserve, Season, and Give it a Better Surface.*—October, 5, 1869.

Claim.—1. Treating wood by impregnating and filling its pores and tissues with the combined vapors of paraffine or palm-oil and water, and then checking the evaporation of such materials, the result being the depositing of a thin film within and about the pores and tissues of the wood.

2. In combination with a material for preserving wood by injection into its pores, the use of sciliate of soda, and of carbonate of ammonia, for the purpose before stated.

95,584.—William Hebdon, New York, N. Y.—*Machine for Steaming and Shrinking Cloth.*—October 5, 1869.

Claim.—The arrangement of the steam-pipe *i*, plates *l*, rollers *b* and *c*, table *n*, and receptacle *m*, substantially as and for the purposes specified.

95,585.—George W. Heckart, New Lisbon, Ohio.—*Machine for Bending Fifth-Wheels.*—October 5, 1869.

Claim.—1. The combination and arrangement of the circular bed A, bars B B, base C, dial H, cap I, and screw J, all constructed and connected as described, and for the purposes set forth.

2. The arrangement of the collar K, shaft L, standard M, and lever N, with the screw J and base C, substantially as and for the purpose set forth.

3. The arrangement of the split wheel *h*, revolving on the pin *f*, and made adjustable by means of said pin, and the posts *d* S R, and the spring *g*, with the bar B, substantially in the manner and for the purpose herein described.

95,586.—William M. Henderson, Philadelphia, Pa.—*Mechanical Movement.*—October 5, 1869.

Claim.—The construction of a spur-wheel, B, with teeth of a triangular form, in combination with two frogs C C′, which, by a rectilinear motion of the frogs, or of the wheel in line with its axis, will impart an intermittent rotary motion to the wheel, or to the frogs, at a point intermediate from the ends of the stroke, where it shall be rigidly held from turning by the combined action of the teeth of the wheel, the inclined faces of the frogs, and their parallel continuations, as set forth.

95,587.—Suspended.

95,588.—Simon Ingersoll, Brooklyn, N. Y.—*Spring-Scale.*—October 5, 1869.

Claim.—1. The lever G, in combination with rack-bar *h*, pinion *m*, spiral spring *s*, and lever *d*, all arranged to operate substantially as described.

2. A scale, consisting of base A, upright B, beam C, rod *f*, levers *d* and G, rack-bar *h*, pinion *m*, and spring *s*, dial-plate D and bail E, the whole arranged to operate substantially as set forth.

95,589.—Hans Iverson and Daniel Acker, New York, N. Y.—*Stair-Rod.*—October 5, 1869.

Claim.—The transverse-sliding bolt *i*, in combination with the stair-rod socket *b* and attachment *c*, as and for the purposes set forth.

95,590.—Melvin Jincks, Wallace, N. Y.—*Wagon-Seat.*—October 5, 1869.

Claim.—1. The hooked plates *e e*, in combination with springs *h h*, when said plates and springs are connected by means of metal links *s s*, and each part constructed and arranged to operate in the manner and for the purpose described.

2. The seat A, in combination with metal plates *e e*, frames B B′, springs *h h*, metal links *s s*, and slotted plates *n n*, when all are constructed and arranged as and for the purpose set forth.

95,591.—Hans Knudsen, North Windsor, Wis.—*Steam-Engine Slide-Valve.*—October 5, 1869.

Claim.—1. The arrangement of the valve H, having the journal I, the plate Hi, and straps Hii, substantially as shown and described.

2. The construction and arrangement of the valve C and its seat B, in relation to the induction and eduction pipes E and E′, and the valve H of the cylinder A, substantially as described.

95,592.—James S. Kuder and Willoughby Seiple, Tiffin, Ohio.—*Sash-Holder.*—October 5, 1869.

Claim.—The combination of the toothed wheel D, and perforated strip C, arm E, spring F, shaft G, and thumb-piece H, or their equivalents, all substantially as and for the purposes herein set forth.

95,593.—Dennis Lane, Montpelier, Vt.—*Water-Wheel.*—October 5, 1869.

Claim.—1. The exterior case, forming a gate for the chutes, with its serrated flanges, all substantially as described.

2. The case and gate for water-wheels herein described, having guides *a*, forming the chutes, case B, cylinder D, sleeve E, arms H, and rods *s* and *v*, constructed and arranged substantially as specified.

95,594.—Daniel P. Leach, Franklin, Ind.—*Hen's Nest.*—October 5, 1869.

Claim.—1. The box A, provided with movable gratings B B on the sides, and hinged door or grating D at the front side, substantially as herein set forth.

2. The serrated arm, in combination with the weight J, when used substantially in the manner and for the purpose set forth.

3. The combination of the lever H, notched arm I, movable weight J, and strings *b* and *c*, connected, as described, with the door or grating D, substantially as and for the purposes herein set forth.

95,595.—L. L. Lee, Milwaukee, Wis.—*Low-Water Indicator.*—October 5, 1869.

Claim.—1. Safety-valve D, whistle C, yoke I, valve S, indicator-dials B B, and shell A, all constructed and arranged substantially as described.

2. Duplicate dials B B, rod P, adjustable joints H, so arranged in any part of the building as to show the height of water, in combination with the water-indicator, substantially as described.

3. Ground joint R, dial B, yoke I, valve S, lever K, and shell A, arranged substantially as described.

4. Shell A, dial B, whistle C, safety-valve D, safety-rod E, weight F, hand G, joints H, rods P, yoke I, and valve S, all combined substantially as described.

95,596.—William Mallary, Bucyrus, Ohio.—*Fence.*—October 5, 1869.

Claim.—1. The post A, when the same is provided with stirrups or clasps B B and stump B′, and is secured to the block A′ by rods *a a*, all being constructed and arranged substantially as described.

2. The compound brace E, when the same is arranged and applied substantially as described.

3. The double adjustable brace F, when the same is secured to the block G and applied to the fence, substantially as described.

4. Introducing, midway the panel, an intermediate support H, when the same is arranged so as to operate substantially as described.

5. A fence, consisting of panels C C′, connected by coupling-bars D D′, post A, braces E F, and intermediate support H, when the whole is so combined and arranged, substantially as described.

95,597.—William E. Marsh, Jr., Plainfield, N. J.—*Water-Closet for Railroad-Cars.*—October 5, 1869.

Claim.—The hinged lid *c*, and cam *i*, in combination with the hopper *a*, pan *e*, and cam tail-piece *l*, substantially as and for the purposes set forth.

95,598.—William J. Miller and James W. Campbell, New York, N. Y.—*Moldings of Wood.*—October 5, 1869.

Claim.—A molding, constructed substantially as herein specified.

95,599.—Elie Moneuse and Louis Dufarquet, New York, N. Y.—*Coffee-Pot.*—October 5, 1869.

Claim.—1. The movable foraminous coffee-holding piston, formed with the botton *n*, lids *p*, sides *o*, and provided with a handle, in combination with the coffee-holding cylinder *b*, into which said piston fits, as and for the purposes set forth.

2. The thermometer *k*, glass tube *l*, and divisions applied to and combined with the coffee-holding cylinder *b*, in the manner and for the purposes set forth.

95,600.—Charles Muhl, Bloomington, Ill.—*Washing-Machine.*—October 5, 1869.

Claim.—1. A cylinder for washing-machines, constructed as herein described, of the heads *a a* and troughs *e e* and *i i*, the said troughs opening alternately into and outward from the cylinder, substantially as and for the purposes herein set forth.

2. In combination with a wash-boiler, a revolving cylinder, when constructed substantially in the manner described, and for the purposes set forth.

95,601.—Gordon Hall Nott, Boston, Mass.—*Boiler-Furnace.*—October 5, 1869.

Claim.—The construction and arrangement of the protective walls *e* and *f f*, all facing the fire, with their concave sides before the tube-sheet in the furnaces of boilers, for the purpose as fully set forth and described.

95,602.—W. B. Noyes, Manchester, N. H., assignor to himself and C. S. Baker, same place.—*Saw-Teeth.*—October 5, 1869.

Claim.—A saw provided with a steel dovetail point *b*, substantially in the manner and for the purpose described.

95,603.—Elijah S. Pierce, Hartford, Conn.—*Screw-Feeding Apparatus.*—October 5, 1869.

Claim.—1. The arrangement of the springs *e e*, sliding bar *e*, and conductor *a*, constructed and operated as described, for the purposes set forth.

2. The combination of the conductor *a*, shield *a'*, sliding bar *c*, with its springs *d*, and the springs *e e*, the whole constructed, arranged, and operating as described, for the purposes described.

3. The plunger *i*, moved as described, in combination with the conductor *a*, both parts being constructed as described, for the purpose described.

4. The combination of all the parts mentioned in the preceding claims, the whole being constructed and operating as described, for the purpose described.

95,604.—John B. Read, Tuscaloosa, Ala.—*Construction of Ordnance.*—October 5, 1869; antedated September 27, 1869.

Claim.—In the construction of ordnance, shafts, axles, cylinders, and the like, of concentric coils or cylinders, applied to a central tube or core, in the manner described, providing channels or spaces for the introduction of the melted metal or alloy between the several coils or cylinders by previously grooving or corrugating the surface or surfaces of the plates to be coiled, or of the cylinders to be applied; or by holding the successive coils or cylinders apart from each other by the interposition between them of studs or points, as described, and then filling said grooves, channels, or spaces, as well as all other interstices, with melted metal or alloy, in the manner substantially as set forth, whereby the full strength and tension of the metal composing the enveloping-coils or cylinders may be secured while the whole mass is firmly consolidated by bronze or other alloy.

95,605.—Victor Rillet, Hoboken, N. J.—*Sirup for Flavoring Beverages, &c.*—October 5, 1869.

Claim.—The within-described sirup, made of the ingredients, and compounded substantially as described.

95,606.—Henry E. Rogers, South Manchester, Conn.—*Calendering-Machine.*—October 5, 1869.

Claim.—1. The rotary arms or cylinder *d*, secured upon the shaft *d'*, having the calender-rolls *x* arranged thereon in combination with the cylinder formation *b* and plate *b'*, substantially as set forth.

2. The feed-rollers *h h*, constructed as described, and for the purpose set forth.

3. An elastic or rubber pad, g^2, in combination with rotary arms or cylinder *d*, substantially as and for the purpose set forth.

95,607.—J. R. Rude, S. B. Rude, and G. W. Rude, Liberty, Ind.—*Grain-Drill.*—October 5, 1869.

Claim.—1. The seed-wheels, so constructed that the bearings come on shaft *h*, in the center of seed-wheels, for the purpose substantially as described.

2. The counter-shaft *m*, receiving motion from the driving-wheel H, by means of wheels N K and chain-belt L, substantially as set forth.

3. The standards *r*, furnished with shovels or hoes, and braced with rods *x*, when constructed substantially as described.

4. The counter-shaft *m*, in combination with hangers *o o*, as and for the purpose specified.

5. The hangers *o o*, arranged for accommodating the gearing in the manner described.

6. The counter-shaft *m*, in combination with wheels *p*, *j*, and *w*, and lever *t*, when arranged in the manner set forth.

7. Cases *i*, the seed-wheels *n*, pinions *j* and *p*, the chain L, toothed wheels *k* and N, and driving-wheel H, the whole combined and arranged as and for the purpose set forth.

95,608.—John Schaffer and Emanuel Stoner, Westminster, Md.—*Cider-Press.*—October 5, 1869.

Claim.—1. The beam *e''*, combined with the hook *e'''*, link *d'*, follower-beam C, and guide-bar *a*, substantially in the manner and for the purpose set forth.

2. The eye *e*, links *e d*, hook *e'*, lever D, guide-bar *a*, and follower-beam C, all combined as and for the purpose explained.

95,609.—Edward M. Shield, Cincinnati, Ohio—*Snag-Boat.*—October 5, 1869.

Claim.—1. The provision, in a snag-boat, of one or more steam-engines, adapted to operate the hoist independently of the main propelling-engines of the boat, substantially as and for the purpose set forth.

2. The pair of drag-chain booms B, having the oblique sheaves *b*, as and for the purpose designed.

3. The provision, in a snag-boat of a series of cross-cut-saws, U, at suitable intervals along one of the nearer or adjacent sides of the hulls, and each operated by an independent engine, as set forth.

4. The provision, in this connection, of the derrick or shears 5, for the purpose stated.

5. The sheaves 1 2, arranged and located as and for the purpose stated.

6. The arrangement of rollers H and inclined planes I, as described.

95,610.—Warren P. Sigsby, Delta, Ohio.—*Compound for Curing Toothache.*—October 5, 1869.

Claim.—The paste or pellets herein described, compounded of the ingredients and in the manner substantially as herein specified.

95,611.—Anthony Smith, Shellsburgh, Pa.—*Hay-Elevator.*—October 5, 1869.

Claim.—The arrangement within the mow, of the blocks C E, hoisting-rope D, guide-rope G, shifting-rope H, and staples *a a*, all substantially as shown and described.

95,612.—Daniel E. Somes, Washington, D. C.—*Refrigerator, Sideboard, and Room-Cooler.*—October 5, 1869.

Claim.—1. The movable shutter A^2 or its equivalent, and pipe A^3, in combination with the circulating-spaces A^1 and openings H', as set forth.

2. The combination of the ice-chest B, liquid-chambers D, and sideboard-shelf D^2, as set forth.

3. Refrigerating-compartments, with circulating-spaces between them, cooled by means of air or water surrounding them, and having air from the ice-box excluded from within them, substantially as described.

4. Separate air-tight compartments, surrounded by cooled air on all sides but the front, substantially as described.

5. The ice-box, water-tank, liquid-cells, refrigerating-chambers and drawers, circulating-spaces, ventilating-pipes and tubes, registers, and dampers, or their equivalents, in combination, substantially as described, and for the purpose set forth.

6. Ventilating-tubes and flues, shutters A^2, ventilating-pipes A^3, and ice-box B, all arranged as described.

95,613.—Daniel E. Somes, Washington, D. C.—*Air-Pump.*—October 5, 1869.

Claim.—The delivery-valve E, eduction-valve C, nozzle A', stuffing-box, and piston-rod B' in combination with the cylinder A and piston B, substantially as described.

95,614.—Robert Spear, New Haven, Conn.—*Apparatus for Transmitting Power by Means of a Fluid Passed through a Pipe or Tube.*—October 5, 1869.

Claim.—1. The within-described improvement in transmitting power by means of a fluid passed

through a tube or tubes, with diminished connection, substantially as described.

2. The pipe or pipes through which a fluid is transmitted from an engine or power-source to the machinery designed to be operated upon, or to the desired terminus with any form of engine, when said pipe or pipes are united with diminished connections, or provided with contractions, substantially as and for the purpose set forth.

95,615.—JOSEPH STEINHAUSER, Lancaster, Pa.—*Sleeves for Overcoats, &c.*—October 5, 1869.

Claim.—A coat having one or both sleeves provided with a pocket, substantially as shown and described, and for the purpose specified.

95,616.—SIDNEY M. STEVENS, Elwood, Ill.—*Grain-Drier.*—October 5, 1869.

Claim.—1. Tubes S and S″ and T, in combination with fans *f* and *f″*, arranged to operate substantially as and for the purpose set forth.

2. Heater A, constructed as described, in combination with tubes S S″ and T, fans *f* and *f″*, the whole arranged to operate substantially as and for the purpose specified.

95,617.—CHARLES M. STRAUSS, Memphis, Tenn.—*Process of Forming Letters, Characters, and Ornaments on Glass.*—October 5, 1869.

Claim.—1. The herein-described process of forming letters, characters, or ornaments on glass.

2. The use of movable type, characters, figures, or designs of any kind, in combination with paraffine or any equivalent material, for the production on glass of letters, characters, or ornaments, in the manner substantially as herein described.

95,618.—JAMES A. STRONG, North Woleott, Vt.—*Dish-Washer.*—October 5, 1869.

Claim.—The duplex, eccentric, soft packing I J, arranged, as represented, relatively to the shaft C and its connections, and to the fixed ring E, on the vessel M, as and for the purposes herein described.

95,619.—WILLIAM H. TRIMMER, Round Hill, Pa.—*Grain-Drill.*—October 5, 1869.

Claim.—1. The hinged frame A′, provided with pins *v v*, wheels *k k*, and coverers *w w*, in combination with the main frame A, all arranged to operate substantially as described.

2. A seeder and cultivator constructed with seed-boxes *d d*, *g g*, slides C C, adjustable frame A′, wheels *k*, casters L L, shovels *n*, forked hoes *w*, the whole combined and operated substantially as set forth.

95,620.—LUCIUS J. VANSANDS, Chicago, Ill.—*Hotel-Annunciator.*—October 5, 1869.

Claim.—1. The cams N, so constructed that they begin to act upon the pins O as soon as the wires begin to draw, substantially in the manner and for the purpose set forth.

2. The rods R, having one end bent at right angles, and having the slotted plates P secured to them, in combination with the pins O and lever V, when used substantially as specified.

3. The levers B, V, and L, bell K, hammer C, rods R, slotted plates P, cams N, arm X, pins O, handle W, springs G and H, and D, when arranged and combined to form a hotel-annunciator, substantially as described.

95,621.—AUGUSTUS WEYERMANN, Saint Gall, Switzerland.—*Pipe-Connection.*—October 5, 1869.

Claim.—1. The pipe *a*, provided with segmental lips, or flanges, in combination with the removable collar *b* and bolts *d*.

2. The pipe *a*, provided with segmental lips, or flanges, in combination with the collar *b*, connecting-piece *c′*, and bolts *d*.

3. The pipe *a*, provided with segmental lips, in combination with the collar *b*, connecting-piece *c*, intermediate piece *g*, and bolts *d*.

95,622.—N. S. WHIPPLE, Detroit, Mich.—*Spring for Beds, Berths, Car-Seats, &c.*—October 5, 1869.

Claim.—The combination of the springs B B, the continuous wire C, or independent wires D D, the whole being so arranged as to operate substantially as described.

95,623.—HENRY R. ROBBINS, Baltimore, Md., assignor to himself and J. J. MORAN.—*Boiler for Cooking-Stoves.*—October 5, 1869; antedated September 21, 1869.

Claim.—In connection with an oblong boiler, A, constructed and adapted to occupy the rear end of the stove, as described, the pipes C D, the cock F, the water-back B, and the glass pipe E, when said parts are each constructed and employed in the manner set forth, the whole forming a single boiling-apparatus for cooking-stoves, substantially as described.

95,624.—WILLIAM THORPE, Saint Louis, Mo.—*Mode of Applying Inks of Different Characters, so as to Print Safety, Revenue, and other Stamps.*—October 5, 1869.

Claim.—1. In the printing of stamps for internal-revenue, postal, and other purposes, the combination of the two inks described, or of any other two inks, of whatever ingredients and proportions thereof composed, provided that one of the inks shall have sufficient affinity for the acids, while the other shall have a like affinity for the alkalies, and the two shall produce substantially the results described, substantially in the manner described.

2. The using of any two inks of decidedly different colors and of materially different chemical affinities, one for the acids and the other for the alkalies, so that while one of them will be destroyed by the action of the acids, the other will be destroyed by the action of the alkalies, and the imprinting the ground color upon the stamp with one ink, and by another operation imprinting the letters, vignette, or other devices with the other ink over and upon the first impression, so as to commingle the tints and colors of the two upon the face of the stamp, for the purpose of preventing the removal of the ink used in canceling, without also destroying at least one of the inks used in printing the stamp, and as a means of increasing the difficulties of counterfeiting the same, when used and done substantially in the manner described.

3. In combination with the described mode of inking or coloring the paper of the stamp, paper sized with any material which is delicately sensitive to the action of chemical solvents, so that an attempt to remove the ink used in canceling, by the use of either an acid or an alkali, will result in the destruction of the sizing, as well as one of the inks of the engraving, substantially as set forth.

4. The described stamp for internal-revenue, postal, and other purposes, made substantially as described and set forth, as a new article of manufacture.

95,625.—K. MCRAE, New York, N. Y.—*Hoop-Skirt.*—October 5, 1869.

Claim.—The combination of a skirt-tape, A B, formed with pockets, with the hoop C and clasp D *d*, as described, when the latter is inserted within the said pocket or pockets, between the hoop and the front side of the tape, thus concealing its body, while its prongs grasp the hoop at each end of the said pocket, substantially as before described.

95,626.—THOMAS ANTISELL, Washington, D. C.—*Ink for Printing Revenue, Postage, and other Stamps, so as to Secure Greater Safety and Prevent Frauds.*—October 5, 1869.

Claim.—1. An ink, composed as described, having for its basis a salt of copper, or other metal acting similarly, as set forth.

2. An ink, having for its basis a sensitive vegetable color, acting in the manner and for the purposes set forth.

3. The combination of a vegetable-color ink, as described, with the metallic ink, set forth, on the same print by successive application.

95,627.—ALEXANDER ALLAN, New York, N. Y.—*Boring-Tool.*—October 12, 1869.

Claim.—1. The triangular tool H, with the pyramidal point working in the guide G, with the necessary eccentricity to reach the angles of the guide, as described.

2. The combination and arrangement of the clamping-box B, hollow standard E, tool-stock I, and tool H, in the manner and for the purpose described.

3. A tool, constructed as described, for boring rectangular and other angular holes, by having an eccentric movement or "play" communicated to it by the operator, in the manner set forth.

95,628.—Henry Andes, Wilkesbarre, Pa.—*Pneumatic Apparatus for Drawing Ale.*—October 12, 1869.

Claim.—The arrangement of the air-compressing vessel number one with its inlet and outlet cocks, 1 and A, the perpendicular tube or cylinder with the cock S, and enlargement number three, the cock N, and the cocks E and O, and connecting-pipes, all substantially as shown and described.

95,629.—Solomon Andrews, Perth Amboy, N. J.—*Velocipede.*—October 12, 1869.

Claim.—1. Two wheels A A, of equal diameters, arranged in a right line, the one forward of the other, and connected together by a connecting-rod, B, on each side, attached to crank-pins C, on the spokes of the wheels, to which connecting-rod the power is to be applied for driving the machine.

2. The combination, with the connecting-rods B B, of the cranks E and the standard G, substantially as hereinbefore set forth.

3. The combination of two driving-wheels, of equal diameter, fore and aft of each other, with two wheels, one on each side, in a cruciform plan, which will make it a four-wheel machine, and which side wheels, being depressed, will make it run on three wheels, so as to turn it around, and when they are elevated, making it run on two wheels, like a bicycle.

95,630.—V. M. Baker, Preston, Minn.—*Water-Wheel.*—October 12, 1869.

Claim.—1. The compound buckets F G, formed by the combination of the long double-curved buckets F and the short buckets G with each other and with the body of the wheel, substantially in the manner herein shown and described, and for the purpose set forth.

2. The gates J, formed with curved inner ends and with the projecting arms K, connected with the hoisting-ring L, by means of the rods M, whether the connecting-bars N be used or not, substantially as herein shown and described.

3. The straight chute-plates H, in combination with the gates J and case E, substantially as herein shown and described, and for the purpose set forth.

4. The rim a^2 of the wheel A, when constructed as herein shown and described, that is to say, with an incline or flare from the upper curve of the long buckets F, to the top of the wheel, substantially as herein shown and described, and for the purpose set forth.

95,631.—William C. Banks, Como Depot, Miss.—*Hay and Cotton Press.*—October 12, 1869.

Claim—The arrangement of the four levers L L L L, two at each end of the beam G, pivoted, at their upper end, to the frame of the press, and connected, by chains *g g*, or equivalent device, to the ends of said beam, substantially as and for the purposes specified.

95,632.—James H. Barker, Washington, D. C.—*Reel.*—October 12, 1869.

Claim.—The combination, with the arms B, of the slides D, the folding claws C, and the springs E, all arranged and operating substantially in the manner and for the purpose set forth.

95,633.—Arad Barrows, Philadelphia, Pa.—*Bath-Tub.*—October 12, 1869.

Claim.—An interiorly-enameled cast-iron vessel, having the curved surfaces adapted to receive and retain the enamel, and the vertical projection or tongue *g* to fit the grooved case, for the purposes and substantially as herein specified.

95,634.—Daniel P. Bartlett and Alfred Adams, Chagrin Falls, Ohio.—*Roofing-Fabric.*—October 12, 1869.

Claim.—1. The combination of shellac-coated paper, or felt, with an oleaginous paint and cement, or either of them, substantially as set forth.

2. The application of shellac to paper, cloth, or felt, singly therewith, preparatory to the application of a coating of oleaginous paint, or in combination with said paint, substantially as described and for the purpose specified.

95,635.—Carl August Baumgart, Allegheny City, Pa.—*Lubricator.*—October 12, 1869.

Claim.—The combination of a strainer, C, located between the cap and body of the cup, to arrest the impurities of the oil as it flows into the vessel, with a cup, A, to serve as a reservoir, to retain the oil while it is being fed to the object intended, and the tubes *d f*, to graduate the discharge of the said oil with greater or less rapidity, all being arranged, with respect to each other, as shown and described.

95,636.—Robert Batting, Albany, N. Y.—*Base-Burning Stove.*—October 12, 1869.

Claim.—The combination of the convex cap R with the upper end of the pipe F, to distribute the coal as it passes from the reservoir K, substantially as herein shown and described.

95,637.—William Baxter, Newark, N. J., assignor to William D. Russell, same place.—*Steam-Engine.*—October 12, 1869.

Claim.—1. The combination, with each of two or more steam-cylinders, which operate at different pressure, and exhaust one into the other, as specified, of a boiler which shall generate steam at a pressure corresponding with that at which its cylinders are to work, substantially as herein described.

2. The combination, with a series of two or more engines, working at different pressures, and united so that each cylinder shall exhaust into the cylinder having the next lower pressure, of a series of two or more boilers, arranged substantially as herein described, whereby the fire, and other products of combustion, shall pass from one boiler to the other, and produce in said boilers pressures corresponding with those in their respective cylinders, substantially as set forth.

3. In a series of two or more engines, combined with two or more boilers, operating at different pressures, as described, driving the piston of the second or subsequent cylinder by means of steam generated in that boiler having a corresponding pressure with said cylinder, in conjunction with the exhaust steam from the cylinder immediately preceding, the one supply of steam being auxiliary to and complementary of the other, as set forth.

4. Feeding the water to a series of two or more boilers, generating steam at different pressures, and united, as described, by causing the water to first enter the lowest-pressure boiler, and feeding it thence to the higher-pressure boilers, substantially as herein specified.

5. The herein-described arrangement of the high and low pressure engines, and their corresponding boilers or steam-generators, the same being constructed and connected together, substantially as shown and set forth.

95,638.—Edgar M. Birdsall, Penn Yan, N. Y.—*Harvester-Cutter.*—October 12, 1869.

Claim.—1. Attaching the cutters of a reaping or mowing machine to the cutter-bar, substantially in the manner shown and described; that is to say, by means of the plate B, orifice D′, rivet F, and hooks C, or either of their equivalents, substantially as herein described.

2. The button, having a depression upon the under side of its head, engaging with a corresponding projection upon the top of the cutter, to prevent the turning of the button when the machine is in use, substantially as herein shown and described.

95,639.—Byron Bisbee, North Waterford, Me.—*Grindstone-Frame.*—October 12, 1869.

Claim.—The described arrangement of the stone B, gear *a*, gear *d*, shaft *e*, friction-rollers *f g*, and water-receptacle *h*, with its valve and spout, as and for the purposes herein described.

95,640.—John Stricker Bradford, New York,

N. Y.—*Ore-Concentrator and Amalgamator.*—October 12, 1869.

Claim.—1. The construction and form of concentrator and amalgamator, in the combination of all their parts, and in the combination of the two as one machine, either being convertible into the other, as before described in this specification.

2. The wheel-arms, in their alternating sections, constructed alike for both concentration and amalgamation purposes.

3. The concentrating-chamber.

4. The waste, as arranged at *h* and *g*.

5. The water-discharge, as at *w*.

6. The valve-discharge, as at *x*, in the amalgamator, all constructed substantially as herein described, and for the purpose set forth, but not confining myself to absolute dimensions or materials, or relative positions of the points of feed or discharge

95,641.—James B. Brewster, Flushing, N. Y.—*Draught-Bar for Vehicles.*—October 12, 1869.

Claim.—The whiffletrees, evener-bars, and other draught-bars of vehicles, made of wood, with metal plates inserted in the wood, between the layers or cheeks of the same, substantially as herein shown and described.

95,642.—James B. Brewster, Flushing, N. Y.—*Supporting-Bars for Vehicles.*—October 12, 1869.

Claim.—The axle-beds and other supporting-bars of wheeled vehicles or sleighs, provided with metal plates *b*, which are interposed vertically between two layers or cheeks of wood, substantially as herein shown and described.

95,643.—James Bridger, Newark, N. Y.—*Railway-Rail Chair.*—October 12, 1869.

Claim.—A symmetrical railroad-chair, constructed substantially as herein set forth; that is to say, of two plates, *a* a^1 *b* b^1, each having a flat base and one lateral flange, formed as described and shown, and the lower plate provided with a recess or socket, *e*, to receive the edge *m* of the upper plate, when employed in connection with spikes driven through holes *c c*, arranged as described, the whole constituting a chair to receive and securely hold the rail, substantially in the manner specified.

95,644.—Warren Brown, Sandusky, Ohio.—*Heat-Radiator.*—October 12, 1869.

Claim.—1. The star *b b b b b*, Fig. 1, as described.

2. The star *g g g g*, Fig. 2, and *g*, Fig. 4, as described.

3. The bottom *c c*, and the surrounding side *a a a a*, the pipe *d d d*, the plate E, and the cover I, in combination with the star *b b b b b*, and with each and every other member of this combination, as described.

4. The bottom *f f*, and the surrounding side *f f f f*, and the pipe *h*, and the cover K, in combination with the star *g g g g*, Fig. 2, and *g*, Fig. 4, and with each and every member of this combination, as described.

5. The combination of the combination with the star *b b b b*, with the combination with the star *g g g g*, Fig. 2, and *g*, Fig. 4, as described.

6. The pipes *j j j*, Fig. 2, and *j j*, Fig. 4, in this combination, substantially as described, and for the purposes herein set forth.

95,645.—J. Brunner, New York, N. Y.—*Casting Hollow Articles.*—October 12, 1869.

Claim.—Making hollow castings by inserting in molten metal a chill-mold, A, having an air-passage or passages, *c*, in its upper side, and passage or passages B in its lower side, and then withdrawing the same when the shell is formed, to allow the central or unchilled portion of metal to escape, substantially as herein set forth.

95,646.—William Bunton, Pittsburgh, Pa., assignor to himself and George W. Jope, same place.—*Blank for Ax-Polls.*—October 12, 1869.

Claim.—As a new article of manufacture, a bar of iron, rolled to the shape of a continuous undivided series of blanks for "ax-heads," the fiber of the metal running lengthwise of the bar and ax-poll, as herein described.

95,647.—Hiram M. Burdick, Ilion, N. Y.—*Hay-Tedder.*—October 12, 1869; antedated May 19, 1869.

Claim.—In combination with the rocking fork-rod D, the continuous double-flanged cam *r*, roller *s*, bar J, and crank *t*, constructed and arranged to operate substantially as described, for the purpose set forth.

95,648.—Victor H. Buschman, Baltimore, Md.—*Velocipede.*—October 12, 1869; antedated September 29, 1869.

Claim.—1. The arrangement of the seat-frame E, suspended beneath a cranked axle, C, of transporting-wheels A A, and sustained at a point in rear of seat S, upon supporting-wheel F, substantially as described.

2. The tubular hand-slides *h h* on cranks C′ C′ of axle C, in combination with pawls applied to these cranks, and ratchets applied to the wheels A A, and a rider's seat, suspended beneath said axle, substantially as and for the purposes described.

3. The treadle or vibrating foot-board G, and connecting-rod J, in combination with the cranked axle C of two transporting-wheels, and a support for the rider, beneath this axle, substantially as and for the purposes described.

4. The flanged collars *n n*, applied to the hubs of wheels A A, and adapted to serve as ratchets for pawls *b b* on cranks C′ C′, and also as a means for suspending the front part of seat-frame E beneath the axle C, substantially as described.

95,649.—C. A. Buttles, Milwaukee, Wis.—*Stove-Pipe Thimble.*—October 12, 1869.

Claim.—A ring, head, or cylinder for stove-pipe holes, composed of an upper and an under cast-iron rim, with openings through them, as and for the purpose described, the upper rim flat and flanged, the under one conical or flaring, and the two held together and sustained by the outer band C and the inner band D, as described and represented, and for the purposes and objects set forth.

95,650.—C. A. Buttles and Dennis Murphy, Milwaukee, Wis.—*Machine for Bending Sheet-Metal for Cornices, &c.*—October 12, 1869.

Claim.—1. In a machine for bending sheet-metal cornice, the combination of the bed, clamp, and hinged wings or sides D E, arranged and operating in the manner herein described and represented.

2. In combination with the bed, clamp, and hinged wings or side-pieces, the removable and replaceable pattern-pieces *g h*, or their substitutes, for forming the smaller members of cornice, substantially as herein described.

95,651.—H. B. Cage, Madison Station, Miss.—*Cotton-Chopper and Scraper.*—October 12, 1869.

Claim.—1. Attaching the chopper K, and its shaft J, to an ordinary plow-beam, by means of the bent arms M M′ and screw-nuts *o o*, the several parts being combined and arranged substantially as and for the purposes specified.

2. Attaching the scraper N to the standard C by a shank or landside, N′, and a bolt, *n*, arranged as set forth, so that by means of a vertical rod, P, and screw-nut, *p*, operating in connection with said parts, as described, the inclination of the scraper can be adjusted at pleasure.

3. The device as a whole, consisting of the beam A, plate G, wheel H, rim I, shaft J, chopper K, arms M M′, scraper N, post C, rod P, brace D, handles B B, and round E, all constructed and operating substantially as and for the purposes specified.

95,652.—A. H. Clark, Otisville, Mich.—*Car-Coupling.*—October 12, 1869.

Claim.—1. In combination with the draw-head of a railroad-coupling, the block B, operating on inclines in the chamber E, substantially as shown and described, and for the purposes set forth.

2. The arrangement of the block B and chamber E, in combination with a railroad-coupling, substantially as shown and described.

95,653.—William H. T. Clark, San Francisco, Cal.—*Steam-Engine.*—October 12, 1869.

Claim.—1. The elongated piston I, and the stationary packing-rings L, substantially as and for the purpose herein described.

2. The interior linings or cylinders H, made larger than the piston, and the false heads F F, substantially as herein described.

3. Forming the packing of one or more series of rings, placed loosely within a case which is stationary in the cylinder, substantially as herein described.

4. Constructing the piston so that steam can be admitted at any point in the cylinder within its stroke, and allowed to circulate around the piston, substantially as herein described.

5. The valve C, having the double walls O O, substantially as herein described.

95,654.—S. Clough, Monmouth, Me. — *Roof-Bracket.*—October 12, 1869.

Claim. — 1. The compound vertical upright C, formed by a combination of bar D, slotted adjustable bar E, and clamping-screw and nut E, as set forth.

2. The combination, with a rigid metallic strap, H, of a hinged base-plate, G, centrally perforated claw I, and binding-screw J, all operating as described, to fasten a wooden bar, horizontally or vertically, to a shingle roof.

3. In combination with a roof-bracket, the adjustable hinge-connection, as seen at K, substantially as described.

4. A right-angled roof-bracket, consisting of the rigid horizontal bar B slotted near one end, and provided at the other with a fastening-device, and an upright, C, perpendicular thereto, and adjustable in altitude, all as specified.

95,655.—George L. Coburn, Hartford, Conn.—*Calendar.*—October 12, 1869.

Claim.—The removable calendar-card C, in combination with the permanent back B, and clips *l m n o*, when the several parts are arranged and constructed, with reference to each other, substantially as and for the purpose described.

95,656.—J. K. Collins, Hartford, Vt.—*Hay-Tedder.*—October 12, 1869.

Claim.—1. The combination of the crank-shaft, arms, fork-handles, pivoted rings, swiveled brackets, and tilting-frame, all operating together in the manner described.

2. The combination of the bent lever J, connecting-bar K, and curved rack or catch-bar L, with the frame F, and tilting-frame H, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the lever B′ and bent lever A′ with the spur-wheel Y and frame F, substantially as herein shown and described, and for the purpose set forth.

95,657.—Nathan Cope, New Waterford, Ohio.—*Fruit-House.*—October 12, 1869.

Claim.—A fruit house, constructed, as hereinbefore described, with bins, the walls of which are formed of movable slats, constructed, arranged, and operating substantially as set forth.

95,658.—James Cowden, La Prairie Centre, and Daniel Brown, Akron, Ill.—*Excavator.*—October 12, 1869.

Claim.—1. Broadly, the guides D, constructed as described, to give direction to the earth when passing through elevators B, as herein specified.

2. The combination of elevators B, rim V, and scraper C, with guide D, substantially as set forth.

3. Making the guide D adjustable, substantially as herein set forth.

95,659.—E. M. Crandal, Alton, Ill. — *Hemp-Break.*—October 12, 1869.

Claim. — 1. The operating of hemp-breaks, by means of a pitman or its equivalent device, wherein the motion is made a yielding one, by means of the spring *c*, substantially as shown and described.

2. The combination of the double-acting break *a′*, its rock-shaft B, arm B′, and springs *c′*, substantially as and for the purposes set forth.

95,660.—James M. Crockett, Newbern, Va.—*Fire-Place.*—October 12, 1869.

Claim.—The arrangement of the side-plates B B, the air-chamber E, cold-air pipe G, box H, with its upper and lower dampers J and K, when constructed and arranged as herein described, and for the purposes set forth.

95,661.—Edward Davidson, Boston, Mass.—*Water-Tuyere.*—October 12, 1869.

Claim.—1. The combination and arrangement of the tuyere A, pipe-section E, section G, tank and tightening-nut K, substantially as specified.

2. The combination and arrangement of the tuyere A, pipe-section E, cap M, and nut K, when the said cap is arranged for the attachment of water-pipes P, substantially as specified.

95,662.—Job A. Davis, Watertown, N. Y.—*Steam Cheese Vat.*—October 12, 1869.

Claim.—1. The process, herein described, of applying the controlling steam for heating the milk-pans of cheese-vats, the same consisting in passing it through a textile, fibrous, or equivalent material, placed between the steam-chamber and the bottom of the pan.

2. In combination with a cheese-vat, a finely-perforated metal tube or diaphragm beneath the milk-pan, and covered with a textile or equivalent material, substantially as and for the purpose described.

3. In combination with the steam-chamber of a cheese-making apparatus, an open-mouthed bent tube, substantially as and for the purposes described.

95,663.— Otis Dean, Richmond, Va.—*Vise.*—October 12, 1869.

Claim.—1. Forming a hole for the handle in the butt-ends of the screw, and extending said ends beyond the jaws, so as to apply the lever to either end, substantially as described.

2. The combination, with the vise-jaws, of the socketed bracket C, grooved shank A, and set-screw E, as and for the purpose set forth.

95,664.—John De Frain, Philadelphia, Pa., assignor to himself and William Callahan, same place.—*Cooking-Stove.*—October 12, 1869.

Claim.—1. The vertical sliding door G, combined and arranged with the front plate F, substantially in the manner and for the purposes herein described.

2. The construction of the flues I I and I′, with vertical side-plates *f f*, in connection with the horizontal plates *e*, for gaining additional heating-surface, as above specified.

3. The curved plates *h h* on the bottom A, arranged and operating, in relation to the flues I I and I′, as above described.

95,665.—Thomas S. Dickerson, Chicago, Ill., assignor for one-half his right to Rodney M. Whipple, same place.—*Manufacture and Application of Gas from Petroleum, &c.*—October 12, 1869.

Claim. — 1. The generator, composed of steam-space E E, tubes A A, oil-space *b b*, steam-pipe D, when used for the manufacture of gas from petroleum and any other oleaginous substance, substantially as shown, and for the purpose set forth.

2. The receiver K, with piston and rod to compress the gas, substantially as shown, and for the purpose set forth.

3. The gas-holder, when combined with the use of elastic sponges, substantially as shown, and for the purpose set forth.

4. In the apparatus herein described, the introduction of superheated steam directly into the oil, for the purpose of forcing out the gas as fast as generated, and to prevent the carbonizing in the pipes, substantially as shown, for the purpose set forth.

5. The use and application of petroleum, or other oleaginous substance, for generating steam, and for heating and illuminating purposes, by the combination and process herein described, substantially as shown, and for the purpose set forth.

95,666.—Martial Dimock, Newark, N. J., assignor to Samuel S. Barnaby and David Millard.—*Apparatus for Exhibiting Photographs.*—October 12, 1869.

Claim.—The connection of the cylinders *b* and *c*, substantially in the manner and for the purpose

hereinabove set forth, and the tension-spring in the cylinder, when used in combination therewith.

95,667.—EDWARD DITHRIDGE, Pittsburgh, Pa.—*Lamp-Chimney.*—October 12, 1869.

Claim.—The within-described lamp-chimney, its lower end or base being turned over and welted, substantially as set forth.

95,668.—WILLIAM JAMES DODGE, Syracuse, N. Y.—*Evaporating Salt Water, &c.*—October 12, 1869.

Claim.—The use of currents of air forced into and discharged through the liquid to be evaporated, in connection with or as auxiliary to the ordinary boiling or solar-evaporation methods, substantially as described.

95,669.—JOHN W. DOUD, Ward's Corners, Iowa.—*Combined Seed-Sower and Cultivator.*—October 12, 1869.

Claim.—1. The combination of the vibrating stirrer-arm K with the hopper A′, the latter being constructed and adjusted, in all its parts, as shown and described.

2. The combination of the above parts, constituting the seeder, with the axle B and inclined bars J, as and for the purpose specified.

95,670.—HENRY DOUGLAS and JAMES DOUGLAS, Glasgow, Scotland.—*Machine for Making Cop-Tubes.*—October 12, 1869.

Claim.—1. The combination of the mandrel H, adjustable arm I, and bracket K, as and for the purpose set forth.

2. The combination of a mandrel, H, and supporting-roll G, with a pair of folding-rolls, L M, constructed as described, and arranged respectively, with reference to the narrow and wide flaps of the tube-blank, and to operate upon each, to fold one end of the material under the other, in the manner described.

3. The combination, with the preliminary and finishing folders L, M, N, O, and mandrel H, all operating together as described, of a brushing-roller, P, acting upon the tube at an angle to its line of movement, and causing the contiguous pasted faces of the flap edges to coincide and adhere at every point, as set forth.

95,671.—JOHN S. DUNHAM and JAMES GREEN, Saint Louis, Mo.—*Oven.*—October 12, 1869.

Claim.—1. The arrangement of the passages C and D′, extending under the full width of the oven-floors, with flues G or D′, and the passage H, extending over the full width of the oven-crown, for distributing and equalizing the heat above the oven, substantially as set forth.

2. The side flues N, with dampers *n*, to carry heated air into the baking-chamber, in combination with the flues M′ and dampers *m′*, to carry off the heated air, when necessary, substantially as set forth.

3. The air-ducts O, controlled by proper slides, combined with the passage C, flues D, and passage E′, and side flues N, to carry air into the baking-chamber, substantially as set forth.

95,672.—W. C. EDENFIELD, Savannah, Mo.—*Stone-Drill.*—October 12, 1869; antedated September 27, 1869.

Claim.—The eyes G G, constructed as described, with the screw-shanks *d*, and the internal friction-rollers *e*, and adapted for adjustment laterally in the horizontal grooved bars *c*, as herein described, for the purpose specified.

95,673.—RUSSELL FISK, New York, N. Y.—*Compound for Pavements, Roadways, &c.*—October 12, 1869.

Claim.—1. The improved compound, consisting of the ingredients above stated, mixed in the proportions as described, either in whole, or with the exceptions stated as to the oils, tar, and pitch, substantially as specified.

2. The combination of the herein-described improved compound with sand, gravel, broken stone, cinders, and other like matters, in the construction of solid pavement, artificial stone, tile, and brick, substantially as specified.

95,674.—F. R. FOSTER, Brandon, Wis.—*Grain-Separator.*—October 12, 1869.

Claim.—1. The method herein described of separating wheat from oats, or other substances of lighter specific gravity.

2. The coffin-shaped perforated trough, constructed as described, for the purposes set forth.

3. The combination of the spout, the deflectors, and the trough, all constructed as set forth, for the purpose specified.

4. Constructing the screen with a diminishing number of holes toward the lower end, as and for the purpose set forth.

95,675.—E. W. GALE, Monroeton, Pa., assignor to himself and J. G. GALE, same place.—*Horse Cant-Hook.*—October 12, 1869.

Claim.—The herein-described horse-power cant-hook, consisting of an upright, A, with hooks D D′ at different elevations, the chain E with hook F, the hook B, and fulcrum-block C, when the latter has a straight base, and the chain E is made adjustable in its attachment to the upright, all as herein set forth, and for the purpose specified.

95,676.—FRANCIS M. GARDNER, Brown Township, Ohio.—*Clod-Fender.*—October 12, 1869.

Claim.—The mode of constructing and manner of attaching a guard or clod-fender to a plow or cultivator, as shown and described.

95,677.—S. B. GARDNER, Freeport, Ill., assignor to himself and ABRAHAM H. LEEDY.—*Railway-Car-Brake Shoe.*—October 12, 1869.

Claim.—1. In combination with the friction-plate C and block A, the plate D P, for preventing the block from taking fire, as set forth.

2. In combination with the friction-plate C and plate D P, the thimbles L, put around the bolts J J, as and for the purpose set forth.

95,678.—JOHN L. GRIFFIN, Ridding, Conn.—*Coal-Ash Sifter.*—October 12, 1869.

Claim.—The arrangement of the self-feeding bottom L, in combination with the endless screw G, pulley and gear H I, chain N, rod and catch M O, and spring P, in the manner substantially as and for the purpose set forth.

95,679.—HIRAM L. GULDIN, Robeson Township, Pa.—*Soap.*—October 12, 1869.

Claim.—The manufacture of a new and improved soap, of the ingredients, in the proportions, and for the purposes set forth.

95,680.—CHARLES P. HALL, Calhoun, Ky.—*Hay-Loader.*—October 12, 1869.

Claim.—1. The arrangement of the ratchet-wheels I, and pawls, with the wheels P, the cords M, swinging arms N, pulleys Y X, loop V, and rake, all substantially as specified.

2. The combination, with the detachable rack H, of the looped cords U, block V, shaft W, blocks X Y, and trip-lever Z, when all arranged substantially as specified.

95,681.—JACOB J. HARPEL, Lebanon, Pa.—*Corn-Planter.*—October 12, 1869.

Claim.—1. The combination of the cut-off B with the wheel A, so arranged as to stop the discharge of seed when the slide or cut-off is at rest, and during its stroke to let the seed pass through the slot B′, by the operation of the seed-wheel A, substantially as set forth.

2. The wheels R and short axle fastened to the front of the boot, substantially as set forth.

3. The arrangement and combination of the pulleys O, chains L and N, lever M, boot T, and gum spring F, all constructed and operated substantially as set forth.

95,682.—BRADDOCK R. HATHAWAY, Mormon Island, Cal.—*Key-Guard.*—October 12, 1869.

Claim.—The "key-keeper," composed of the plate A and hooks *b b*, to place over the bend or rim of

the key, the cam D for fastening it, and the spring and hook for securing it to the door.

95,683.—E. W. Haven, Brandon, Vt.—*Hand Corn-Planter.*—October 12, 1869.

Claim.—1. The gauge *a* and screw *r*, in combination with the slide-valve A, substantially as shown.

2. The arrangement and combination of the lever C, slide-valves A and B, springs D and E, gauge *a*, tube H, hopper *h*, and levers G L, substantially as and for the purposes set forth.

95,684.—Henry Hayward, New York, N. Y.—*Skirt.*—October 12, 1869.

Claim.—As a new article of manufacture, a skirt composed of a fabric whose warp and weft, one or both, are partially composed of spun horse-hair yarn, substantially as described.

95,685.—Joseph C. Henderson, Troy, N. Y.—*Base-Burning Stove.*—October 12, 1869.

Claim.—1. The supply-cylinder or magazine C, constructed with double walls, inclosing the air-chamber *a a*, with the apertures *b b*, the perforated annular tube or air-chamber F, and the air-flues E and G, all arranged and combined substantially as hereinbefore specified.

2. The oven D, in combination with the cylinder C, air-chamber *a a*, and air-flue or passage E, substantially as and for the purposes hereinbefore described and specified.

3. The said oven D, cylinder C, air-chamber *a a*, cover H, apertures *g g*, and damper I, all arranged and combined substantially as hereinbefore specified and set forth.

95,686.—Samuel A. Hill and Charles F. Thumm, Oil City, assignors to themselves and Oliver P. Scaife, Pittsburgh, Pa.—*Apparatus for Heating Puddling-Furnaces.*—October 12, 1869.

Claim.—1. An apparatus for burning gaseous fuel or matter, said apparatus consisting of chambers A and B, pipes C and D, and air-inlets *e* and *f*, constructed, arranged, and operating substantially as herein described, and for the purpose set forth.

2. In combination with the above, a gas or exhalating furnace or apparatus, for supplying the chambers A and B with gaseous fuel or matter for burning, as herein described.

3. Drawing the gaseous fuel or matter from a furnace or other apparatus, and then forcing it into chambers A and B, through the medium of compressed air, as herein described, and for the purpose set forth.

95,687.—Samuel A. Hill and Charles F. Thumm, Oil City, assignors to themselves and Oliver P. Scaife, Pittsburgh, Pa.—*Device for Generating Steam in Steam-Generators.*—October 12, 1869.

Claim.—1. The construction and arrangement of the hereinbefore-described devices, for commingling in chambers A and B heated hydrocarbon, heated air and superheated steam, so as to form a gaseous or vaporous admixture for burning, substantially as herein described.

2. The combination of the pipes *e*, *f*, *g*, and *h*, and chambers A and B, constructed, arranged, and operating substantially as herein described.

95,688.—Samuel A. Hill and Charles F. Thumm, Oil City, assignors to themselves and Oliver P. Scaife, Pittsburgh, Pa.—*Apparatus for Generating Steam in Boilers.*—October 12, 1869.

Claim.—The apparatus herein described for generating steam by consuming hydrocarbon and other matter susceptible of evolution or vaporization, by commingling it, in chambers A and B, with an active current of steam or air, or active currents of steam and air combined, substantially as herein described.

95,689.—James Howard, West Manchester, Pa.—*Machine for Tarring Paper for Roofing.*—October 12, 1869.

Claim.—The arrangement of the reservoir A, windlasses B and C, adjustable rollers D, scrapers *i* and *h*, and rollers *e* and *f*, constructed, arranged, and operating substantially as herein described, and for the purpose set forth.

95,690.—Lymon Howe, Worcester, assignor to himself, Jonathan Luther, same place, and Moses W. Wheeler, Millbury, Mass.—*Road-Scraper.*—October 12, 1869.

Claim.—1. A road-scraper consisting of the shaft attached to the scraper-board at E, the arc A, pivoted also to the board, and having holes to allow the shaft or thills to be turned aside, the ratchet-bar B and round C, turning in the handles, all constructed and arranged to operate as and for the purpose set forth.

2. In combination with such a scraper, the ears D D, as and for the purpose set forth.

95,691.—William M. Howland and George L. Howland, Topsham, Me.—*Hoisting-Apparatus.*—October 12, 1869.

Claim.—1. The combination, with the leg A, either permanently or detachably connected to the legs B, and arranged for supporting the chain shaft E in the parts D of the divided shank of the connecting-hook, as described, of the chain-shaft, ratchet-wheels, pawls, pawl-arms, pawl-lever, and connecting-rods, substantially as specified.

2. The combination, with the pawl L, of the tripping sliding spring N O, substantially as specified.

95,692.—George R. Johnson, Wilmington, Del.—*Station-Indicator.*—October 12, 1869.

Claim.—The combination of the four (4) toothed ratchet *g*, pawl *i*, and spring *j*, with the rollers *c c'* and apron *d*, when the names of the same stations are arranged on both sides of said apron in contrary series, with intervening spaces, which vary in width to compensate for the increase in the diameter of the taking-up roll, all substantially as set forth.

95,693.—Edward Kaylor, Pittsburgh, Pa.—*Drop-Hammer.*—October 12, 1869.

Claim.—One or more pins *o o'*, projecting from a revolving disk or arms, on the end of a horizontal shaft, *h*, in combination with a vertical drop-shaft *e*, and its bracket, *m*, so arranged that the pin or pins, in revolving to raise the drop-shaft, shall operate during one-half of its revolution, substantially as and for the purposes hereinbefore described.

95,694.—James Kievlan, Chicago, Ill., assignor to himself and William Wisdom, same place.—*Lathe.*—October 12, 1869.

Claim.—1. The stationary rest W, provided with a series of slotted studs, 1, 2, and 3, for sustaining and operating the cutters *h*, when constructed and operating as described.

2. The tool-holder X, provided with cutter *h*, thumb *j*, and steady-rest *k*, in connection with spring *i*, attached to stationary rest W, when constructed and operating as and for the purposes specified.

3. The arrangement of the several devices of the head-spindle F, consisting of the chuck N, the spring O, the pin *m*, and the recess *f*, when constructed and operating as shown and described, and for the purposes set forth.

4. The combination of the several devices of the tail spindle G, consisting of the chuck N', the spring O', the key-way *g*, the pin *e*, and the guide-pin P, when constructed and operating as and for the purposes described.

95,695.—John King, Warren County, Ohio.—*Liniment and Medical Compound.*—October 12, 1869.

Claim.—The preparation of a medical compound, which I denominate "King's Magic Ohio Liniment," of the ingredients, in the proportion, and for the purposes set forth.

95,696.—Emil Kunzendorf, New York, N. Y.—*Fire-Proof Paint.*—October 12, 1869.

Claim.—The fire-proof paint, composed of the ingredients substantially as herein described.

95,697.—M. C. Lawless, Montana, Iowa.—*Railway-Car.*—October 12, 1869.

Claim.—Clamping the timbers B to the stringers.

A by detachable clamps, substantially as herein shown and described.

95,698.—George A. Lloyd and Charles A. Stewart, San Francisco, Cal.—*Anchor.*—October 12, 1869.

Claim.—In combination with anchors having movable arms, flukes, or palms, the barb, beak, or projections *a a*, substantially as described.

95,699.—William W. Loomis, Wilkesbarre, Pa.—*Railway-Brake.*—October 12, 1869.

Claim.—The revolving brake-wheels A, A′, or A″, at either or both ends of a railroad-car, mounted upon the adjustable axle-tree B, to operate upon the car-wheels 1′, 2, by means of the slots *u* or *u′*, suitable springs *s s″*, wire ropes or chains *c c c*, or by any other suitable devices employed for working car-brakes.

95,700.—Ellis Luther, West Troy, N. Y.—*Machine for Wiring Hinges.*—October 12, 1869.

Claim.—1. The combination and arrangement together, in the manner described, of the jaws K L, discharging-follower *e*, and the mechanism by which the movable jaw L is advanced and retracted.

2. The combination of holding-jaws K L, with block J, slatted side P, recessed rotating cylinder O, hopper M, and reciprocating plunger I, all constructed and arranged as set forth.

3. The receiving-plate J and movable jaw L, in combination with the slatted side P, the recessed rotating blank-feeder O, and hopper M, all constructed and arranged as specified.

4. The construction and arrangement, with the reciprocating plunger I, of movable rest-blocks *g*, and chains *n*, as and for the purpose specified.

95,701.—Peter Lutteke, Saint Louis, Mo.—*Vehicle Propelled by Hand.*—October 12, 1869.

Claim.—The hand-lever I, combined with the vibrator L and N by the toggle-links *i* i^1 i^2 i^3, the fulcrum K, and rods L′ and N′, collar M and crank B′, operating substantially as and for the purposes set forth.

95,702.—Benjamin F. Mann, Oakland, Cal.—*Chimney.*—October 12, 1869.

Claim.—The combination, with two or more metallic chimney-flues, E and F, of a base-section, A, provided with a removable partition, consisting of the vertical plate G, the horizontal plate *g*, having openings *h*, and the cross-plate *i*, the same being constructed and arranged substantially as herein described.

95,703.—William P. Martin, Millersburgh, Ky.—*Apparatus for Imparting Age to Whisky and other Spirits.*—October 12, 1869.

Claim.—The swinging-frame A, in combination with shaft D and crank-axle E, the whole operated as described.

95,704.—William C. Mason, Beaver Falls, Pa., assignor to himself and J. H. Nichols, same place.—*Lock-Nut.*—October 12, 1869.

Claim.—In combination with the right and left-hand nuts C B, and the bolt A, the washer D, substantially as described, for the purpose specified.

95,705.—Mark McCammon, Chicago, Ill.—*Railway-Car-Axle Box.*—October 12, 1869.

Claim.—1. The combination of the inclined notched block G and the adjustable notched wedge H, either with or without the strips *i j*, with the shell A and journal-box F, substantially as herein shown and described, for the purpose specified.

2. Adjusting the lateral movement of the axle to regulate the motion of the cars from side to side, substantially as herein shown and described, for the purpose specified.

3. In combination with the shell A and axle E, the collar B, gasket C, and adjustable flanged collar D, substantially as herein shown and described, for the purpose specified.

4. In combination with the shell A, the convex projection M and convex guides N, substantially as herein shown and described, for the purpose specified.

5. In combination with the shell A, the passage or channel K, in which the oily residuum from the shell is received, and from which it is discharged, substantially as herein shown and described.

95,706.—V. K. McElheny, Pittsburgh, Pa., assignor to himself, Ernest Frank, and John B. Adt.—*Combined Pipe-Tongs and Wrench.*—October 12, 1869.

Claim.—The arrangement of the main stem *a* with the movable jaw *e*, oblique slot *g*, pawl *b*, band *h*, and lever *c*, substantially as described.

95,707.—James A. McGillivrae and C. O. Wheeler, Matteson, Ill., assignors to C. O. Wheeler, same place.—*Hay and Cotton Press.*—October 12, 1869.

Claim.—The combination of a vertically-sliding entrance-door, L, hinged upper and lower doors O P, to admit of a quick and easy discharge of the pressed bale, and the yielding end walls, all constructed and fitted together as described, to form an improved bale-pressing box.

2. The subject-matter of first clause, in combination with an oblong rectangular case or box, A, and a horizontal plunger, all as shown and described.

3. The arrangement, with the case A, of the yielding end walls V, substantially as specified.

95,708.—Albert G. Mead, Boston, Mass., assignor to himself, Charles J. Addy, and George H. Wood, assignors to Albert G. Mead, Charles J. Addy, and Milton A. Kent, same place.—*Lacing-Eye.*—October 12, 1869; antedated September 27, 1869.

Claim.—1. A transverse eye, H, and plate *c*, as described, which serve a double purpose, as a stay for the leather and for holding a loop or bight for the lacing.

2. A double lacing-eye, *f*, and plate *c*, constructed and applied in the manner and for the purpose substantially as described.

3. The combination of the transverse eye H and plate *c*, with eyelets *a*, when applied to the leather by plate *c*, for the purpose and substantially as described.

4. The combination of transverse eye G with eyelets *a*, substantially as described.

5. The combination of transverse eye G and H with eyelets *a*, for the purpose and substantially as described.

95,709.—Emil F. Meyer, Brooklyn, N. Y.—*Mode of Preparing Ornamental Transparent Letters for Signs, &c.*—October 12, 1869; antedated October 5, 1869.

Claim.—The device and making of transparent writing or painting, combining the beauty and usefulness of opaque and transparent painting, as heretofore described, using for the purpose the aforesaid ingredients and mode of process, or any other, and other material, for the same, and which will produce the intended effect.

95,710.—Elie Moneuse and Louis Duparquet, New York, N. Y.—*Coffee-Pot.*—October 12, 1869.

Claim.—The coffee-pot or holder, with the cocks *m* and *n*, introduced, the one higher up than the other, for the purposes and as specified.

94,711.—James A. Morrison, Brady's Bend, Pa.—*Railway-Car Coupling.*—October 12, 1869.

Claim.—The combination of the rods H and K, levers I and J, and rod L, with each other and with the bumper B, pivoted plates E, and springs G, substantially as herein shown and described, and for the purpose set forth.

95,712.—William F. Moore and Jacob A. Bowers, Channahon, Ill.—*Wagon-Box.*—October 12, 1869.

Claim.—The combination of the metal ends B, metal plates A, thumb-catches E, end-boards C, and side-boards D, arranged and constructed as and for the purposes set forth.

95,713.—Porter C. Moulton, New Haven, Conn.—*Neck-Tie-Retainer.*—October 12, 1869.

Claim.—As a new article of manufacture, a neck-tie-retainer, consisting of a metallic plate, with two tongues struck therefrom, and in one and the same piece therewith, as shown and described.

95,714.—J. H. MUDGETT, Camanche, Iowa.—*Grain-Binder.*—October 12, 1869.

Claim.—1. The combination, in a reaper-attachment, of the carrier E, elevator G, arms F, and stop or discharger L′, all substantially as specified.

2. The arrangement of the carrier E, bridge T, elevator G, spring-shifter treadle L, driving-shaft I, and pulleys for operating the elevators G, all substantially as specified.

3. The combination, with arm F on elevator G, of stop L, arranged to operate as set forth.

4. The rack O, arranged to swing over to and rest on the frame, as specified.

95,715.—GEORGE H. MUNROE, New York, N. Y.—*Preserving Meat for Pastry-Purposes.*—October 12, 1869.

Claim.—1. Preserving meat for pastry-purposes, by the use of saccharine sirup, substantially in manner as described.

2. Meat for pastry-purposes, prepared for preservation, shipment, and use, substantially as described.

95,716.—SAMUEL NASH, Boston, Mass., assignor to himself and JOHN M. DUNCAN, same place.—*Mode of Lubricating Journals.*—October 12, 1869.

Claim.—The combination, with the hollow journal perforated at *g*, and the retaining-nut *d*, with its corresponding perforation *h*, of the pin or screw *i*, which is inserted in said perforation, and serves not only as a plug to close the lubricating-chamber, but also as a stop to hold the nut in its proper position, as herein shown and set forth.

95,717.—PETER NOLING, Woodside, Wis.—*Wheelbarrow.*—October 12, 1869.

Claim.—1. The combination of the frame A, drive-wheel C, axle D, adjustable bearings E F, balancing-wheels G, double inclined bottom H, stationary ends I, and pivoted sides J, with each other, substantially as herein shown and described, and for the purpose set forth.

2. The ratchet O and pivoted pawl P, combined and arranged with the levers L, N, and K, as shown, whereby the sides J of the wheelbarrow may be adjusted and held open at the desired angle, to permit the discharge of the load from the car.

95,718.—JOHN D. O'CALLAHAN, Calhoun, Ga.—*Combined Wheelbarrow and Garden-Plow.*—October 12, 1869.

Claim.—1. The herein-described combination of the plow A E and wheelbarrow D G, as specified.

2. The herein-described manner of attaching the plow to the handles of the frame of the barrow, by means of the cross-piece *d*, leather strap *e*, link *f*, and braces *a a*, as shown and described.

95,719.—ALEXANDER OSBORN, Eagleville, Ohio.—*Milk-Cooler and Deodorizer.*—October 12, 1869.

Claim.—1. The combination and arrangement of the blower B, chute J, perforated or not perforated, and vat H, in the manner substantially as described, and for the purpose set forth.

2. The ice-box F, when arranged in relation to the blower B, and in combination therewith, in the manner as and for the purpose described.

3. An arrangement of devices, consisting of the wind-current generators, and a chute or chutes, as will produce a blast or current of air upon falling milk, as specified.

95,720.—J. W. PEARSON, Watertown, assignor to ALFRED B. ELY, Newton, Mass.—*Gas-Check for Ordnance.*—October 12, 1869.

Claim.—A gas-check for ordnance, constructed to operate substantially as described.

95,721.—GEORGE S. PECK, Towanda, Pa., assignor to himself and WILLIAM H. MORGAN, same place.—*Machine for Making Sheet-Metal Pans.*—October 12, 1869.

Claim.—1. In combination with a male and female die for swaging sheet-metal plates into pans, each pan being made entire out of one piece, the pulley H and sleeve N, provided respectively with the teeth *k k′* to form a clutch, the cam P on the sleeve N, the notch or recess *n* in the cross-frame J, and the spring O, all being constructed and arranged to operate in the manner substantially as and for the purpose specified.

2. Having two opposite sides or cleats C C of the female die applied in such a manner that they may be adjusted to vary the width of the spaces at the angles or corners of the female die, when said adjustable cleats are used in combination with a male die, F, arranged to operate (rise and fall) automatically, substantially as set forth.

3. The stops *o o*, on the pulley H, in combination with the buffers *p p*, substantially as set forth.

95,722.—JULIUS R. POND, New Hartford, Conn.—*Milk-Cooler.*—October 12, 1869.

Claim.—1. The construction and arrangement of the within-described milk-cooler, consisting of the inner and outer reservoirs A and B, inlet-pipe, for water, C, openings D and E, overflow-pipe F, central reservoir G, inlet and outlet pipes H and I, and spirals, Figs. 3 and 4, substantially as and for the purpose shown.

2. The combination of a movable spiral with one or more reservoirs or coolers, substantially as shown, and for the purpose specified.

3. The combination and arrangement of the pipes C and F and openings D and E with the reservoirs A, B, and G, substantially as shown and described.

95,723.—JULIUS R. POND, New Hartford, Conn.—*Milk-House.*—October 12, 1869.

Claim.—1. The arrangement of the double walls A and D, air-space E, openings *a a*, &c., and *x x*, &c., and ventilators H, for the purpose of ventilating a milk-room, substantially as herein shown and described.

2. The chamber I, rendered as nearly air-tight as practicable, by the use of double or other non-conducting walls, in combination with the mechanism for controlling the temperature of said room, consisting of the pipes *k k′* and *l*, all constructed and arranged substantially as and for the purpose shown.

3. The within-described milk-house, consisting of the double walls A and D, with openings *a* and *x*, roofs B and C, ceiling G, and ventilator H, when constructed and arranged substantially as described, and for the purpose specified.

95,724.—HENRY RAUSCH, Brooklyn, N. Y.—*Hydrant Stop-Cock Rod.*—October 12, 1869.

Claim.—The cast-iron head A, constructed substantially as herein shown and described, that is to say, recessed upon its lower edge to receive the shoulder of the valve-stem, and with an enlargement or projection, *a′*, upon its upper edge to receive the squared lower end of the rod B, substantially as and for the purpose set forth.

95,725.—F. S. REEFY and S. M. ZENT, Roanoke, Ind.—*Baking and Drying Stove.*—October 12, 1869.

Claim.—1. The radiating-drum B, provided with the return-flue, and arranged relatively to the stove, and with the air-openings C C′, all substantially as specified.

2. The arrangement, with the stove and oven F, of the inclined sides H, when provided with the air-passages I, and valves, substantially as specified.

3. The arrangement, in the side-walls, between the zinc lining G and the exterior sheet-metal, of the wood filling, substantially as specified.

95,726.—J. R. RENKIN, Hillsdale, Pa., assignor to himself and M. M. GRUMBLING, same place.—*Reversible Axle for Carriages.*—October 12, 1869.

Claim.—Providing the reversible spindle *e f* with the projections D, as herein described, and for the purpose set forth.

95,727.—EDWIN L. ROBBINS, Owego, N. Y.—*Fire-Box for Steam-Generators.*—October 12, 1869.

Claim.—The construction and arrangement of the tubular circulating cast-iron lining for fire-boxes and furnaces, with pipes B and B, substantially as herein described.

95,728.—L. M. Roby, Lcesville, Ohio.—*Foot or Bed Warmer.*—October 12, 1869.

Claim.—The arrangement herein described of the metallic heat-radiator A, with its projection E, and the cloth-covered non conducting cylindrical chamber, with its cap I and plug D, when applied as herein set forth.

95,729.—Thomas J. Rockwood, Saint Johnsbury, Vt.—*Machine for Milling the Knife-Edges of Scale-Beams.*—October 12, 1869.

Claim.—1. The notched supports *f f*, mounted in vertical guides in the blocks F^1, so that they may yield vertically downward to any required extent, being pressed upward by the action of the springs F^2, or their equivalents, the several parts being adapted to serve, relatively to each other and to the cutting-mechanism of a milling-machine, substantially in the manner and for the purposes set forth.

2. The cams *y*, and their operating-means, in combination with the yielding supports *f f*, all adapted to serve, in relation to each other and to the clamping and cutting mechanism in a knife-edge milling-machine, substantially as and for the purposes herein set forth.

3. The springs K^1, arranged, relatively to the clamps or cross-pieces H and to the supports G of a milling-machine, substantially as herein described.

4. The blocks Z^2, mounted, as represented, on the screws Z^1, and adapted to serve as represented, relatively to each other and to the cutting-mechanism of a milling-machine, for the purposes herein set forth.

95,730.—William H. Rogers, New York, N. Y.—*Friction-Match.*—October 12, 1869.

Claim.—A friction-match, with an inflammable coating applied below the ignitible end thereof, as and for the purpose specified.

95,731.—Sidney W. Rowell, Rutland, Vt.—*Screw-Propeller.*—October 12. 1869.

Claim.—The reciprocating propelling-screw, with attachments to hold it rigidly when moving in one direction, and to allow it to rotate freely when moving in the opposite direction, substantially as and for the purpose herein set forth.

95,732.—Franklyn Roys, East Berlin, Conn.—*Metallic Roofing.*—October 12, 1869.

Claim.—A roof of sheet-metal, one edge, or both, of the plates, of which is nailed through the projecting edge *d*, outside of the bent portion *c*, which forms the joint, and is connected to the adjacent sheet, as shown and described, to cover the nailed edge, substantially as set forth.

95,733.—J. Saxton and B. Saxton, Sumner, Ill.—*Process of Preparing Wool for Manufacture.*—October 12, 1869.

Claim.—The improved process for manufacturing wools into all kinds of colors and goods without the use of oil or grease in carding and spinning, substantially as herein set forth and described.

95,734.—Ph. I. Schopp, Louisville, Ky.—*Hot-Air Furnace.*—October 12. 1869.

Claim.—Connecting the pan A with the furnace B, cylinder G, forebay C, and reservoir D, in combination with float E and valve F, when arranged to operate as herein described.

95,735.—Ph. I. Schopp, Louisville, Ky.—*Boiler for Hydrating the Atmosphere of Apartments.*—October 12, 1869.

Claim.—1. Connecting the reservoir A with the air-chamber E, forebay C, and steam-chamber B, in combination with float F and valve V, when arranged to operate as herein described.

2. Connecting the apparatus in a permanent way with the top or sides of a stove, substantially as and for the purposes described.

95,736.—Charles Shea, Newark, N. J.—*Compensating or Equilibrium Spring.*—October 12, 1869.

Claim.—The spring E, when connected with the axle by straps F, and with the bearing-springs B by a rod, D, all arranged and operating as described.

95,737.—S. M. Sherman, Fort Dodge, Iowa.—*Window-Blind.*—October 12, 1869.

Claim.—1. The sliding-shaft *c*, provided with pinion b^3 and knob C, in combination with rack-segments b^2 and C′, arranged and operated substantially as described.

2. The slats a^1, constructed of sheet-metal and provided with the angular edges a^3 and a^4, as and for the purpose set forth.

3. The slats a^1, with the bars *b* and *c*, and connecting-rods b^1 and c^1, in combination with rack-segments b^2 and C′, arranged and operated substantially as described.

95,738.—Amos Smith, Springfield, Ohio.—*Harvester.*—October 12, 1869; antedated April 12, 1869.

Claim.—1. The bed-plate N, constructed with a curve, to admit of the passage and free play of the tongue, substantially as shown and described.

2. The combination of seat-support J, adjustable connecting-rod F, crank G, and hand-lever H, arranged and operating to raise the tongue and cutting-apparatus attached thereto, substantially as shown and described.

3. The combination of hand-lever H, segment S, crank G, guide-way L, and presser-foot K, operating substantially as and for the purpose described.

4. The supporting-bar O, attached flexibly, at one end to the collar of the box of the crank-shaft, and, at the other end, rigidly to the rear of the tongue and lng-plate B, substantially as shown and described.

5. The lifting-mechanism, consisting of seat-support J, adjustable connecting-rod F, crank G, segment S, hand-lever H, and bearing-chains *c* and *c′*, for raising and lowering the tongue and its attachments, by the weight of the driver and hand-lever combined, substantially as shown and described.

6. The draught-rod *k*, connecting the front of the frame with the rear of the tongue, (and its attachments,) to hold the same in position, as shown and described.

95,739.—Daniel Snell, Little Falls, N. Y.—*Permutation-Lock.*—October 12, 1869.

Claim.—1. The combination of the plates *a b c*, of which *a c* are the lock-plates, and *b* is the bolt, for constituting a lock which may serve as a door also, when said bolt is arranged to ocupy the entire space between the outer plates, to resist the introduction of powder, substantially as described.

2. In combination with the side-plates and the bolt occupying the entire space between said plates, the openings *r s t t′* in said bolt, as herein explained, the two knobs and their shanks and tumblers each forming a locking and unlocking mechanism, in connection with the sliding-bolt, one of said knobs turning and sliding, the other turning only, as and for the purpose substantially as described.

3. In combination with the plates, bolt, and knobs, or their shanks, constructed and arranged as herein described, the tumblers *h*, composed of the hubs *i* and flanges *j*, and their openings, *x*, *w*, and *l*, real and false, substantially as and for the purpose described.

4. In combination, the cheek-plates *a c* and the bolt *b*, capable of fitting and filling the space, and sliding between them, the knobs and shanks acting both as knobs and keys, tumblers, in which there are real and false openings, *x w l*, and set by permutation, the whole being arranged as and for constituting a vault or safe-lock without springs, or a removable key, substantially as described.

95,740.—Frank Sonier, Springfield, Ill.—*Distilling-Apparatus for Spirits.*—October 12. 1869.

Claim.—1. Combining two or more stills with a steam-boiler, substantially as and for the purpose specified.

2. Combining two or more stills with a doubler, H, and mash-heater D, so as to permit said stills to be alternately charged and worked off through each other and through the doubler, substantially as shown, and for the purpose specified.

3. Combining one or more stills, B or C, with the doubler H and boiler A, substantially as herein shown and described.

4. The combination of the boiler A, one or more

stills B or C, and the mash-heater D, substantially as and for the purpose specified.

5. The combination of the stills B and C, and pipes G and G′, substantially as shown and described.

6. The combination of the stills B and C, the pipes I, *i*, K, and *k*, and the doubler H, substantially as described, and for the purpose shown.

7. The combination of the pipes F and *f* with the boiler A and stills B and C, substantially as shown, and for the purpose specified.

8. The combination of the doubler H and pipe L with the mash-heater D and condenser M, substantially as and for the purpose shown.

9. The general combination of the various parts of the apparatus, substantially as shown and for the purpose set forth.

95,741.—JOHN STAINTHORP, New York, N. Y.—*Machine for Mixing Soap, Paint, Paste, and other Similar Materials.*—October 12, 1869.

Claim.—1. A mixing-vessel of spheroidal shape, rotating on its center, in combination and arrangement with two or more mixing-wheels, revolving in like or opposite directions, and in vertical planes, the whole working and operating in the manner and for the purpose specified.

2. The pipe B and valve V, in combination with the kettle or vessel A, as set forth.

3. The wheel J′, or its equivalent, that is to say, a stirring-wheel, formed of thin rims, mounted so as to present a dishing-shape, as represented and set forth.

95,742.—NEWELL D. STEVENS, Westbrook, Me., assignor to himself and O. A. HILL, same place.—*Plate.*—October 12, 1869.

Claim.—As a new article of manufacture, a porcelain, or other frangible plate, with a metal band, rim, or clamp spun upon the flange thereof, as herein described.

95,743.—DAVID P. STEWART, Spruce Creek, Pa.—*Horse Hay-Fork.*—October 12, 1869.

Claim.—The arrangement of the straight shank A, having the point B slotted, as described, the straight slides D, resting against said shank, and provided at their lower ends with the curved hooks C, crossing each other in the slot of the point B, and attached at their upper ends to the cross-head F, having the branching hooks E, the connecting-rod H, pivoted to the cross-head, and the operating-lever G, pivoted to the rod H and shank A, all as herein described and shown, for the purpose specified.

95,744.—DANIEL C. STILLSON, Charlestown, Mass.—*Wrench.*—October 12, 1869.

Claim.—1. The within described wrench, consisting of the shanks A and D, the jaws B and E, the frame C, the nut F, and the spring G, substantially as herein shown and specified.

2. The frame C, pivoted to or upon the shank A, and provided with the slotted part *c*, inclosing the shanks A and D, by means of which the jaws B and E are permitted to close upon but not crush a pipe, substantially as herein specified.

95,745.—SAMUEL STONE, North Manchester, Conn.—*Forming Horseshoe-Calks.*—October 12, 1869.

Claim.—The dies for swaging the calk, and shaping the bar, and cutting the calk therefrom, substantially as set forth.

95,746.—SAMUEL STONE, North Manchester, Conn.—*Metallic Bar.*—October 12, 1869.

Claim.—As an improved article of manufacture, a bar of iron, having a center core of steel through its entire length, substantially as shown and set forth.

95,747.—JAMES W. SYKES, Chicago, Ill.—*Railroad Grain-Transferrer.*—October 12, 1869.

Claim.—Arranging, on a car, elevating-belts, and a scale or scales, in such a manner that, by the apparatus, grain can be taken from a car, weighed, and thrown into another car, or warehouse, substantially as shown and described.

95,748.—SAMUEL TAYLOR, Georgetown, N. J.—*Shaft-Tug.*—October 12, 1869.

Claim.—1. The roller E, when applied to a shaft-tug and adapted to operate substantially as and for the purpose described.

2. As an article of manufacture, the shaft-tug above described, consisting essentially of the curved rod A, leather cover *l*, buckle *b*, iron rod *r*, and roller E, covered with rubber or other soft material, *e*′, all constructed, arranged, and adapted to operate in the manner and for the purpose substantially as described.

95,749.—STEPHEN P. THAYER, Baldwinsville, N. Y.—*Centrifugal Pump.*—October 12, 1869.

Claim.—1. The peripheral-discharge centrifugal pump, having wings K K, inclined forward toward the induction opening of the pump, substantially as and for the purpose herein specified.

2. In combination with the centrifugal wheel, constructed as above described, the two tangential discharge-openings in the case, substantially as and for the purpose herein set forth.

95,750.—JOHN R. TREADWELL, Brooklyn, N. Y.—*Oven.*—October 12, 1869.

Claim.—In combination with the "reel-oven," a steam-flue or series of steam-flues, when arranged above the mouth and below the top, substantially as described, whereby a proper steam-level is maintained to protect the face of the crackers when carried to the upper part of the oven, and the steam prevented from accumulating below said level, to interfere with drying out the crackers properly, substantially as described.

95,751.—JOHN WEICHART, San Francisco, Cal.—*Machine for Grinding Harvester-Cutters.*—October 12, 1869.

Claim.—The clamp or holder, consisting of the plates E and G, and set-screws H, in combination with the gauge I, slotted bar L, lever N, set screw P, and movable plate C, substantially as set forth.

95,752.—OTTO WUTH, Pittsburgh, Pa.—*Manufacture of Crystal Glass.*—October 12, 1869.

Claim.—The use, together with lime and sand, or other ingredients, in preparing the batch or mix for making glass, of the monohydrate of carbonate of soda, (or the anhydrous carbonate of soda,) prepared as hereinbefore described.

95,753.—MCCLINTOCK YOUNG, Frederick, Md.—*Velocipede.*—October 12, 1869.

Claim.—1. The V-shaped reach, composed of two bars A A, and provided with the upward-projecting diagonal braces E E, substantially as herein shown and described.

2. The steering-post, consisting of the bars *d d*, cross bars F *f*, and braces *g h*, all combined substantially as herein shown and described.

3. The saddle, so constructed that its pommel and cantel are connected by springs, webbing, and covering, substantially as herein shown and described.

4. The bag H, constructed as described, when arranged between the webbing *m* and covering *n*, as specified.

5. The brake I, in combination with two independent cords O and levers *y*, all so arranged that when one cord breaks, the other will serve to operate the brake, as set forth.

95,754.—FRED. T. ANGERS, Canastota, N. Y.—*Sculling-Oar.*—October 12, 1869.

Claim.—A sculling-oar, having grooved handle A, blade B, rod C, plate D, and staple *c*, constructed and arranged substantially as shown and described.

95,755.—FRED. T. ANGERS, Canastota, N. Y.—*Fish-Hook.*—October 12, 1869.

Claim.—The arrangement herein described of the hooks *h h*, hinged to the slotted tube A, rod *c*, and spring D, constructed to operate substantially as specified.

95,756.—JOHN ARMSTRONG, Jr., San Francisco, Cal.—*Heating-Apparatus.*—October 12, 1869.

Claim.—The apparatus described, consisting of

the case A, perforated at top and bottom, as shown, and radiator D, the whole being supported upon legs, as and for the purpose described.

95,757.—George H. Babcock, Joseph P. Manton, and Jonathan Boyd, Providence, R. I.—*Means for Preventing Backlash in Machines Driven by Gearing.*—October 12, 1869; patented in England, May 8, 1868.

Claim.—1. The double gears E and F, in combination with the wedge-acting key G, substantially as described, for the purposes specified.

2. The double gears E and F, mounted upon the hollow sleeve, in combination with the wedge-acting key G, arranged in such a manner that the gear F may be partially rotated upon the sleeve by means of the worm *a b*, the several parts forming one complete adjustable gear, which may be attached to and removed from the mandrel of the roller as one piece, substantially as herein shown.

95,758.—George S. Barton, Worcester, Mass.—*Machine for Printing Paper, Cloth, &c.*—October 12, 1869.

Claim.—The combination, with the divided gear D, of the holding-bolts *f f* and the adjusting wedge-bolt F, substantially as and for the purposes set forth.

95,759.—Alphonse V. Benoit, New York, N. Y.—*Draughtsmen's Square and Triangle.*—October 12, 1869.

Claim.—The combination of suitable leather with adjustable steel plates, for manufacturing T-square blades and triangles, in the manner substantially as herein described.

95,760.—William H. Berger, Pittsburgh, Pa.—*Graining-Machine.*—October 12, 1869.

Claim.—1. Arranging the printing-roller, with the apparatus for supplying it with coloring-matter, in a frame, and then swiveling this frame on a vibrating or rocking post, so that it may have rotatory and vibratory motion, substantially as herein described, and for the purpose set forth.

2. The adjustable metallic plate K, provided with a cloth facing, *m*, in combination with the distributing-roller J, constructed and arranged to operate substantially as herein described, and for the purpose set forth.

3. The post E and bar B, when constructed and arranged so as to be adjusted laterally, substantially as herein described, for the purpose of adapting the machine for graining different-sized articles, as set orth.

95,761.—Alfred Bixby, Lansing, Mich.—*Carriage-Clip.*—October 12, 1869.

Claim.—A thill-coupling, consisting of the iron *b*, with the cross-head or lugs C and the hook A, having the rubber *a* inserted in the bottom thereof, as shown and described.

95,762.—Jeremiah Bohan, New Hartford, Iowa.—*Cultivator.*—October 12, 1869.

Claim.—1. The evener E, pivoted upright B, metallic straps *c*, and sweep F, when constructed and arranged substantially as herein described, and for the purpose set forth.

2. The braces *h*, having their lower ends connected to the shovel-beams H, by means of gauge-nuts *t*, for adjusting the beams laterally, and their upper ends hooked or journaled to the frame to allow them to swing, substantially as and for the purpose set forth.

3. The bent arms *g*, in combination with the block N, lever K, and sweep F, when constructed and arranged substantially as herein described, for the purpose of spreading the shovels, as set forth.

4. The lever K, in combination with the sweep F, cross-piece O, shovel-beams G and H, and cord *k*, when constructed and arranged to operate substantially as and for the purposes set forth.

5. The treadle-hook L, and spring *p*, in combination with the lever K, cross-piece O, and sweep F, when constructed and arranged substantially as herein described, and for the purpose set forth.

6. In combination with the sweep F, and the devices for operating the shovels, the block I, having friction-rollers therein, when constructed and arranged substantially as and for the purpose set forth

7. The shield M, and slotted braces P, when constructed and arranged substantially as and for the purpose set forth.

95,763.—David Bookwalter, Gardner, Ill.—*Revolving Prow for Vessels.*—October 12, 1869.

Claim.—1. The cylindrical rotating prow P, constructed and operating substantially as set forth, and for the purposes herein specified.

2. In combination with the above, the cylindrical fore end of the hull H, substantially as set forth.

95,764.—Otto Brück, New York, N. Y.—*Fan*—October 12, 1869.

Claim.—The combination, with the head *a*, slotted arms *d*, and fan A, of the spring *h* and rod *l*, substantially as and for the purpose described.

95,765.—Solomon Brunswick, Saint Louis, Mo.—*Revolving Billiard-Table.*—October 12, 1869.

Claim.—The table-frame A, formed of side-rails securely joined, (in the usual manner,) arranged and combined with a plate, B, revolving entirely within said frame, said plate having the billiard-cushions *b* secured to one face thereof, and, when in position, being supported by lock-latches D, secured in the rails of the frame A, substantially as set forth.

95,766.—Hubert Burgess, San Francisco, Cal.—*Paper-File.*—October 12, 1869.

Claim.—1. A pair of clamping-bars or jaws, A and D, held parallel or nearly parallel, by their flanges or angle-pieces B and C, and by the bolts E, that draw them together, and so arranged as to clamp and hold the edges of papers, music-sheets, &c., without perforating them, substantially as described.

2. In combination with the clamping-bars, constructed as described, a portfolio, provided with a rigid back, G, to serve as a means of connecting the clamping-bars of the file to the portfolio, substantially as described.

3. In combination with the clamping-bars of a paper-file and portfolio, the bar K, fitted to notches in the clamping-bars to hold the portfolio open and spread the music-sheets, &c., whether applied as a wrench or otherwise, substantially as set forth.

95,767.—James S. Casey, Voluntown, Conn.—*Stop-Motion for Drawing-Frame.*—October 12, 1869.

Claim.—1. In combination with the eccentrics B and C, or their equivalents, the spur-wheel *a'*, secured to the extended shaft of the top roll A, substantially as shown and described.

2. The eccentrics B and C, partially toothed and weighted, so as to present their smooth and lank sides automatically to the geared end of the top roll, substantially as specified.

3. In combination with the eccentries B and C, the fork H, constructed and arranged to operate substantially as specified.

4. The stop-motion herein described, having sliding standard G, adjustable support D, with hinged and adjustable jaws *d d*, eccentrics B C, balanced fork H, spur-wheel *a'*, shaft K, and spiral spring *k*, all constructed and arranged to operate with the belt-shifter, substantially as specified.

95,768.—L. A. Chichester, Poughkeepsie, N. Y.—*Crib or Cradle.*—October 12, 1869.

Claim.—A cradle composed of the body formed of the bars E and slats F, provided with the end-pieces A A, extended above the body, as shown, and each formed of one piece of bent wood, having rockers B attached, and provided with the cross-bars C and slats D, as set forth, for the purpose specified.

95,769.—Thomas J. Clark and George M. Clark, Higganum, Conn.—*Mowing-Machine.*—October 12, 1869.

Claim.—1. In combination with the cutter-bar and its connecting-rod, the lever 1, with the rods 4, 5, 6, 7, jointed together, and so as to operate as set forth.

2. In combination with the reciprocating cutters of a mowing-machine, the arrangement of the springs 11 12, to act at the extremes of movement, substantially as and for the purpose set forth.

3. In combination with the frame A^2 and finger-bar pivoted thereto, the lever H, constructed, arranged, and operating substantially as described.

95,770. — S. P. CLEMONS, Dansville, N. Y. — *Milking-Stool.*—October 12, 1869.

Claim.—The milking-stool herein described, having receptacle for pail, and conduit-pipe M, constructed and arranged to operate substantially as specified.

95,771.—GEORGE CONROY, Mendocino County, Cal., assignor to ROBERT A. SMITH, same place.—*Medicine for Rheumatism.*—October 12, 1869.

Claim.—The medicine for the cure of rheumatism, prepared of the materials herein described.

95,772.—ROSWELL F. COOK and JOHN FOBES POST, Potsdam, N. Y.; said COOK assignor to said POST.—*Wood-Vise.*—October 12, 1869.

Claim. — The pawl O and lever E, being formed from the same piece of metal, and provided with point *m*, spring *k*, braces P, spring D, roller I, and ratchet H, when constructed, combined, and arranged to operate substantially as herein described.

95,773. — A. M. CORBIT, Bethlehem, Iowa. — *Weather-Strip.*—October 12, 1869.

Claim.—1. The strip G, pivoted by means of a rod, *i*, extending under the strip from side to side, in the two plates H H, one of which is stationary and the other movable, substantially as and for the purposes herein set forth.

2. In combination with the strip G, rod *i*, and plates H H, the lever *e*, strip B, and plate *c*, all constructed and arranged to operate substantially in the manner and for the purposes herein set forth.

95,774. — H. A. CROSSLEY, Cleveland, Ohio.—*Stave-Jointer.*—October 12, 1869.

Claim. — The swinging frame C, provided with clamps D *a*, D *a*, operated by means of the rock-shaft H, J J, and treadle G, through the medium of the connection *a a'*, and when provided with springs *b b*, whereby the clamps are rendered self-releasing, all arranged substantially as herein described.

95,775. — THOMAS CROSSLEY, Bridgeport, Conn.—*Carpet.*—October 12, 1869.

Claim.—As an article of manufacture, carpeting having a back of paper, or other suitable material, corrugated and attached thereto by an adhesive substance, as set forth.

95,776. — THOMAS CROSSLEY, Bridgeport, Conn.—*Felted Carpet-Fabric.*—October 12, 1869.

Claim. — A fabric composed of a foundation of coarse jute, cotton, linen, or equivalent fabric, to one or both sides of which is applied a layer of wool or other felting-material, and the two united by felting, and the surface finished by printing or embossing, one or both, substantially as described.

95,777. — THOMAS CROSSLEY, Bridgeport, Conn.—*Machine for Printing Carpets.*—October 12, 1869.

Claim.—1. A machine for printing carpets, and other fabrics, combining in its construction a table or platform, upon which the fabric is to be spread while receiving the impressions of the blocks; a lever or other equivalent mechanism, for raising the blocks; guides for determining the exact position of such blocks while making its impression; and mechanism for removing the blocks from the positions which they occupy when making their impressions, to that which they occupy when receiving the ink or coloring-matter, substantially as and for the purpose set forth.

2. The combination and arrangement of the table A, block or form B, sector-lever C', device D, crane E, and car F, substantially as and for the purpose set forth.

3. The arrangement of the car F and crane E, with reference to the table or platform A, substantially as and for the purpose set forth.

4. The combination and arrangement of the levers or rods F^1, screws F^2, car F, and platen G, substantially as and for the purpose set forth.

5. The combination and arrangement of the platen G, toggle-levers G^1, connecting-rods G^3, and treadle-levers G^2, substantially as and for the purpose set forth.

95,778. — HENRY CUNNINGHAM, Albany, N. Y.—*Grinding Curriers' Knives.*—October 12, 1869.

Claim.—The disk B, provided with the slots *c*, dogs *e*, or their equivalents, and the vertical shaft *a*, all in combination with the stone C, substantially as and for the purpose set forth.

95,779.—HENRY CUNNINGHAM, Albany, N. Y.—*Mode of Softening Leather.*—October 12, 1869.

Claim. — 1. In a leather-softening machine, the elastic rubber piece *g* within the roll of leather G, as an internal reacting power, substantially as set forth.

2. Softening leather between three or more corrugated rollers B, C, and D, constructed, arranged, and operated substantially as set forth, for the purpose specified.

3. In a leather-softening machine, operated by corrugated rollers, the roller D, hung in the vibrating frame *d*, in combination with the cams or wiper-wheels *e*, substantially as and for the purpose set forth.

4. The hinged bars *b'*, and wiper-wheels *e*, in combination with the roller D, substantially as and for the purpose set forth.

95,780.—HENRY CUNNINGHAM, Albany, N. Y.—*Machine for Splitting Leather.*—October 12, 1869.

Claim. — 1. In a leather-splitting machine, the elastic bearing-roller E, in combination with the knife B, and pressing-roller D, substantially as and for the purpose set forth.

2. In combination with a leather-splitting machine, the stretching-roller G, constructed and arranged substantially as and for the purpose set forth.

3. In combination with the stretching-roller G, the supplementary roller H, or equivalent weight, substantially as and for the purpose set forth.

4. Reversing the order of the elastic roller E and solid pressing-roller D, from that shown in Fig. 2 to that shown in Fig. 5, the screw G then being out of contact with the elastic roller, the whole substantially as and for the purpose specified.

95,781.—DANIEL S. CURTISS, Washington, D. C.—*Milk-Pail and Strainer.*—October 12, 1869.

Claim.—1. The employment of a valve, opening inward upon or within the cover of a pail, substantially as and for the purpose specified.

2. The employment of the diaphragm D, upon or within the cover B, substantially as shown and for the purpose specified.

3. The valve E, constructed as described, and provided with the spring-guides and supports *e*, substantially as shown and for the purpose specified.

4. The herein-described device, consisting of the cover B, provided with the rim C and flange G, the diaphragm D, and the valve E, provided with the strips *e*, substantially as and for the purpose shown,

95,782. — FRANK DOUGLAS, Norwich Town, Conn.—*Planing-Machine.*—October 12, 1869.

Claim.—1. The compound lever L L^1, having a movable fulcrum, and provided with the adjustable weight L^2, and connecting-bar l^2, when constructed and arranged substantially as described.

2. The sliding frame J, provided with vertically-sliding boxes for the support of the upper feed-rollers, and combined with the spindle K, cylinder m^1, cross-shaft M, nut *k*, and crank m^3, all arranged to operate substantially as described.

3. In combination with the pivoted arms G, the frame H, and pivoted presser-bar I, substantially as and for the purposes described.

4. The combination of the sliding boxes, screw-rod s^1, crank-shaft s^2, platform U, set-screw *u*, frame B', inclined bed *b*, arm *i*, rod *t*, and handle t^1, all constructed and arranged to operate substantially as described.

95,783.—Patrick J. Dwyer, Elizabeth Port, N. J.—*Coal-Ash Sifter and Table.*—October 12, 1869.

Claim.—1. The arrangement and combination of the doors D and I with the chamber A and ash-receptacle G, substantially as shown and described, for the purpose set forth.

2. The hod H, constructed with a pivoted bottom, *d*, and hinged cover *e*, and adapted for use in connection with the sifter, as shown and described.

3. The rod *h*, having projections *m n*, to form a detachable connection with the sieve J, as and for the purpose set forth.

4. The chest A, fitted internally with a reciprocating sieve J, hopper E, and receptacle G, and provided with hinged leaves L and brackets *p*, substantially as shown and described, for the purpose set forth.

95,784.—James B. Eads and Henry Flad, Saint Louis, Mo.—*Arched Bridge.*—October 12, 1869.

Claim.—The arches A A′, connected by a joint-piece, and supported by rollers on the piers C, substantially as and for the purposes set forth.

95,785.—George A. Fall, Hoboken, N. J.—*Water-Locomotive.*—October 12, 1869.

Claim.—The arrangement of four paddle-floats, with inclined surfaces, sustaining the braced platform, in combination with the bands and driving-pulleys, and the cranks and slip-pipe, substantially as and for the purposes set forth.

95,786.—Henry Flad, Saint Louis, Mo., assignor to James B. Eads, same place.—*Pile-Driver.*—October 12, 1869.

Claim.—1. The arrangement of a frame, C, and platform C′, movable vertically, when said movement is controlled from the platform, substantially as set forth.

2. The ram, raised by friction-wheels *i*, substantially as set forth.

3. The lever N and links *n*, operating to clutch the wheels *i* against the ram-shank, substantially as set forth.

95,787.—George Fowler, Claverack, N. Y.—*Railway-Track Clearer.*—October 12, 1869.

Claim.—1. The combination and arrangement of beam B, shovels C C, springs *e e e*, &c., in the manner, or substantially in the manner and for the purpose herein set forth.

2. The employment, in combination with the above, of the flanges or springs D D, substantially as and for the purpose described.

3. Attaching the above-described several parts and devices, when combined and arranged substantially as set forth, to the rear end of a railway-truck or car, substantially in the manner and for the purpose herein set forth.

95,788.—Henry A. Gaston, Stockton, Cal.—*Rotary Harrow.*—October 12, 1869.

Claim.—1. The central right and left disks, with their projections (right and left) and their central cylindrical projections, when constructed substantially as above described.

2. The right-angled triangular frame, provided with the hooks h^1 and h^2, constructed substantially as and for the purpose above described.

3. A rotary harrow, constructed and operated substantially as above described.

95,789.—Henry A. Gaston, Stockton, Cal.—*Combined Seeder and Grain-Drill.*—October 12, 1869.

Claim.—1. The oscillating or rotating shafts, when constructed and operated substantially as and for the purposes above described.

2. The comb C, combined with the divided shaft 3^1 3^2 in such manner that the teeth of the former may pass centrally through the fingers of the latter, as and for the purpose described.

3. The frame C E D, in combination with the lever *l*, arms *y*, head-bars S, and fluke-levers *b*, all arranged and operating substantially as set forth.

4. The governing-levers *l*, and their arms *y*, attached to the head-pieces S, substantially as and for the purpose above described.

5. The sharp-edged fluke *f*, with its internal projection *x*, and also its foot-like projection *i*, and its stop *k*, constructed substantially as above described.

6. The fluke *f*, provided with the foot-like and slotted projection *o*, and angular depression *g*, and combined with the point P, in the manner and for the purpose specified.

7. A grain drill, constructed and operated substantially as above described.

95,790.—Oscar L. Gaylord, Plainfield, Ill.—*Sulky-Cultivator.*—October 12, 1869.

Claim.—The combination of the main frame *a*, diagonal axles *c c*, cross-bar *b*, double-tree l, straps 2^2, pulleys 3^3, and suspended arms 4^4, arranged to operate as and for the purposes set forth.

95,791.—E. A. Goodes, Philadelphia, Pa., assignor to The Philadelphia Patent and Novelty Company, same place.—*Table and Cradle Combined.*—October 12, 1869.

Claim.—The combination and arrangement of the divided table-top A B, semi-elliptical legs C, and circular brace or support D, made in two parts, and hinged together substantially as specified.

95,792.—Benjamin F. Gott, Brooklyn, E. D., N. Y.—*Wash-Board.*—October 12, 1869.

Claim.—A wash-board, formed with a back composed of cylindrical sections *d d*, in combination with the ordinary fluted metallic surface *c*, substantially as herein shown and described.

95,793.—Emile Granier, Paris, France.—*Combined Tool.*—October 12, 1869; patented in France, May 9, 1868.

Claim.—The combined tool, constructed as described, and for the purposes herein set forth.

95,794.—Isaac H. Graves, Sacramento City Cal.—*Spark-Arrester.*—October 12, 1869.

Claim.—1. The arrangement of the inner casing A, substantially as described.

2. The combination of the flange E with the upper and lower net-work C C′, substantially as described.

3. In combination with the lower and upper system of net-work, the central diaphragm F, substantially as described, and for the purpose specified.

95,795.—William Green, Snyder Township, Pa.—*Cast-Metal Chimney-Cap.*—October 12, 1869.

Claim.—As an article of manufacture, the cast metallic cover, constructed as herein described, that is to say, with an arch, B, open at both ends, and overhanging the chimney-opening, and the slant roof *a*, projecting beyond the sides of the chimney, and the two parts operated together as herein described, for the purpose specified.

95,796.—John H. Guest, Brooklyn, N. Y.—*Electrical Fire-Alarm Thermometer.*—October 12, 1869.

Claim.—An electrical fire-alarm thermometer, formed with the expansion-tube bent at an angle to the bulb, so as to be inserted in the ceiling, and fitted with the platina conducting-wires, as and for the purposes set forth.

95,797.—Frederick Heiles, New York, N. Y.—*Pocket-Book.*—October 12, 1869.

Claim.—The locket, consisting of the raised portion E, the serrations *e*, the top plate B, and the locking slide I, when the parts are constructed substantially as herein described.

95,798.—Alexander Herbst, Moscow, Russia.—*Apparatus for Drying Sugar.*—October 12, 1869.

Claim.—1. The process, substantially as herein described, of drying the loaves, by forcing or drawing currents of heated air through them, while in their molds or formers, as herein set forth.

2. The apparatus, substantially as herein described, for holding and supporting the loaves while in their molds or formers, and passing currents of heated air through the loaves, from their apex to their base, to effect the drying of the sugar within the formers, essentially as specified.

95,799.—D. Hitchcock and D. S. Trout, Areola, Ill.—*Door-Sill.*—October 12, 1869.

Claim.—1. The arrangement of the frame L and sliding cover G, over the gutter B, said gutter being provided with a channel, C, having the weighted door D, all substantially as shown and described.

2. The sliding cover G, in combination with the springs E K and rabbet *a* on the door H, all constructed and arranged to operate substantially in the manner and for the purposes herein set forth.

95,800.—JOHN HOLZBERGER, Newark, N. J.—*Machine for Wiring Blind-Rods.*—October 12, 1869.

Claim.—1. The two detaining-plates, G and H, when arranged on a blind-wiring machine, to separately arrest the staples, substantially as herein shown and described.

2. The adjustable feeding device, consisting of the bell-crank D, carrying the working pawl, and connected by a rod, *e*, with the slotted oscillating lever C, substantially as herein shown and described.

95,801.—C. M. HUCKINS, East Topsham, Vt.—*Bridle-Bit.*—October 12, 1869.

Claim.—The toggle-levers B B, arranged on the arms of a jointed bit, substantially as herein shown and described, for the purpose specified.

95,802.—C. D. HUNT, Fairhaven, Mass.—*Nail-Cutting Machine.*—October 12, 1869.

Claim.—1. Connecting the vibrating arm of a nail-feeding device to the frame supporting it, by one or more flexible metallic straps, in the manner and for the purposes substantially as herein set forth.

2. The combination of the reciprocating rod O, barrel box V, vibrating arm K, bar P, link and spring *h*, and arm *g*, substantially as set forth.

3. The construction of the barrel-box V and its connections to the vibrating arm K, substantially as specified.

4. The arrangement, substantially as described, of the shafts C and J, miter-wheels H I, toothed segment L, and barrel-wheel M, in relation to the vibrating arm K and barrel-box V.

5. The combination of the friction-disks N N, ratchet-wheel *f*, pawl *i*, and arm *g*, with the bar P and the link and spring *h*, substantially as set forth, and for the purposes specified.

95,803.—W. A. IVES, New Haven, Conn.—*Auger.*—October 12, 1869.

Claim.—In auger-bits, the combination of the gouge floor-lips C C′, with their respective side or vertical cutters *a a*, connected and arranged substantially as shown and described.

95,804.—JAMES JERVIS, Baltimore, Md.—*File-Cutting Machine.*—October 12, 1869.

Claim.—1. The mechanism here described, whereby the movement of the regulator on "the shape" is made to change the angle of the chisel, so as to maintain the sharpness of the tooth the same in every part of the file.

2. The combination of a cross-head, having a rotating motion, substantially as described, with a chisel and regulator, whose agency, besides steadying "the shape," is to impart a movement to the cross-head corresponding to the taper of the shape.

95,805.—AMOS S. KELLY, Haverhill, Mass.—*Shoe.*—October 12, 1869.

Claim.—The new or improved manufacture of shoe, as made with the slits and gores arranged on the vamp, and with the instep-part of the vamp bent to an angle with the front portion of the said vamp, in manner as and for the purpose specified.

95,806.—JOHN S. KELLY, New York, N. Y.—*Peat Machine.*—October 12, 1869.

Claim.—1. The detachable double-convex circular, revolving cutters C, and tubular washers or rollers D, in combination with the shaft B and frame A, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the frame E F and scrapers G, with the frame A, cutters C, and tubular washers or rollers D, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the rollers H, frame A, shaft B, cutters C, tubular washers D, frame E F, and scrapers G, with each other, substantially as herein shown and described, and for the purpose set forth.

95,807.—WILLIAM G. KENYON, Wakefield, R. I.—*Mowing-Machine.*—October 12, 1869.

Claim.—1. The segmental gear *o′*, in combination with the cutter-bar *x* and the connecting-bar *g*, as and for the purpose specified.

2. The chain *w*, in combination with the shoe E and auxiliary frame G, substantially as and for the purpose set forth.

3. The cover Y, in combination with the parts that move the knife-bar, substantially as specified, and for the purpose set forth.

4. The guard-finger, in combination with the ledger-blades, constructed substantially as described, and for the purpose specified.

95,808.—HENRY KILLAM, New Haven, Conn.—*Hinge for Carriage-Tops.*—October 12, 1869.

Claim.—1. The hinge for carriage-tops, consisting of the two parts, C and D, upon one of which is fixed the lip *a*, so as to cover the joint and form the angle between the bow B and post A, substantially as set forth.

2. The outer surface of the lip *a*, eccentric to the pintle *d*, substantially as and for the purpose specified.

95,809.—JEFFERSON KINDLEBERGER and WILLIAM AUGUSTUS ARNOLD, San Francisco, Cal., assignors to "THE INVENTORS' ASSOCIATION, SAN FRANCISCO, CAL."—*Cutter-Head.*—October 12, 1869.

Claim.—The cylinder A, provided with wedge-shaped slots, H H, in combination with the plates E E and wedge-shaped plates *c c*, constructed and arranged to operate substantially as described.

95,810.—JEFFERSON KINDLEBERGER and WILLIAM AUGUSTUS ARNOLD, San Francisco, Cal., assignors to "THE INVENTORS' ASSOCIATION, SAN FRANCISCO, CAL."—*Machine for Tenoning Blind-Slats.*—October 12, 1869.

Claim.—1. In combination with the cutters F F, the slotted pinions E E, turned, and at the same time traversed by the cam-gears D, substantially as and for the purposes specified.

2. The combination of the flanges on the gears D and pinions E, and the link *g*, with its friction-wheels *i*, for keeping the gears and pinions properly connected while revolving, substantially as described.

3. In combination with the lug I, on the table R, the arrangement of the lever J, acting on the wheel C, for stopping the machine on the completion of each slat, substantially as described.

4. The combination of the hinged table R, the lever *e*, operated by the wheel C, and the spring M, for discharging the finished slat and returning the table to its place, substantially as described.

95,811.—JULIUS G. KLUGE, New York, N. Y.—*Bakers' Oven.*—October 12, 1869.

Claim.—The fire-pot A, provided with a flanged rim to receive the covering plates *b*, and with an outwardly-inclined side, *c*, to give ready access to the fire, in combination with the hearth of a baker's oven, all constructed and arranged substantially in the manner shown and described.

95,812.—L. F. LAKEY and W. B. HAYTE, Quincy, Ill.—*Grate-Bar.*—October 12, 1869.

Claim.—The construction and arrangement of the bars A A and movable plate B′, with the air-chamber B, substantially as shown and described.

95,813.—PHILANDER P. LANE and EDWARD MYERS, Cincinnati, Ohio, assignors to LANE & BODLEY, same place.—*Hanger.*—October 12, 1869.

Claim.—1. The arrangement, in the mold, of core, core-bar, or mandrel, A, provided with the necessary nuts, in proper position and adapted to be withdrawn from the finished casting leaving said nuts therein, substantially as described.

2. The combination, with the core, core-bar, or

mandrel A, of the convex-spherical chill E, substantially as set forth.

95,814.—Suspended.

95,815. — NOAH LOVELL, Adrian, Mich., assignor to himself and EDWARD W. MIXER, same place.—*Scaffold-Bracket.*—October 12, 1869.

Claim.—The combination of the strap *m*, clasp *g*, and screw T, with the bracket A and wedge W, constructed in the manner and for the purposes set forth and described.

95,816. — R. O. LOWREY, Salem, N. Y. — *Lock for Mail-Bags.*—October 12, 1869.

Claim.—1. A lock, having its case A provided with a guard, *h*, extending from the entire edge of the key-hole inwardly, and rigidly attached thereto, all constructed and arranged substantially as herein described.

2. The bolt B, consisting of the frame *a*, stem *d*, catch *e*, and cross-piece *f*, when constructed and arranged to be operated substantially as and for the purpose set forth.

95,817.—R. O. LOWREY, Salem, N. Y.—*Mail-Bag.*—October 12, 1869.

Claim.—1. A bag, having its body constructed of fibrous or textile fabrics and India rubber combined, in the manner substantially as herein described, for the transportation of mail or other matter, as set forth.

2. The metallic plates B and C, when constructed and arranged for operation, substantially as and for the purpose set forth.

3. The combination of the plates B and C, with the button D, when constructed and arranged to operate substantially as and for the purpose set forth.

4. The combination of the bag A and rubber packing F with the metallic plates B and C, and button D, all constructed and arranged substantially as and for the purpose set forth.

95,818.—R. O. LOWREY, Salem, N. Y.—*Mail-Bag Fastener.*—October 12, 1869.

Claim.—1. A mail-bag fastening, consisting of the plates A and B, the studs D, and the linked sliding bolts E, or their equivalents, when constructed and arranged substantially as herein described.

2. The combination of the linked sliding-bolts E and studs D, or their equivalents, when constructed and arranged to operate substantially as herein described, and for the purpose set forth.

3. The sliding-bolts E and studs D, when constructed and arranged for receiving the locking-device H, substantially as herein described, and for the purpose set forth.

95,819. — WILLIAM W. LYMAN, Meriden, Conn.—*Fruit-Jar.*—October 12, 1869.

Claim. — In a fruit-jar, the combination of the cover, constructed so as to pass down over the packing *d*, with a clamping-device, operating so that while the said clamping-device draws the cover down on the neck, it will, at the same time, impart a rotating movement to the cover, substantially as herein set forth.

95,820. — JOHN MARKLEY, Bucyrus, Ohio. — *Fence.*—October 12, 1869.

Claim.—A fence, in which the panels are secured together by clasps and screw-bolts, and supported above the ground by inclined stakes, when constructed and arranged as herein shown and described.

95,821.—GORDON ALLEN MAY, Chicago, Ill.—*Gate for Draw-Bridges.*—October 12, 1869.

Claim. — 1. The gate or fence C, consisting of pickets provided with rollers to run upon, and the lips or projections, to keep the same on the tracks, said pickets connected by suitable loose joints, so as to make the gate pliable, and adapted as a barrier for draw-bridges and other structures, substantially as herein set forth and specified.

2. In combination with the above, the bars, plates, or tracks E E, and pins, catches, stops, or other suitable projecting fixtures F F, substantially as and for the purposes herein set forth and specified.

95,822. — HAMILTON J. MAY, Brooklyn, N. Y., assignor to himself and JOHN S. THORNTON, Jersey City, N. J.—*Toy-Hoop.*—October 12, 1869.

Claim.—The wheel, constructed substantially as herein shown and described, in combination with the stick or rod D, as and for the purposes set forth.

95,823. — JOHN K. MERRICK, Odell, Ill. — *Dentists' Grinding and Polishing Wheel.*—October 12, 1869.

Claim. — Glass dental grinding and polishing wheels, secured upon a mandrel, as herein described, as an improved article of manufacture.

95,824.—E. C. MERRILL and A. W. WILLARD, Charlestown, Vt., assignors to E. C. MERRILL. — *Composition for Emery-Wheels and other Abrading-Implements.*—October 12, 1869.

Claim.—1. An abrading-wheel, or tool made of emery, artificially united or combined with a softer abrading-powder, having sharp cutting points, substantially as described.

2. As a new article of manufacture, a grinder-wheel or other tool, formed of abrasive powder, united by an oxide-of-zinc and a chloride-of-zinc solution, formed and compressed in a mold, substantially as described.

95,825.—JOHN S. MOORE, Jr., and CHARLES H. REYNOLDS, Brooklyn, E. D., N. Y.—*Washing-Machine.*—October 12, 1869.

Claim.—The beaters, connected to their points of suspension, that they can swing or yield toward or from their center of motion, substantially as and for the purpose described.

95,826.—GEORGE W. MOYERS, Gordonsville, Va.—*Horse-Power.*—October 12, 1869.

Claim.—1. Adjusting the line-shaft to the power-wheel, substantially in the manner set forth.

2. The connection of the power-wheel bridge C′ with the sills A A, by means of the turned-up end-pieces *d*, as and for the purpose described.

95,827.—WILLIAM NEWELL, Philadelphia, Pa.—*Machine for Polishing and Cleaning Coffee.*—October 12, 1869.

Claim.—A cylinder composed of wood, for cleaning and polishing coffee by the friction and attrition of the grains among themselves and the bulk of coffee with the wood of the cylinder, when said cylinder is strengthened, as described, furnished with openings covered by screens, and internal ribs, and is revolved upon journals secured to the wooden heads, as and for the purpose herein described and represented.

95,828.—J. H. ORMSBY, Dixon, Ill.—*Carriage-Body Brace.*—October 12, 1869.

Claim. — The carriage-body brace, composed of the pieces D and E, the brace-rod F, and pieces H, when the braee-rod F is connected by a journal or wrist-joint, and the pieces are otherwise constructed and operating substantially as and for the purpose specified.

95,829.—GEORGE PARKER, Poughkeepsie, N. Y. —*Feed for Grinding-Mills.*—October 12, 1869.

Claim.—1. The cone-shaped valve G, spirally cut, as and for the purpose set forth.

2. The chamber C, provided with any suitable valve arrangement, in combination with the chamber D, having the conveyers F, as and for the purpose described.

3. The machine described, consisting of the base A, shaft B, chambers C and D, center-piece E, conveyers F, valve G, lever H, and stirrers I, when combined and arranged as and for the purpose described.

95,830.—THOMAS PARKER, Shelby, Ohio.—*Sausage-Stuffer.*—October 12, 1869.

Claim.—The combination of the part A, having a rounded bottom, its interior divided, by partitions *b*, into spaces a^1 a^3 a^3 a^4, the cover C, hopper C′, spout

d, ring *j*, latch *k*, slotted roller B, sliding plates D, the gearing *f h*, and crank *i*, all constructed and arranged to operate substantially as herein described.

95,831.—JOHN C. PEARL, Mendota, Ill.—*Cultivator.*—October 12, 1869.

Claim.—1. The standards D, with sleeves D′, when constructed and arranged substantially as shown and described, for the purpose set forth.

2. The axles C, when constructed and arranged substantially as shown and described.

3. The clevises F, when constructed as shown and described, in combination with the plates F′, both arranged to operate as and for the purpose set forth.

4. The combination, with the whiffletree, of the thimble, whereby the former may be raised or lowered, as set forth.

95,832.—JAMES PENFIELD and DAVID F. WOOLSEY, Bridgeport, Conn.—*Coach-Door.*—October 12, 1869.

Claim.—The inside handle herein described, having operating-lever C, pitman *b*, and lever D, in combination with the spindle E, of the tumbler of the lock of a coach-door, constructed and arranged to operate substantially as specified.

95,833.—THOMAS THOMPSON PONSONBY, Liverpool, England, assignor to JOHN ANDERSON, same place.—*Machine for Surfacing and Ornamenting Wood.*—October 12, 1869; patented in England, September 5, 1865.

Claim.—1. Mounting the engraved cylinder *d* upon the disk-bearing *e*, fitted into the end of said cylinder, in such a manner that the latter may turn freely upon its axis, as described, and for the purposes set forth.

2. The cylinder *d*, disk-bearing *e*, with its sleeve and ring *f*, fastened by set-screw f^1, together with shaft *c*, when the parts are constructed for the purposes specified, as described.

3. The arrangement, of the driving-gear, consisting of cone-pulleys b^2, screw-pinion b^2, gear-wheel c^1, shaft *c*, and gearing k^1, in connection with brace *b*, when the parts are constructed and operated as described, for the purpose set forth.

4. The spirally-grooved and serrated rollers *d d*, in combination with the table C, operating as described for the purpose specified.

95,834.—JOHN H. PRICE, Boston, Mass.—*Combined Pliers and Scissors.*—October 12, 1869.

Claim.—The within-described instrument, consisting of a pair of jaws, A B, provided with cutting-edges, and a pair of jaws *d d′*, flattened at its extremities, for performing the respective function of scissors and pliers, when constructed substantially as described.

95,835.—WALKER V. PULLIAM, Kansas City, Mo.—*Railway-Car Coupling.*—October 12, 1869.

Claim.—1. As an improvement in self-adjusting car-couplers, the double plates D D, pivoted on either side of a metallic block or support, A, at one end, and secured to an interposed wedge-shaped head, B, at the other, substantially as herein described.

2. The combination of the spring G, or its equivalent, with the supporting-block A and cross-bar F of the plates D D, carrying the coupling-head of my improved car-coupler, substantially as herein described.

3. The combination of the bent lever K, pivoted to or upon the platform of a car, with the rod L pivoted to one of the plates D of an automatic car-coupler, constructed substantially as herein described.

95,836.—GEORGE W. RAWSON, Cambridgeport, assignor to himself and MICHAEL HITTINGER, Somerville, Mass.—*Stone-Crushing Machine.*—October 12, 1869.

Claim.—1. The arrangement of the surplus-receiver F, with the stationary and lateral jaw-plates B E E, as described, viz, so as to extend over, and serve as a cap to such plates, and a means of aiding in holding them in position when they are resting on the studs or projections *a a*, by which they are supported.

2. The arrangement of the wedge-keys *b b*, and their screws *d d* and nuts *c c*, with the jaw C, and its carrier H, applied together as set forth.

95,837.—W. B. REANEY, Chester, Pa.—*Hoisting-Apparatus.*—October 12, 1869.

Claim.—1. A hoisting-maching, in which are combined the following elements, namely: first, a shaft, to be revolved continuously in one direction; second, a barrel, loose on the said shaft; third, a braking-device, revolving with the shaft, and arranged to control the barrel, or release the same; and fourth, a braking-device for retarding and stopping the barrel, all arranged substantially as set forth.

2. The plate F, secured to the shaft *a*, and carrying the sliding sockets G G^1, in combination with the links *j* and *k*, connected together by a rod, H, passing through a slot in the shaft, and with a rod, *n*, passing through the shaft, all substantially as described.

3. The rod *n*, connected to the inner braking device, and the rods *h*, connected to the outer braking-device, in combination with the cross-piece M, for the purpose described.

4. The combination of the braking-device herein described, the cross-piece M, and the lever N, for the purpose set forth.

95,838.—JOHN B. ROOT, New York, N. Y.—*Cut-Off Gear for Steam-Engines.*—October 12, 1869; antedated October 2, 1869.

Claim.—1. The combination or gear of the driving-pulley of the governor with the main shaft of the engine, in such manner as that a reduced and minimum velocity is imparted to the governor at or about the commencement of each piston-stroke of the engine, at all speeds of the latter, substantially as specified.

2. The combination, with the main or crank-shaft A, of the engine and governor-driving pulley C, of the double-scroll gears E and F, essentially as herein set forth.

95,839.—JAMES J. ROSS, Buffalo, N. Y., assignor to SARAH ROSS, same place.—*Fishing-Reel.*—October 12, 1869.

Claim.—1. The arrangement and construction of the barrel or reel B, as described, and for the use and purpose set forth.

2. The combination of A′, barrel or reel B, and eccentric, C, to operate substantially as and for the purpose set forth.

95,840.—ENNO SANDER, Saint Louis, Mo.—*Device for Extinguishing Fires.*—October 12, 1869.

Claim.—1. The jar B, provided with the inverted cone-shaped valve D, the same opening upward, as described.

2. The feed-spout *x* with its cap, when arranged and operated substantially as described.

95,841.—Canceled.

95,842.—THEODORE O. L. SCHRADER, New York, N. Y.—*Spool and Thread-Protector.*—October 12, 1869.

Claim.—1. The combination, in a spool-thread protector, of the rim or ring *d* with the convex head *a*, and arms or projections *c*, substantially as and for the purposes set forth.

2. In combination with the above, the ring *f*, provided with points *g*, substantially as and for the purposes set forth.

95,843.—CHARLES WILLIAM SIEMENS, Westminster, England.—*Manufacture of Iron and Steel.*—October 12, 1869; patented in England, September 20, 1866.

Claim.—1. The above-described process of making cast steel upon the open hearth of a furnace, such process being by effecting, simultaneously, the reduction of iron-ores, in one or more heated hoppers, and the solution of the reduced metal, (without exposing it to the flame,) in a bath of metal, provided in the furnace, substantially as hereinbefore described.

2. The mode of making cast steel upon the open hearth of a furnace, the same consisting in causing

wrought iron, steel, or white cast iron, to descend upon inclined planes, or through hoppers, (where the metal becomes gradually heated,) and into a fluid bath of cast iron, under the influence of very intense heat, the metal being dissolved in such bath, and converted into cast steel, substantially as described.

3. The employment of a regenerative gas-furnace, with a bath of metal, and one or more hoppers, used as described, during and by the process of making steel thereby, as explained.

95,844. — JOHN SILSBY, New York, N. Y.— *House-Connection for Sewer, Water, and Gas Pipes.* —October 12, 1869.

Claim.—The tubular cases E, extending from the houses on the opposite sides of a street, under said street, and into the sides of the tunnel A, to form permanent channels, through which the house-connections of gas, water, and sewer pipes, either or all, can be introduced, without disturbing the street or sidewalk, as shown and described.

95,845.—GEORGE E. SMITH, Middleport, N. Y. —*Hoop-Bending Machine.*—October 12, 1869.

Claim.—The within-described device, consisting of the frame A A, B, and C, the rollers D D, F and L, the adjustable slides G, bolts H, and nuts *h*, the belt I, and the adjustable frame K, all constructed and arranged substantially as and for the purpose specified.

95,846.—S. A. SMITH, New Haven, assignor to THE CENTRE BROOK MANUFACTURING COMPANY, Centre Brook, Conn.—*Combined Bit and Tap.*—October 12, 1869.

Claim. — The bit and tap, constructed and combined in one and the same piece, as shown and described, as an improved article of manufacture.

95,847. — DANIEL MCLEAN SOMERS, Brooklyn, N. Y.—*Device for Securing Buttons to Fabrics.*— October 12, 1869.

Claim.—The combination, with the riveting-die F, and stud-supporting and centering die E, of the rubber spring G, arranged around the exterior of the riveting-die for action on the button, in concert with said die, essentially as herein set forth.

95,848.—DANIEL E. SOMES, Washington, D. C, —*Bed and Cushion Spring.*—October 12, 1869.

Claim.—1. A series of elastic tubes, one within another, as springs for bed, sofa, and chair bottoms and cushions, substantially as set forth.

2. A spring-bottom for beds, sofas, chairs, &c., composed of a series of elastic tubes, arranged in one or more horizontal layers, and either longitudinally or transversely, or both, substantially as set forth.

3. Circulating warm or cold water, or air, through or between a series of elastic tubes of a bed-bottom, by the devices substantially as and for the purpose described.

4. Perforated tubes, or their equivalents, so arranged as to admit and distribute air, substantially in the manner described, for the purpose of warming or cooling and ventilating beds.

5. Ventilating-beds by forcing air into them, and allowing it to escape through small perforations, in the manner described.

95,849. — B. F. STURTEVANT, Jamaica Plains, Mass.—*Apparatus for Utilizing Heat.*—October 12, 1869.

Claim. — For utilizing the heat escaping in currents of volatile products of combustion, an incased series of tubes, provided with inlet and outlet pipes for said volatile products, and with an air-inlet and an air-outlet entering and proceeding from the inclosed space around the tubes, when combined with a rotary blower, by which air is passed rapidly through said air-passages, and is forced from the outlet of the blower in a heated condition, substantially as described.

95,850.—BENJAMIN TATHAM, New York, N. Y. —*Die for Manufacturing Lead Pipe.*—October 12, 1869.

Claim.—The combination of a loose core with a cylinder and ram, for the manufacture of pipes, substantially as herein described.

95,851. — JACOB TAYLOR, Beloit, Ohio.—*Carriage-Body Brace.*—October 12, 1869.

Claim.—The brace F, guide G, and fulcrum-loop H, in combination with the spring G and reach A, substantially as and for the purpose shown.

95,852. — JAMES THOMPSON, Bridgeport, Ill.— *Horse-Rake.*—October 12, 1869.

Claim.—1. The arrangement of the frame A, platform B, seat C, braces D D, runners E E, and wheel F, all substantially as shown and described.

2. The arrangement of the frame A, with runners E, pivoted arms G G, rake H, handle J, spring-bars *a a*, and lugs *b b*, all constructed and operating substantially as specified.

3. The combination of the handle J, frame K, and forked rod L, all constructed and arranged substantially as and for the purposes herein set forth.

95,853.—JOSEPH THORNE, New York, N. Y.— *Type-Setting Machine.*—October 12, 1869.

Claim.—1. The combination of the pair of parallel series of type-holders with the type-race arranged between the pair, and with type-drivers traversing said type-race, and constructed to push the types along the same, substantially as before set forth.

2. The combination of two series of type-holders, arranged endwise to each other, with a type-race extending along both, and with type-drivers traversing said type-race in opposite directions, so as to deliver the types at a central point, substantially as before set forth.

3. The combination of two type-holders, arranged at opposite sides of a type-race, with a type-race divided into two courses, one course for the types ejected from each series of type-holders, substantially as before set forth.

4. The combination of a type-holder with an ejecting-finger, a key to select said finger, and a reciprocating carrier, operated by power separately from the key, to move said finger when it is selected, substantially as before set forth.

5. The combination of two series of type-holders with two series of ejecting-fingers and reciprocating carriers, operated in alternate succession, substantially as before set forth.

6. The combination of two series of ejecting-fingers with reciprocating type-carriers, operated in alternate succession, and with keys arranged in two gangs, one for each hand of an operator, substantially as before set forth.

7. The combination of the series of type-holders, type-race, and type-driver, with a reciprocating type-transferrer, to transfer the types from the type-race, the whole constructed to operate substantially as before set forth.

8. The combination of the series of type-holders with the type-race, type-transferrer, type channel, and reciprocating type-setter, the whole constructed to operate substantially as before set forth.

9. The combination of the type-channel with a reciprocating type-setter and spring-presser pawl, the whole constructed to operate substantially as before set forth.

10. The combination of a type-race and type-driver with a movable gauge, substantially as before set forth.

11. The combination of the ejecting-fingers with a friction-driver for the shaft, which imparts motion to said fingers by connecting-mechanism, the whole constructed to operate substantially as before set forth.

12. The combination of the reciprocating type-driver with a friction-driver for the shaft, which imparts motion to said type-driver by connecting-mechanism, the whole constructed to operate substantially as before set forth.

13. The combination of the type-driver and movable gauge with a friction-driver for the shaft, that imparts motion to said movable gauge by connecting-mechanism, the whole construeted to operate substantially as before set forth.

14. The combination of the reciprocating type-transferrer with a friction-driver for the shaft that imparts motion to said type-transferrer by connect-

ing-mechanism, the whole constructed to operate substantially as before set forth.

15. The combination of the reciprocating type-setter with a friction-driver for the shaft that imparts motion to the said type-setter by connecting-mechanism, the whole constructed to operate substantially as before set forth.

95,854.—MATTHEW TILDESLEY, Willenhall, England.—*Cotton Bale Fastening.*—October 12, 1869.

Claim.—The double tie, clip, or fastening, obtained by the combination of the two parts *a a*, when constructed and applied to each other, and to the surrounding band, as herein specified.

95,855.—A. J. TOMPKINS and J. M. WEGAND, Clarksville, Iowa.—*Hames-Fastener.*—October 12, 1869.

Claim.—The casings B and c^2, formed respectively on the socket A and perforated strap C, the socket B being adapted to receive and inclose the tube D, containing the spring-pin E, all arranged as described, for the purpose specified.

95,856.—E. W. VAILL, Worcester, Mass.—*Folding Chair.*—October 12, 1869.

Claim.—1. In a folding chair, the attachment of rigid arms to a rigid seat, having two slots in its side, as and for the purpose specified.

2. The combination of the legs A B, arm D, rigid seat C, slots *c*, pin *b*, and braces *a*, substantially as described.

95,857.—CHARLES R. VAN OSDEL, Chicago, Ill.—*Stirrup.*—October 12, 1869.

Claim.—1. A stirrup consisting of the sole and heel plates A and C, and provided with the toe-cap B, and with a counter, *b*, substantially as herein shown and described.

2. Making the stirrup extensible, to adapt it to feet of different length, as set forth, by arranging the heel-plate adjustably on the sole-plate, as specified.

3. The ring G and pin *f*, formed on the stirrup, when arranged on the stirrup, to allow the same to be swiveled in the straps D E, of which one has the ring F to fit on G, substantially as herein shown and described.

95,858.—LOUIS WALTHER, New York, N. Y.—*Medicated Cigar.*—October 12, 1869.

Claim.—As a new article of manufacture, medicated cigars, made from tobacco-leaves treated in an infusion of the substances herein described, substantially as specified.

95,859.—EDWARD G. WARD, Hoboken, N. J.—*Slate-Pencil Holder.*—October 12, 1869.

Claim.—Attaching the pencil to the slate by means of the elastic band *a*, passing through a mortise in the slate-frame, and beneath which, in the groove, formed in the edge of the frame, the pencil is placed, as herein shown and described.

95,860.—GEORGE J. WARDWELL, Rutland, Vt., assignor to STEAM STONE-CUTTER COMPANY, New York City.—*Stone-Channeling Machine.*—October 12, 1869.

Claim.—1. A stone-channeling machine, having its cutter-standard J applied to a base, T, which is adjustable upon the carriage A, substantially as described, and for the purpose set forth.

2. The combination of a hinged cutter-carrying standard, J, and an adjustable base, T, with the carriage A, substantially as described, and for the purpose set forth.

3. The adjustable sub-base D, on carriage A, having a steam-boiler mounted upon it by trunnions, substantially as described.

4. The air-chamber above the piston b^2, in cylinder M, and air-cock *t*, in combination with reciprocating cutters, and a support or standard, J, substantially as described.

5. The air chamber below piston b^1, in cylinder M^1, and air-cock *t'*, adapted to operate substantially as described.

95,861.—EDWARD WEISSENBORN, Hudson City, N. J.—*Pencil-Attachment.*—October 12, 1869.

Claim.—1. A pencil-clasp or stock, with compass-leg jointed thereto, for use, in connection with a pencil, as the scribing-leg and handle of the compass, substantially as specified.

2. The compass-leg C, constructed to form a knife-blade, *f*, and jointed to the pencil clasp or stock A, essentially as described.

3. A pencil-attachment, constructed to combine the threefold purposes or uses of a compass leg, a knife, and a pencil-point protector, essentially as herein set forth.

95,862.—MILTON D. WHIPPLE, Cambridge, Mass., assignor to JAMES T. SANFORD, New York City.—*Machinery for the Manufacture of Felt.*—October 12, 1869.

Claim.—1. The mode of fulling or contracting and softening cloth by rubbing and bending or looping it back upon itself, by means of the bed M, rubbing-plate M', and the feed-wheel or drum K, or their equivalents, operating substantially as described.

2. The combination of the pawls L' and *l'* with the ratchet-wheel K' and drum K, for giving to the latter an intermittent feed-movement, and at the same time preventing the fabric from being drawn too tightly over the edge of the bed M, as set forth.

3. The pawls L' and *l'*, slide L, and cam h^2, or its equivalent, for operating the ratchet-wheel K', and drum K, as set forth.

4. A regulator-rod, P, or its equivalent, in combination with the mechanism for operating the feed-drum K, for taking up the slack of the cloth and regulating the feed thereof, as set forth.

95,863.—MILTON D. WHIPPLE, Cambridge, Mass., assignor to JAMES T. SANFORD, New York City.—*Machine for the Manufacture of Felt.*—October 12, 1869.

Claim.—1. Automatically lifting the rubbing-plate D', to permit the feed of the cloth or bat to the bed D, by means substantially as described.

2. The intermittently-operating feed-rolls *j j'*, in combination with the intermittently-lifting rubbing-plate D', substantially as described.

3. The combination of devices for simultaneously operating the intermittently-lifting rubbing-plate D', and intermittently-rotating feed-rolls *j j'*, as described.

4. The combination of the levers E E^1, rock-shaft E^2, and cam *h*, for lifting the vibrating rubbing-plate D', without interfering with its vibratory movement.

95,864.—RICHARD M. WILLIAMS, Rockville, Md.—*Harvester.*—October 12, 1869.

Claim.—1. The platforms D D and finger-bars, placed opposite each other, and arranged so as to rotate, with their sickle-bars, in a horizontal plane, about a common center, substantially as and for the purposes explained.

2. In combination with the revolving platforms and the finger-bars, the beam H, carrying the graded series of fingers *l'*, arranged to operate in the manner and to the end set forth.

3. In combination with the revolving platforms and finger-bars, the beam G, carrying the adjustable rake *k*, arranged to act as described, and with the extent specified.

95,865.—SILAS N. BROOKS, Bernardston, Mass., administrator of the estate of LINUS YALE, Jr., deceased.—*Lock.*—October 12, 1869.

Claim.—1. The combination of the turning-slide, lock-bolt, and stop, all constructed to operate substantially as before set forth.

2. The combination of the turning-slide, bolt, stop, and detent, all constructed to operate substantially as before set forth.

95,866.—HUGH YOUNG, Middletown, Conn., and JAMES L. YOUNG, New York, N. Y.—*Carbon-Tool.*—October 12, 1869.

Claim.—The improved mode of inserting mineral carbons, or other hard stones, in tools for cutting stones, metals, or other substances, from the front side B of the block A, instead of inserting the same from the top part, or that part of the block through which the cutting-point is to project, as is now done,

and this we claim for any shape or size of mineral carbon, or other hard stones, when done substantially in the manner and for the purpose herein set forth.

95,867.—Louis Brauer, Washington, D. C.—*Car-Axle Bearing.*—October 12, 1869.

Claim.—1. The hollow vibrating box or case, provided with the side-rollers D D′ and large roller B, and with the shoulders H H and springs P P resting thereon, all constructed and arranged to operate as and for the purpose set forth.

2. In combination with the box carrying the described arrangement of wheels and springs, the stationary frame E, constructed and applied to the car, substantially as and for the purpose set forth.

95,868.—John F. Allen, Tremont, N. Y.—*Steam-Engine Slide-Valve.*—October 19, 1869.

Claim.—1. A perforated slide-valve, constructed as shown, whereby to admit the steam by four courses, allowing it to pass through the body of the valve, substantially as herein shown and described.

2. A perforated slide-valve, having the cross bars *n o* and connecting tube or tubes *t*, to admit or exhaust the steam by four different passages, as specified.

3. The cap F, arranged in the steam-chest, above the perforated slide-valve, and provided with one or two grooves, or recesses, to admit the steam above the valve, substantially as herein shown and described.

95,869.—Emanuel Andrews, Williamsport, Pa.—*Saw-Swage.*—October 19, 1869.

Claim.—1. The adjustable hexagonal anvil A, constructed and operating as described, and for the purpose aforesaid.

2. The saw-swage C, constructed and operating as above shown, and for the purpose above set forth.

3. The combination, arrangement, and employment of the saw-swage C, adjustable hexagonal anvil A, screws E E, and supports D D, in connection with a suitable frame, when constructed and operating as above mentioned.

95,870.—Henry M. Beidler, Philadelphia, Pa.—*Lamp-Burner.*—October 19, 1869.

Claim.—The bell-shaped case A, with its broad open or perforated bottom, in combination with the inner heat-conducting case C, constructed and arranged substantially as and for the purpose set forth.

95,871.—Henry C. Bell, Emporia, Kans.—*Saw-Filing Machine.*—October 19, 1869; antedated October 13, 1869.

Claim.—The construction and arrangement of the slotted angular clamp F, the slotted angular plate E adjustable upon the clamp F, and the slotted guide D, adjustable upon the plate E, as herein shown and described.

95,872.—Louis Black, Detroit, Mich.—*Spring Eye-Glass.*—October 19, 1869.

Claim.—1. Connecting the springs of spring eye-glasses to the eye-glass frame by clamps *a b′*, when arranged to be secured by wedge-formed devices, or their equivalents, substantially as specified.

2. In combination with the said clamps, the bent projections at the ends of the springs, or their equivalents, substantially as specified.

95,873.—William M. Bleakley, Verplank, N. Y.—*Can-Opener.*—October 19, 1869.

Claim.—A can-opener, composed of the levers A and B, which are pivoted together by a hook, and which carry respectively the adjustable cutter D and the adjustable prong C, substantially as herein shown and described.

95,874.—Henry E. Bodwell, Jr., South Norwalk, Conn.—*Tucking Attachment for Sewing-Machines.*—October 19, 1869.

Claim.—The adjustable sliding-plate A, the hinged folding-plate D, the forming-plate E, and regulating-guide L, all constructed and arranged as and for the purpose specified.

95,875.—Milton Bowker, Newark, N. J.—*Hay-Spreader.*—October 19, 1869; antedated October 9, 1869.

Claim.—1. The cylinders, pistons, and springs, constructed, combined, and arranged upon a hay-spreader, substantially as specified and shown.

2. The sleeves *d*, when constructed with the sockets *e* and set-screws *f*, in the manner and for the purpose herein described.

3. The adjusting-plate *g*, when used in combination with the cylinders, pistons, and springs, and the sleeves *d*, in constructing a machine to spread hay.

4. The combination of the connecting-rod *g*, the sleeve *d*, and the tines and set-screws *f*, substantially as specified and shown.

95,876.—Benjamin B. Brown, Delaware, Ohio.—*Adding-Machine.*—October 19, 1869.

Claim.—The combination of plate *l*, ratchet *n*, detent-pawl *q*, actuating-pawl *m*, chain *p p*, slide *b*, (having lug C and spring-pins *d*, thereon,) scroll-pin *g*, frame *k*, and face-plate, all constructed and arranged as and for the purpose specified.

95,877.—Daniel S. Brown, Astoria, Oregon.—*Boat-Detaching Apparatus.*—October 19, 1869.

Claim.—The combination of the stationary jaws B and pivoted jaws C, with the rods *b b′*, bar D, lever E, rod *d*, and catch F, all arranged and operating substantially as herein shown and described.

95,878.—Augustus Oliver Brummel, Memphis, Tenn.—*Driven-Well Points.*—October 19, 1869.

Claim.—1. The point C B, made in two sections, with the air-passages *a a a a*, in combination with *b b*, as described above, for the purpose there stated and described.

2. The point C B, in combination with the pipes A D, constructed as above described, and for the purpose therein contained and stated.

95,879.—T. N. Bunnell, Reynolds, Ind.—*Hay-Stacker.*—October 19, 1869.

Claim.—The frame-work A, combined with the pivoted bar B, the lever C, rope D, and stay *d′*, in the manner and for the purpose set forth.

95,880.—W. Newton Cook, Grand Rapids, Mich.—*Spring-Bed Bottom.*—October 19, 1869.

Claim.—The combination of the guide-bar C and frames A and B, bolts and thimbles D, springs *a a a a*, and canvas *b*, when constructed and used substantially as and for the purposes specified.

95,881.—Albert Cooper, Harrisburgh, Pa.—*Clothes-Line Holder.*—October 19, 1869.

Claim.—In combination with a line-holder, the double-incline plane disk-wheels E and D, and the center C with the collar B, constructed, arranged, and operating substantially as described, for the purposes set forth.

95,882.—John Corson, Washington, D. C., assignor to himself and Daniel Breed, same place.—*Manufacture and Preservation of Metals.*—October 19, 1869.

Claim.—The above-described mode of manufacturing, working, tempering, storing, and preserving metals in a state of insulation from earth-currents of electricity, in order to produce and preserve a superior fibrous condition of the metal, and to prevent or retard the crystallization and deterioration of the same, using the aforesaid means, or their equivalents, involving the same principles, substantially as set forth.

95,883.—E. D. Cramer, Hackettstown, N. J.—*Stable Horse-Tie.*—October 19, 1869.

Claim.—An improved stable horse-tie, formed by the combination of staple B, strap C, and elastic block D, the said parts operating together, substantially as shown and described.

95,884.—Hermann Cramer, Sonora, Cal.—*Saw.*—October 19, 1869.

Claim.—A saw, whose back edge is provided with a graduated scale, and whose blade is perforated, in combination with the square-edged handle B, spirit-

levels *d c*, and pivoted bar or plate *f*, all arranged and operating substantially as herein shown and described.

95,885.—MITCHELL R. DAND, Philadelphia, Pa.—*Car-Spring.*—October 19, 1869.

Claim. — 1. The spring, made substantially as shown and described, from the blank A, with the coils *b*, straight part *a*, and inclined portions *c d*, for the purposes specified.

2. The grooved plate B, in combination with the spring, arranged substantially as and for the purpose set forth.

95,886.—HIRAM DODGE, Beaver Dam, Wis.—*Shaft-Coupling.*—October 19, 1869.

Claim.—The head A, provided with arms E, internal ratchet *f f f f*, in combination with the nut M, provided with pawls J, cylindrical head F, provided with friction-rollers, the shafts C D, and shell B, as and for the purpose set forth.

95,887.—WILSON ELDER, Mill Hall, Pa.—*Straw-Cutter.*—October 19, 1869.

Claim.—The enlarged part B of the lever C, elastic bearing-ribs H H, annular groove I, plate A, and bolt C, all combined, constructed, and arranged as specified.

95,888.—ERVIN H. EWELL, Saint Louis, Mich.—*Machine for Sawing Lath.*—October 19, 1869.

Claim.—The devices by which the gang of saws M is adjustable vertically above and below the surface of the saw-table C, consisting of the mandrel L, the frame K, the slides *f*, the lever O, and the treadle P, when constructed and arranged as above set forth.

95,889.—WILLIAM M. FERRY, Grand Haven, Mich.—*Circular-Saw Mill.*—October 19, 1869.

Claim.—1. The head-block D, constructed substantially as herein described, and provided at its lower edge with stationary dogs *d*, as and for the purpose set forth.

2. The dogs G, recessed in the vertical guides F in the face of the head-block, which dogs engage, of their own weight, with a cant, as herein specified.

3. In combination with the dogs G, the racks *h*, operated by pinions I′, gears J J′, and lever K, or other suitable mechanism for raising said racks, substantially as described.

4. The employment of the springs C′, on the log-side of the carriage, to arrest the "throw" of the head-block, when the cant has become light.

5. The inclined-plane bearings *b*, on the back side of the saw-carriage, in which play the journals of the traction-wheels *a*′, so that while feeding up to cut, the carriage shall stand level, and, in gigging back, the back side will drop, causing the log-side of the carriage to diverge from the saw, as and for the purpose set forth.

6. The dial-wheel Q, perforated on its periphery with pin-holes, in parallel rows, the holes of each row being placed at equal distances from each other, in combination with a feed-pinion, N, of such diameter at its pitch-line as will accurately space off the various thicknesses of merchantable lumber, and come out even on the last cut of the cant, substantially as described.

95,890.—J. HYDE FISHER, Chicago, Ill.—*Nut-Lock.*—October 19, 1869; antedated April 19, 1869.

Claim.—In combination with the nut D and screw H, a washer, C, which is so formed to have projections *d b* fitting into corresponding depressions *d*′ *b*′ in its seat, as set forth.

95,891.—JOHN J. FLANSBURGH, Berne, N. Y.—*Sausage-Stuffer.*—October 19, 1869.

Claim.—1. The stuffing-cylinder F, provided with the sloping mouth *f*, and the trunnions *g g*, arranged so as to swing its mouth over a side of the machine, substantially as described, for the purpose set forth.

2. In a sausage-stuffer, in combination with the screw C and hand-wheel D, or its equivalent, the frame B, with the plunger E, attached, and working in the frame A, provided with the guides *a a*, and all arranged and operated substantially in the manner specified, for the purpose set forth.

95,892.—EGBERT GUY FOWX, Baltimore, Md.—*Photographic Printing.*—October 19, 1869.

Claim.—The combination of two or more negatives, for the purpose of producing photographic prints, substantially as described, and for the purpose set forth.

95,893.—CALVIN G. FRUSHOUR, La Gro, Ind.—*Animal-Trap.*—October 19, 1869.

Claim.—The combination of the notched flanges or wings *e*, with the spring-treadle L, constructed as herein shown and described.

95,894.—HORACE W. GEORGE, Danvers, Mass., assignor to JOHN H. YOUNG and JOHN A. GREENE.—*Box-Toe for Boots and Shoes.*—October 19, 1869.

Claim. — As a new article of manufacture, a molded box-toe for boots and shoes, made of vulcanized rubber, with or without an intermixture of fibrous material, or of any suitable material capable of being formed or shaped in molds, substantially as described.

95,895.—ALGERNON GILLIAM, Pittsburgh, Pa.—*Harness-Saddle.*—October 19, 1869.

Claim.—The tree A, with its upward-projecting flanges B, strengthened by means of the loop M, at each end of the same, and connecting said flanges, in combination with the patent-leather top piece D, housing K, and pad I, in the manner and for the purpose herein set forth.

95,896.—DENNIS GORMAN, Hornellsville, N. Y.—*Potato-Digger.*—October 19, 1869.

Claim.—The digging-fork scoops D D D as constructed and arranged on the revolving disk C for adjusting their depth, in combination with the screen E, operating in the manner substantially as herein described, for the purposes set forth.

95,897.—MERRITT W. GRISWOLD, New York, N. Y.—*Lock-Nut.*—October 19, 1869.

Claim.—1. A spiral spring, F, or H, combined with the edges or periphery of either end of a free screw-bolt, or of a free screw-nut upon a fixed bolt, to lock and tighten the same, substantially as herein set forth.

2. An interposed spring, when extended between and secured to the edges or peripheries of two or more nuts B B, or of two or more free bolts G, passing into fixed or secured nuts or threaded apertures, so as to lock and tighten the same, substantially as herein set forth.

95,898.—JOSEPH D. HALL, Trenton, N. J.—*Ruler.*—October 19, 1869.

Claim.—The combination of the ruler and blotting-pad with the frame which holds the blotting-pad, and the manner of attaching them, substantially as described, and for the purposes hereinbefore set forth.

95,899. — WILLIAM HALL, Boston, Mass., assignor to himself and SAMUEL PECK AND COMPANY, New Haven, Coun.—*Rose for Door-Knobs.*—October 19, 1869.

Claim. — The molded composition washer C, in which the metallic part D E is molded into the non-metallic part, substantially as described, and for the purpose set forth.

95,900.—JOHN HARVEY, Martinsville, Ind.—*Fruit-Drier.*—October 19, 1869.

Claim.—1. The arrangement of the case A B, the flue E, F, G, M, dividing the case into compartments, the ventilating-passages Q, and dampers R, all substantially as specified.

2. The improved fruit-drawers or shelves, constructed and arranged as specified.

95,901.—JOHN HINE, Cockermouth, England.—*Machine for Dressing Millstones.*—October 19, 1869.

Claim.—1. The guide B, fastened to the plate J, which is pivoted to the radial arm A, substantially as described, so that the position of the guide can be varied at will, as specified.

2. The lever E, pivoted to the radial arm, to move the cutter-block and the ratchets, which impart in-

termittent rotary motion to the entire apparatus, as specified.

3. The radial arm A, toothed disk C, and worm H, in combination with the lever E, ratchet-bar I, cutter-block F, and holder M, all arranged and operating substantially as herein shown and described.

4. The diamond holder M, having the split conical end, the collar l', and nut m, all arranged as described, to clamp the diamond between the segments of the cone, as specified.

95,902. — DAVID H. HORNER, Battle Ground, Ind.—*Weather-Strip.*—October 19, 1869.

Claim.—The combination, with a door and door-frame, of the under-cut bracket B, strip A, springs C and D, when all constructed and arranged as specified.

95,903. — J. W. HOWARD, Greenville, Ala.—*Slack-Belt Attachment for Machinery.*—October 19, 1869.

Claim.—The combination of loosely-pivoted lever E and pin G with the post C, having a series of holes arranged thereon, in the arc of a circle, as and for the purpose specified.

95,904.—JOSEPH HUBBELL, Zanesville, Ohio.—*Head-Block of Saw-Mills.*—October 19, 1869.

Claim. — 1. The combination of the vibrating hand-lever, the reciprocating pitman, the spring-clutches linked to and operated by the pitman, the ratchet-teeth on the driving-wheels, the pinion, the worm-shaft, and the jacks, all these parts being constructed as set forth.

2. The combination of the driving-wheels, the reciprocating pawls moving parallel to the face of the wheels, the springs, and the vibrating pawl-holders, all constructed as set forth.

3. The combination of the pawl-holders, the spring-pawls, each having a short projection or foot, l^2, and the retractor k, all constructed as set forth.

4. The combination of the reciprocating sliding bar, pawls, or spring-clutches, connected by links with the bar, cogged driving-wheels, having internal ratchet-teeth, screw or worm shafts, secured in the head-blocks, and carrying pinions corresponding with and driven by the cogged wheels, screw-socket or nuts, in which the shafts turn, and feeding-jacks, sliding in the head-blocks, and to which the sockets or nuts are secured, the combination being and operating substantially as set forth.

95,905. — A. J. JACK and D. E. BRAND, Des Moines, Iowa.—*Water-Wheel.*—October 19, 1869.

Claim.—1. The buckets D, each pivoted at the beginning of the curved outer termination, thence to the inner end being plane, as shown and described.

2. The buckets D, having the form shown, the rods E, and bell-cranks F, pivoted at their angles to the notched disk G, fixed on the shaft H, all arranged as specified.

95,906.—JESSE JENKINS, Andrew County, Mo., assignor for one-half to ABRAM DOBBS, same place.—*Corn-Planter and Cultivator.*—October 19, 1869.

Claim.—1. The combination of the seed-box a, slide a', shaft b', with the pivoted standard c'', spring c''', and slotted guide-frame c', all arranged and operating substantially as described.

2. The combination, with the seeder-frame, of the lever h, rod h'', and handle h''', in the manner and for the purpose set forth.

3. The combination of shaft and roller D D′ with the shafts and shovels C C′ r, controlling-shaft B, planter-apparatus a a', crank-shaft b', disconnecting-apparatus c c' c'' c^3, and brake-mechanism h' h'' h^3, all arranged and operating in the manner explained.

95,907. — C. H. JOHNSON, Chelsea, Mass., assignor to himself and CHARLES LIBBEY, Whitefield, N. H.—*Sleigh and Sled Runner.*—October 19, 1869.

Claim.—In a sled or sleigh runner, the combination of the head-piece B, the elastic runner-iron D, the springs C^1 C^2, and body A, made and connected substantially as described, and for the purpose set forth.

95,908.—WILLIAM H. JOHNSON, Philadelphia, Pa. — *Wash-Pave Key-Handle.* — October 19, 1869; antedated October 5, 1869.

Claim. — The construction of a wash pave key, with the handle of any irregular shape, whereby the hose is kept in position, substantially as described.

95,909.— WILLIAM J. JOHNSON, Newton, and HENRY A. HILDRETH, Lowell, Mass. — *Broiler.*—October 19, 1869.

Claim.—1. The hinged or pivoted drop-hooks, attached to the frame or body of a wire broiler, as and for the purposes specified.

2. Handles formed and attached to the frame or body of a wire broiler, as shown and described, and for the purposes set forth.

95,910. — JOHN J. KIMBALL, Naperville, Ill.—*Water-Wheel.*—October 19, 1869.

Claim. — 1. The combination, with the case A, having the chutes B, of the ring D, and vertical wedge-shaped projections E, substantially as specified.

2. The combination, with the wheel, composed of the rings G G′, vertical arms H, and buckets I, having vertical and inclined faces, of the tubular extension C of the case, substantially as specified.

95,911.—CHARLES A. KING, Springfield, Mass.—*Lubricator for Loose Pulleys.*—October 19, 1869.

Claim. — 1. A valve for pulley-lubricators, constructed and arranged as described, so as to open and close the passage communicating between the reservoir and the pulley-bearing, by its own weight, as the pulley revolves.

2. The combination of the slide-valve A, with adjusting-screws H and I, and hole G, and the reservoir C, with hole E, constructed and arranged as and for the purpose shown.

95,912.—CHARLES A. KING, Springfield, Mass.—*Lubricator for Loose Pulleys.*—October 19, 1869.

Claim.—1. A valve for pulley-lubricators, operated by the centrifugal force obtained from the revolution of the pulley, said valve opening and shutting a passage communicating with the pulley-bearing.

2. The combination of the supply-chamber A, oiling tube B, valve F, and spring I, the parts being constructed and arranged substantially as herein set forth.

3. The independent annular oil-chamber A, constructed in the manner and for the purpose set forth.

95,913.—WILLIAM E. KNIGHT, Shrewsbury, assignor to DARIUS A. MARTIN, Mount Holly, Vt.—*Rotary Vegetable-Grater.*—October 19, 1869.

Claim.—The combination of the revolving disk-grater Z, with a sliding carriage, F, for feeding the vegetable up to the grater, by means of the weight W, cord S, pulleys a' and b', or their equivalents, substantially as and for the purposes specified.

95,914.—FREDERICK KÖHLER and A. J. ALSING, New York, N. Y.—*Spring Pounding and Chopping Block.*—October 19, 1869.

Claim.—An apparatus for reducing and diminishing the shocks and noise of machinery and of pounding-instruments, consisting of the box-shaped support A, the spring or springs B, and the block C, substantially as herein shown and described.

95,915.—FRANZ FRIEDERICH KULLRICH, Berlin, Prussia.—*Picture-Case.*—October 19, 1869.

Claim. — 1. The endless band I, carrying the pictures, in combination with the drum A of a music-box, all arranged so that the band is moved when the music is in action, as set forth.

2. The roller G, held by springs d away from the music-drum A, for the purpose of keeping the band tense, as specified.

3. The case or box J, containing a music-box and picture-belt, and provided with an aperture, through which the pictures are displayed successively while the music is in action, as set forth.

95,916.—WILLIAM LEIGHTY, Ebensburgh, Pa.—*Washing-Machine.*—October 19, 1869.

Claim. — In combination with the triangular bracket E, the sliding stop-plate K, as and for the purpose described.

95,917.—J. C. LONGSHORE, Mansfield, Ohio.—*Clothes-Drier.*—October 19, 1869.

Claim.—1. The combination, with the parallel extension-frame A, united by the bars B, of the frame C, constructed as described.

2. The combination, with the parallel extension-frames A, united as described, and the frame C, of the posts E, all arranged as specified.

95,918.—HENRY O. LOTHROP, Milford, Mass.—*Machine for Making Wire Ferrules.*—October 19, 1869.

Claim.—1. The combination of instrumentalities herein described, for making a soldered-wire ferrule, all substantially as set forth.

2. In coiling mandrels, the combination of a tapering form and grooves *f f*, with a groove *e*, all arranged and operating together in the manner described.

3. The combination and arrangement of mechanism by which the arbor and knife are respectively operated at the time and in the manner set forth.

4. In combination with the mandrel I, the beater *a*, formed as described, actuated in any suitable manner, and operating as explained.

5. As a new manufacture, a ferrule made of coiled and soldered wire, having each fold of the coil formed with an offset, substantially as and for the purposes set forth.

95,919.—THOMAS MAHER, Cleveland, Ohio.—*Core-Box for Car-Wheels.*—October 19, 1869.

Claim.—The core-box A, cover C, and sweep D, constructed and arranged substantially as described.

95,920.—JOEL MANCHESTER, New York, N. Y.—*Animal-Trap.*—October 19, 1869.

Claim.—1. The lever G, with the projections *o o'*, and S, on the inner surface of the slot and end of the lever, substantially as and for the purposes set forth.

2. The bait-box P, constructed as described, when attached, by means of the wires *q*, to the bait-bar F, and arranged as herein set forth and shown, for the purposes specified.

95,921.—HORACE A. MEARS, Pecatonica, Ill.—*Stove-Pipe.*—October 19, 1869.

Claim.—The supplemental open joint B, with beads *c c d*, plates *e e*, and prominences *f f*, when operated by means of the wedge *h*, and used in connection with the pipe A A, as and for the purpose described.

95,922.—GEORGE A. MILANI, Frankfort, Ind.—*Propelling Vessel.*—October 19, 1869.

Claim.—1. The combination of a centrally-fulcrumed lever, having a seat at each end, with two pairs of pawls and ratchet-wheels, arranged as described, to rotate two aligned shafts, D D, simultaneously and with equal velocity, as set forth.

2. The arrangement, on a boat, of two aligned shafts, D D, rotating with equal velocity, spur-wheels E E, pinions *a a*, and shafts B B, to propel the paddle-wheels C C, in the manner described.

3. The arrangement, upon the paddle-driving shaft D D of a boat, of loose equalizing spring spur-wheels E E, for the purpose of giving a uniform motion to the paddle-wheels.

4. The arrangement, near the bottom of the boat, of a lever, H, fulcrumed and shaped as described, for the purpose of removing the pawls from the ratchets, in the manner specified.

95,923.—EDWARD MILNER, Marquette, Mich.—*Wagon-Stake.*—October 19, 1869.

Claim.—The stake A, when provided with the eye B and lug D, in connection with the bolster C, substantially as herein described.

95,924.—TITUS MOLINIER, New Orleans, La.—*Apparatus for Decanting Liquids.*—October 19, 1869.

Claim.—1. The combination, with the divided and hinged decanting-tube or conduit, of the funnel, fixed to the free end of said tube, and arranged to receive the liquid and conduct it to the tube, substantially as and for the purposes set forth.

2. The combination, with the decanting-tube or conduit, of a handle, connected with the free end of said conduit, and adapted to effect the elevation or depression of the receiving-funnel or orifice, and to hold it at any desired height, substantially as set forth.

3. The combination of the hinged conduit, the receiving-funnel or orifice, the handle, for elevating and depressing the same, and the hinged float, surrounding the mouth of said funnel, substantially as set forth.

4. The arrangement, at the point where the two sections of the conduit are hinged together, of leather, India rubber, or other suitable pliable material, which will unite the two sections in one continuous tube, and yet allow the upper or movable section to be swung up or down on its hinge, as set forth.

5. The combination, substantially as described, with the flexible or pliable material, connecting the two sections of the conduit, of props or supports, arranged within the conduit, so as to sustain the said pliable material, and prevent it from impeding the passage of the liquid through the conduit, when the upper section is elevated.

95,925.—ALBERT MOORE and FRIEDERICH WENDEL, Chillicothe, Ohio.—*Combined Plow and Harrow.*—October 19, 1869.

Claim.—The combination of the harrow G, draught-rods H and I, and jointed catch-rod J, with the plow A B C D E F, substantially as herein shown and described, and for the purpose set forth.

95,926.—CHARLES S. MURPHY and DONALD MCGREGOR, Detroit, Mich.—*Soap-Cutting Machine.*—October 19, 1869.

Claim.—1. The vibrating frame D, provided with cutting-wires *o*, table E, and handle L, in combination with the frame C, when constructed and operating substantially as herein specified.

2. In combination with the above-named parts, the slides F, table G, and cutting-wires *m*, when arranged relatively to each other, and operating as herein set forth.

3. In combination with the frames C, D, and G, provided with the various parts herein mentioned, the frame A, provided with cutting-wires *a*, and the ways B, when constructed, combined, and operating substantially as and for the purposes herein described.

95,927.—JOHN MCLEOD MURPHY, New York, N. Y., assignor to JAMES LORIMER GRAHAM, same place.—*Cut-Off Nozzle for Cans.*—October 19, 1869.

Claim.—Packing-cans, for oils and other fluids, provided with nozzles A, having the lateral holes D E, and screw or other caps B, and the cut-off rings F and spouts G, all substantially as specified.

95,928.—FREDERICK NICKLIN, Troy, N. Y., assignor to himself and REUBEN WILLIS, same place.—*Railway-Rail Chair.*—October 19, 1869.

Claim.—A railroad-chair in two parts, whose internal faces are shaped as described, in combination with two keys, with reversed inclination on their coincident sides, the said elements being fitted together, as and for the purpose specified.

95,929.—JORGE OYARZABAL, Malaga, Spain.—*Ice-Cream Server.*—October 19, 1869.

Claim.—The implement or ice-cream server, substantially as described, that is, as composed of the knife A, blade B, and spring-bow C, arranged as set forth.

95,930.—L. D. PARSONS, Tremont, N. Y.—*Wind-Wheel Pump.*—October 19, 1869.

Claim.—1. The combination of a reciprocating weight, P, with a pump-rod, K, having an eye at the top and another at L, whereby, as the weight strikes the top *g*, the rod is raised, and when it strikes the bottom one, it is depressed, all as shown and described.

2. The combination of a winding-spindle, G, loose upon its shaft, and alternately locked and unlocked, with a cord, O, and weight P, whereby the rod K is

raised by mechanical power, but depressed by gravity, in the manner set forth.

3. The combination of the rod K, reciprocating weight P, and lever M, arranged and operated as described, to ship and unship the clutch-sleeve G, in the manner described.

4. The combination of the shaft F, clutch-collar H, clutch-sleeve G, lever M, cord O, and weight P, with the lugged rod K, to displace the water and cause its elevation, as set forth.

5. The combination of the shaft F with a wind-driver, whose wings T face inward, as specified, whereby a vane is rendered unnecessary.

6. The subject-matter of fourth clause, in combination with the wind-driver, as and for the purpose specified.

95,931.—ALMARIN B. PAUL, San Francisco, and J. L. WOOD, Independence, Cal.—*Process for Amalgamating Gold and Silver.*—October 19, 1869.

Claim.—1. The combination of the simple horizontal rotating hollow or perforated-axled cylinder A, with a furnace, for the purpose of drying and ventilating materials to be amalgamated.

2. The process of drying and ventilating metalliferous ores, and amalgamating the same, substantially as set forth.

3. The amalgamating of pulverized ores in a dry condition, with mercury, in metallic or wooden barrels or cylinders, without the use of artificial heat.

95,932.—JAMES N. PEASE, Panama, N. Y.—*Fence-Stake.*—October 19, 1869.

Claim.—1. The sill C, in combination with the cross-cleats B and stakes A, when constructed and arranged as and for the purpose herein substantially described.

2. The combination and arrangement of the cap E, stakes A, cross-cleats B, and sill C, substantially as described.

95,933.—JOHN PLAYER, Philadelphia, Pa.—*Manufacture of Iron and Steel.*—October 19, 1869.

Claim.—1. As a preparatory step in the conversion of crude iron into steel or malleable iron, mechanically dividing cast iron into pieces, flakes, grains, or powder, by running it, in a fluid state, either alone or mixed with other substances, between rollers or other suitable moving and crushing surfaces, substantially as and for the purposes described.

2. The process of converting crude iron into steel, or malleable iron, by subjecting it to the puddling-process or any other suitable treatment, iron which has first been reduced in the manner above described, from a melted state, either alone or together with other substances, to pieces, flakes, grains, or powder, and then mixed, in this solid state, with oxides or other ingredients or agents, also in a solid state, either before being placed in the puddling or other furnace, or in such furnace before any considerable portion of them is melted, substantially as and for the purposes set forth.

95,934.—WILLIAM J. REED, West Middlesex, assignor to himself, JOHN M. CLAPP, and WARNER PEARSON, Newcastle, Pa.—*Steam-Generator.*—October 19, 1869.

Claim.—Throwing jets of steam into the flame, just above and clear of the fuel, by devices constructed and arranged with specific reference thereto, as herein set forth.

95,935.—ANDREW JACKSON ROBERTS, Boston, Mass.—*Machine for Making Horseshoes.*—October 19, 1869.

Claim.—1. The train of mechanism by which the formers Q Q′ are opened and closed, its several parts being constructed, arranged, and operating substantially in the manner described.

2. Constructing, arranging, and fitting together, upon the head-block, the sliding bars R Y and levers V V′, substantially in the manner specified.

3. The train of mechanism by which the sliding bars R Y are actuated, its several parts being arranged and operated as set forth.

4. The combination of the anvil-plate, the pressure-plate *u*, and bar *r*, acting together as a holding-device, with the dies a^1 and p', all being constructed and arranged as shown and described.

5. The subject-matter of the preceding clause, in combination with the formers Q Q′, all the elements of said combination being arranged and operating together as and for the purpose specified.

6. The subject-matter of the preceding clause, in combination with the punches *p p*, all the elements operating together to make a complete shoe, as set forth.

7. The combination of the bending, punching, face-forming, calk-forming, and discharging devices, all arranged and operating together as and for the purpose specified.

8. The arrangement of the punch-carrier R, the orifice H′, the feeding-carriage g^1, and the herein-described mechanism for reciprocating the same, substantially as and for the purposes set forth.

95,936.—EDWARD P. ROCHE, Bath, Me.—*Hooks and Eyes.*—October 19, 1869.

Claim.—As a new manufacture, hooks and eyes, formed from continuous strips of spring or tempered wire, bent into the shape substantially such as herein shown and described.

95,937.—THEODORE W. RYDING, Tully, N. Y.—*Butter-Package.*—October 19, 1869.

Claim.—The improved butter-package, herein described, as a new article of manufacture, the same consisting of a tub, A, with packing groove *a*, the cover B, cross-piece C, screws D, riveted to the tub and to the hoop *e* of the tub, and nuts *d d*, when the cross-piece has its ends cut away, so that the screws and nuts do not project, all the parts being constructed and arranged substantially as herein described.

95,938.—ALBERT G. SAFFORD, Boston, Mass.—*Railroad-Car Ventilator.*—October 19, 1869.

Claim.—The arrangement and combination of the ball D and the stops *b c* with the valve A, its pivots, and the opening B, for reception of the valve, the whole being substantially as set forth.

95,939.—GEORGE W. SCOLLAY, Saint Louis, Mo.—*Preserving Dead Bodies.*—October 19, 1869; antedated October 5, 1869.

Claim.—1. Preserving the body or carcass, by combining, in the arterial or vascular system thereof, the antiseptic, or preserving qualities or influence of a fluid or fluids and a gas or gases, so made, mixed, and compounded as to exert an antiseptic influence upon the body, when united therein, whether the gas or gases and fluid or fluids are antiseptic in themselves or not, or whether they would exert an antiseptic influence or not upon the body, when separately applied thereto.

2. Restoring and preserving the life-like color of the venous blood, and the consequent life-like appearance of the corpse or flesh of the carcass, by means of a combination of gases which are antiseptic and color-restoring in their influence, when united in the vascular and arterial system of the body, substantially as described.

3. Subjecting the body or carcass to an antiseptic influence, in the form of a fluid, introduced into the arterial and vascular system, and to an antiseptic influence in the form of a gas, introduced into the blood and tissues either through the lungs, the pores of the skin, or through the arterial and venous system, so as to cause the two influences to combine in the body, for the purpose of preserving the same, substantially as described.

95,940.—WARREN SHUMARD, Richmond, Ind.—*Soil-Pulverizer.*—October 18, 1869; antedated October 5, 1869.

Claim.—The toothed frame A, in combination with the movable toothed frame B, the teeth of which latter are passed, with a reciprocating or oscillating movement, between those of the frame A, substantially as described.

95,941.—BENJAMIN SILLIMAN, New Haven, Conn.—*Manufacture of Illuminating Gas.*—October 19, 1869.

Claim.—The use and application of the material or mineral hydrocarbon called Wollongongite, possessing the attributes and qualities substantially as

above described, either by itself or mixed with other gas-producing substances, for the purpose of making gas for illuminating or heating purposes.

95,942. — R. H. SIPES and D. DEFIBAUGH, Bloody Run, Pa.—*Fruit-Drier.*—October 19, 1869.

Claim.—1. The combination, with the case A, of the tube G, sliding fire-pot H, fitted thereto, the flues K, radiator L, and flue M, when the said case is provided with suitable air-passages and regulating-valves at top and bottom.

2. In combination with the subject-matter of the above, the posts P, brackets O, and pans N, all substantially as specified.

95,943.—ANTHONY SLUTHOIN, Cleveland, Ohio.—*Pump.*—October 19, 1869.

Claim.—1. The lever L, provided with the hub N, the slotted stuffing-box M, glands O, and any suitable packing, in connection with the air-chamber of a double-cylinder pump, substantially as and for the purposes set forth.

2. The combination and arrangement of the shell A, covers B, lugs b', rods b, cylinder C, air-chamber D, valves E, suction G, piston-rod H, perforated pistons I, followers K, lever L, stuffing-box M, glands O, diaphragm P, and discharge Q, when constructed, arranged, and operating substantially as and for the purposes herein shown and set forth.

95,944. — JOSEPH R. SMITH, Chicago, Ill., assignor to CORNELIUS WALSH, Newark, N. J.—*Traveling Bag.*—October 19, 1869.

Claim.—1. The band A, having its ends a a bent around the hinge-corners of the frame, and connected by a separate strip or brace, B, of greater strength or stiffness, substantially as represented and described, for the purposes set forth.

2. The band A, having its ends a a bent around the hinge-corners of the frame, and united by a separate stiff strip or brace, B, in combination with the corner-shields or protectors F, applied externally of the cover, as represented and described, for the purpose set forth.

95,945. — W. C. SMITH, Warrensburgh, Mo.—*Bed Bottom.*—October 19, 1869.

Claim.—In combination with a bed-bottom, the rollers or pulleys a, resting upon the strips g, the girths d and the slats c, rounded on the under side, all constructed as described, and for the purposes set forth.

95,946. — DAVID T. SNELBAKER, Cincinnati, Ohio, assignor to ALEXANDER DELORAC, same place.—*Wagon-Brake.*—October 19, 1869.

Claim.—The pawl F, with limb f and spring G, or its equivalent, in combination with the ratchet B and levers H and C, arranged and operating substantially as and for the purpose set forth.

95,947.—EUGENE SPEDDEN, Astoria, Oregon.—*Milking-Apparatus.*—October 19, 1869.

Claim.—1. The combination of the pail, tube, funnel, and elastic wristlets D, substantially as specified.

2. The elastic wristlets D, ring a'', and hooks E, in combination with the funnel C, when said parts are constructed and arranged to operate as shown and described.

95,948.—HENRY W. STAPLES, Saco, Me.—*Lamp-Filler.*—October 19, 1869.

Claim.—The tube C, attached at one end to the discharge-nozzle B, and at the other to the top of the can A, at a point farthest, or nearly so, from the angle of said nozzle, substantially as herein shown and described, for the purpose specified.

95,949.—H. STICKNEY, Cleveland, Ohio.—*Coal-Stove.*—October 19, 1869.

Claim.—1. The arrangement, in a heater and about the magazine, of the radiator N, surrounding the reservoir P, and formed of two conical frusta, but having the respective bases thereof reversed, all as shown and described.

2. The combination of a fire-pot, M, and stirrer G, with a magazine, P, having a self-adjusting valve, all operating together, to supply, contain, and stir the fuel, as set forth.

3. The combination, with the grate-lever H, of the rod I and operating lever L, when arranged substantially as specified.

4. The combination of the draught-door V, magazine-door X, catch W, and connecting-rod U, when arranged for causing the draught-door to be disconnected from the suspending catch, for closing the same by the action of the magazine-door, when opened, all substantially as specified.

95,950. — JOEL V. STRAIT, Litchfield, Ohio.—*Mowing-Machine.*—October 19, 1869.

Claim.—The combination of wheel B, having the eccentric gears C D E thereon, and arranged on shaft A, with the pawled fast collar J, ratchet spur-gear G, and clutch and gears H K I, arranged on the shaft F, all operating together, in the manner set forth.

95,951.—WILLIAM SWARTS, Pent Water, Mich.—*Boot-Pattern.*—October 19, 1869.

Claim.—Cutting the foot of a boot or shoe-pack in one piece, of the form specifically shown in Fig. 3 of the drawing, and the use of the same for boot-packs, in combination with a leg cut in one piece.

95,952.—LEWIS TAWS and JOHN M. HARTMAN, Philadelphia, Pa., assignors to LEWIS TAWS and JOHN M. HARTMAN, same place.—*Air-Hoist.*—October 19, 1869.

Claim.—1. An air-hoist, constructed with one double-acting pneumatic cylinder, substantially as shown.

2. The ropes a, twisted in contrary directions, the hollow piston B, and the cylinder A, substantially as shown and described.

3. The cylinder A, piston B, ropes a, oblique or transverse pulleys D', balance-ring D, pawls C, and the racks M, substantially as shown and described.

4. The upper and lower three-way cocks H H, levers V W, and the ropes or rods k, as shown and described.

5. The cylinder A, in combination with the tracks or guides G, racks M, platforms E, with framings, guide-wheels F, balance-ring D, hanger N, pin O, and the pawls C, substantially as shown.

95,953.—L. TAYLOR, Jordan, and J. C. RICHARDSON, Prairie du Chien, Wis.—*Water-Elevator.*—October 19, 1869.

Claim.—1. The combination of the double-grooved winding-wheel I, cord L, cars G H, track D, and balanced track E, when arranged and operating substantially as specified.

2. The combination of the cars G or H, buckets P, spring-pins S, valves R, and guides T T', when arranged and operating substantially as specified.

3. The combination of the track C^1, Fig. 3, car d, weighted roller a, bar b, and cord c^2, when arranged and operating substantially as specified.

4. The combination of the car d, having a ledge, d', stem k, and hinged catch-plate w, when arranged substantially as specified.

5. The combination of the car d, spring-levers t', with their pins, stem k, and contracting-blocks n', when arranged and operating substantially as specified.

6. The combination, with the car d and bucket P', of the watering-trough A, and tilting discharger B^2, substantially as specified.

95,954.—JOSÉ TORT, Mexico, Mexico.—*Water-Wheel.*—October 19, 1869.

Claim.—1. The combination of the wheel A and eccentric plate C with the wheel B, when the latter is arranged to inclose the former, substantially as shown and described.

2. The combination of the fixed buckets f', hinged buckets e', springs g, and eccentric plate C, when arranged substantially as specified.

3. The toothed hub a, of the wheel B, the wheels e f, and shaft of the wheel A, all combined and arranged as specified.

95,955.—FREDERICK TOWNSEND, Albany, N. Y.—*Stone-Cutting Machine.*—October 19, 1869.

Claim.—The tangentially arranged chisels E, applied to a rotary head, and operated substantially as and for the purpose described.

95,956.—THEODOR UEHLING, Logan, Nebraska—*Rotating Cultivator.*—October 19, 1869.

Claim.—1. The cultivator A, constructed and operated substantially as described, for the purposes set forth.

2. In combination with a rotating cultivator, the slide E, arranged and operated substantially as shown and described, for the purposes specified.

95,957.—HENRY C. VAN GIESON, Paterson, N. J.—*Box-Opener.*—October 19, 1869.

Claim.—1. A box-opener, provided with an angle-iron, E, to form a rigid fulcrum against the box itself, in the manner described.

2. A box-opener, provided with a recess, *g*, and corresponding projection on the respective jaws, as and for the purpose specified.

95,958.—REUBEN WAKEFIELD, Hardwick, Vt.—*Apparatus for Evaporating Liquids to Obtain Sugar, &c.*—October 19, 1869.

Claim.—1. The combination of the evaporating-pan B, tubular grate A′, and feed-pipes C C′, all arranged and operating substantially as set forth.

2. The combination of the pan B, tubular grate A′, feed-pipes C C′, and stop-cock *c*, substantially as and for the purpose set forth.

95,959.—SETH V. WARNER, Buffalo, N. Y.—*Coffee-Pot.*—October 19, 1869.

Claim.—1. The combination and arrangement of the inner jar B, provided with feet *a a* and lugs *b b*, with the outer metal case A and circulating-water space *c c*, all operating in the manner and for the purpose herein specified.

2. The combined tunnel and strainer D E, arranged as described, in combination with the jar B and outer case A, the whole operating in the manner and for the purpose set forth.

95,960.—WILLIAM B. WEST, Utica, Wis.—*Plow.*—October 19, 1869.

Claim.—The combination, with a plow, of the anti-friction-rollers F, shaped and arranged substantially as specified.

95,961.—B. ROBERT WEHNER, Mankato, Minn.—*Excavator.*—October 19, 1869.

Claim.—1. The central frame B, made vertically adjustable, so as to excavate a ditch with a plane bottom, and to any depth, and also so arranged, with reference to the truck A, as to be capable of being turned down horizontally for convenience in transportation, substantially as described.

2. Providing an excavating-machine with side-cutting apparatus, so arranged and made adjustable as to form a ditch with sides of any required slope, as and for the purpose set forth.

3. In combination with an excavating-machine having side-cutting apparatus, capable of receiving greater or less inclination, an extensible rear axle, arranged as and for the purpose explained.

4. Providing an excavating-machine with side-cutting apparatus, having a reciprocating motion, substantially as set forth.

95,962.—JOHN WHITEFORD, Pond City, Kansas.—*Brick-Machine.*—October 19, 1869; antedated October 9, 1869.

Claim.—The combination of the pressure-roller or rollers H, mold-cylinder D *d′*, interior loose roller I, and side-wheels E with each other and with the frame A and hopper F, said parts being constructed, arranged, and operated substantially as herein shown and described, and for the purposes set forth.

95,963.—HENRY WICKER, Olean, N. Y.—*Fence.*—October 19, 1869.

Claim.—The metal ring D, and hooks *c c*, as arranged, in combination with the stakes B B, latch C, and the connecting-bar E, substantially as and for the purposes herein set forth.

95,964.—J. S. ZERBE, Delaware, Ohio.—*Combination-Tool.*—October 19, 1869.

Claim.—The compound tool-stock and receptacle above described, its several parts being constructed and arranged in the manner set forth.

95,965.—HENRY AIKEN, Philadelphia, Pa.—*Mode of Hanging Window-Curtains.*—October 19, 1869.

Claim.—1. Arranging a window-curtain, in connection with rollers and pulleys, with two endless cords, whereby it may be lowered from the top, or raised from the bottom, and two fixed cords for rotating the rolls as they are moved vertically, substantially as set forth.

2. The combination of the rolls B B′, fixed cords C C′, endless cords D D′, and pulleys E, all arranged to operate substantially as and for the purpose set forth.

95,966.—JOSEPH N. ARONSON, New York, N. Y.—*Reflector for Street-Lamp.*—October 19, 1869.

Claim.—The arrangement of oppositely-situated lens-reflectors C C, mounted by means of band-sockets E E, on forked arms F F, which project from a collar, H, provided with a set-screw, K, so that the whole may be applied to and adjusted on the ordinary burner of a street-lamp, substantially as and for the purpose herein specified.

95,967.—JAMES M. BAKER, Aurora, Ill.—*Stove-Pipe Damper.*—October 19, 1869.

Claim.—1. The disk B, provided with the corrugated sections *b* and with the fixed pivot C, in combination with the removable pivot D, provided with the enlarged and flattened portion *d*, substantially as and for the purpose specified.

2. The means employed for adjusting the damper to and securing it in position, consisting of the quadrant E, provided with the notches *e*, and with the inclined slot G, and the pivot D, provided with the crank-handle F, all constructed and arranged substantially as and for the purpose set forth.

95,968.—WILLIAM BALL, Wilmington, Ohio.—*Railway-Moving Machine.*—October 19, 1869.

Claim.—1. In combination with the wheel A, the compound lever P, spring *g*, and ratchet-wheel B, substantially as set forth.

2. The moving-machine, herein described, having ratchet-wheels B B, compound levers P P, forked double lever M M′, braces N N, coupling D, forked levers F F, and toothed rings E, constructed and arranged to operate substantially as specified.

95,969.—CHARLES B. BARLOW, Portsmouth, N. H.—*Game.*—October 19, 1869.

Claim.—The implements herein described, for playing the game "le circle," when constructed, colored, and arranged substantially as specified.

95,970.—FREDERICK BAUMANN, Chicago, Ill.—*Composition for Cleaning Stone.*—October 19, 1869.

Claim.—The application of the bioxalate of potassa in aqueous solution, whether mixed or not with sulphuric acid or its equivalent, to the surfaces of stone, in the manner substantially as herein described and for the purposes set forth.

95,971.—BENJAMIN BELLAIR, Paris, France.—*Safety-Tackle.*—October 19, 1869.

Claim.—The arrangement in the block, and with relation to the pulley and ratchet-wheel fixed to the same, of the pawl *o* suspended above the ratchet-wheel, and pivoted to the rear end of the brake *q*, which vibrates upon an axis over the pulley, and is actuated by said pawl, as herein shown and specified.

95,972.—JACOB BENNER, Pittsburgh, Pa.—*Fire-Place Stove.*—October 19, 1869.

Claim.—A water-chamber, in combination with the inclined front flue-plate 1, constructed, arranged, and operating in the manner and for the purpose herein described.

95,973.—HENRY L. BENNETT, Geneva, Ill.—*Feed-Mechanism for Grinding-Mills.*—October 19, 1869.

Claim.—In combination with the runner of a pair of grinding-stones or burrs, which is suspended to or by a hollow spindle, supported and driven from above said runner, a feed-mechanism arranged and operating in connection with said hollow spindle,

substantially as herein described and represented, and for the purpose set forth.

95,974.—Russell O. Benton, Buffalo, N. Y.—*Apparatus for Applying Roofing-Composition to Felt.*—October 19, 1869.

Claim.—The combination of the removable bed B with the ways A A and hoppers E F, either or both, substantially as and for the purposes hereinbefore set forth.

95,975.—John William Bowker, Sacramento City, Cal.—*Spark-Arrester.*—October 19, 1869.

Claim.—The perforated plates F G H, provided with short tubes *a a a*, constructed and arranged substantially as and for the purpose herein described.

95,976.—Thomas Bracher, Rahway, N. J.—*Sectional Coffer-Dam.*—October 19, 1869.

Claim.—A sectional coffer-dam, constructed of a series of curved sections formed of metal plates A, riveted together and to cross-bars B, and provided with interlocking devices, whereby a series of sections can be interlocked together, substantially as described and specified.

95,977.—Joel Brenton, Pittston, Pa., assignor to himself, Frederick C. Epting, Alpheus Cattler, James L. Giddings, and Richard Brenton, same place.—*Paint and Pigment.*—October 19, 1869.

Claim.—1. The manner, herein described, of preparing a material to be used in making black paint out of the above-described black mineral, substantially as set forth.

2. The manner, herein described, of making a black paint out of a newly-discovered "black mineral," substantially as set forth, and for the purposes specified.

3. A black paint or pigment, made of the mineral herein described, as set forth.

95,978.—E. W. Brettell, Elizabeth, N. J.—*Door-Latch.*—October 19, 1869; antedated October 9, 1869.

Claim.—1. The combination of the tail-piece *a*, with its hole *b*, arm *f*, pin *g*, and slot *e*, with the latch A, in the manner and for the purpose set forth.

2. The lever *h* and shaft *j*, with its projection *n*, constructed, arranged, and operated as above described and shown.

3. The combination of the shaft *j* and lever *h* with the tail-piece *a* and latch A, in the manner and for the purpose herein specified and shown.

95,979.—F. T. Brown, New York, N. Y.—*Shutter-Fastener.*—October 19, 1869.

Claim.—The bolt B within the blind, operating the dog *c*, in combination with the spring G, substantially and for the purposes set forth.

95,980.—Reuben F. Brown, Provincetown, Mass.—*Composition for Beverage.*—October 19, 1869.

Claim.—The composition composed of gum-arabic and other ingredients, as hereinbefore set forth.

95,981.—Thomas Brown, Chicago, Ill.—*Steam and Air Whistle.*—October 19, 1869.

Claim.—The construction of whistles with the flattened end of a pipe, and with an opening in the side of the cylindrical box, so constructed and combined with the pipe that the distance between the aperture from which the air or steam issues, and the edge upon which it strikes, may be increased or diminished, whereby to vary the quality of the sound, all arranged as herein made known.

95,982.—J. S. Burch, Buffalo, N. Y.—*Fence.*—October 19, 1869.

Claim.—The construction and arrangement of the post A, the supports B B, and the joint C, all constructed in combination as described, and for the purposes and uses set forth.

95,983.—Jonathan E. Burdge, Cincinnati, Ohio.—*Automatic Boiler-Feeder.*—October 19, 1869.

Claim.—1. In connection with the water-supply pipe E and pipes F F′, communicating with the interior of the steam-boiler, the double-headed piston G, chamber H, and ports B C D of cylinder A, the parts being constructed and arranged, and the whole operated, substantially in the manner and for the purpose described.

2. In combination with an automatic boiler-feeder, which embodies a water-chamber, or feed-pocket, which is brought into alternate communication with the water-supply and the boiler, the feed-pipe F′, communicating with the boiler, when the same terminates inside the boiler, at the point corresponding with the required water-line or level, as set forth.

3. In the described connection with the elements of the clause preceding, the pipe F, when the same terminates inside the boiler, at or near the water-line, as set forth.

4. In the described combination with the feeding-mechanism embodied in the first clause of claim, the side-passages or pipes J J′, and cylinder-heads *a a′*, for the purpose of adapting the feeding-mechanism for direct operation by steam, in the manner substantially as set forth.

95,984.—Edwin L. Bushnell, Poughkeepsie, N. Y.—*Spring-Mattress.*—October 19, 1869.

Claim.—1. The spring A, having the eyes *a* formed thereon at each end, as set forth.

2. A spring-mattress, consisting of a series of springs, A, with eyes *e*, united by cords *c* and *f*, as described.

95,985.—Eben Simpson Chase, Eau Claire, Wis.—*Device for Burning Sawdust in Steam-Generator Furnaces.*—October 19, 1869.

Claim.—1. The arrangement of the pipe E, with valves *b* and *e*, for conveying the steam from the dome B to the superheating-pipes D D, substantially as and for the purposes herein set forth.

2. In combination with the superheating-pipes D D, the elbows or nozzles *a a*, when constructed and used substantially in the manner and for the purposes herein set forth.

3. The spouts G and F F, provided with valves *d d*, and slides *i i*, substantially as and for the purposes herein set forth.

4. The combination and arrangement of the boiler A, dome B, furnace C, superheating-pipes D D, conducting-pipes E, with its valves *b e*, and the spouts F F and G, with their valves *d d* and slides *i i*, all substantially as and for the purposes herein set forth.

95,986.—Ebenezer Clark, Rushville, Ill.—*Hand-Cultivator.*—October 19, 1869.

Claim.—The metal shanks B B, being adjusted by the rod D, and the attaching and detaching of the shanks B B, to and from the handle C, by the bolts F F, as shown and described.

95,987.—D. R. Clem, Edinburgh, Va.—*Manufacturing Flour.*—October 19, 1869.

Claim.—1. The combination of a series of graded bolts, elevators, conveyers, and spouts, whereby the second grade of flour from the first bolt, and the first grade from the second bolt, are both returned to the first bolt, and so on continuously, with any desired number of bolts, substantially as described.

2. The combination of the elevators J K, dressing-machines B C, and the conveyers D E F and G H I, provided with the gates or slides *a b*, when constructed and arranged with connecting-tubes, substantially as herein described, and for the purpose set forth.

95,988.—Aury G. Coes, Worcester, Mass.—*Machine for Grinding Cylindrical-Fluted Cutters.*—October 19, 1869.

Claim.—1. The combination, with the sharpening-wheel and reciprocating carriage, of the cutter-holding mandrel, arranged in or parallel with the plane of rotation of the wheel, and supported in independently-adjustable bearings, substantially as described, so that the mandrel may be adjusted at either end to bring it into proper position to receive the tapering or other-shaped fluted cutter to be acted upon by the wheel.

2. In combination with the sharpening-wheel and sliding or reciprocating carriage, and cutter-holding mandrel, arranged in or parallel with the plane of

rotation of said wheel, as described, the employment of a guiding-plate or stop, affixed to the stationary part of the machine, and arranged to engage with the cutter-teeth during the reciprocations of the carriage, as set forth.

3. The combination of the sharpening-wheel and cam, for imparting an endwise motion to its shaft, with the reciprocating carriage and cutter-holding mandrel, arranged to move in or parallel with the plane of rotation of said wheel, substantially as shown and set forth.

4. A machine for grinding and sharpening fluted cutters, in which the vertically-adjustable reciprocating carriage, the cutter-supporting mandrel and its adjustable end-bearings, the revolving sharpening-wheel and cam for imparting an endwise motion to the same, and the guiding-plate or stop for holding in position the cutter-teeth, are combined and arranged, with relation to each other, and for joint operation, as herein shown and described.

95,989.—JOHN W. CORD, Pleasant Hill, Ind.—*Washing-Machine.*—October 19, 1869.

Claim.—The rocker G, with its bars *b b* and screws *c c*, in combination with the bottoms C and D, and the head-block I I, all arranged and operated as and for the purpose set forth.

95,990.—JOB B. CROWLEY, Middletown, Conn., assignor to himself and MANNING, BOWMAN AND COMPANY, same place.—*Metallic Roofing.*—October 19, 1869.

Claim.—As a new article of manufacture, metallic roofing, coated upon one or both sides, with porcelain, or other vitreous material, substantially as set forth.

95,991.—J. M. CRULL, Harrisburgh, Pa., assignor to himself, A. C. MCCULLEY, W. A. MIDDLETON, and JACOB WALTERS, same place.—*Locomotive Signal-Light.*—October 19, 1869.

Claim.—1. The application of adjustable signal-lights or reflectors to locomotives, steamboats, &c., when placed in such a position as to illuminate a portion or section of the smoke or steam issuing from the smoke-stack, substantially as and for the purposes herein set forth.

2. The two oblique faces A B, in combination with the reflector F, pulleys C G, and post A′ C′, substantially as herein set forth.

95,992.—JOHN CUTHBERT, Glenham, N. Y.—*Rotary Engine.*—October 19, 1869.

Claim.—The swinging abutments *p* and *q*, and screws *t t′*, in combination with the revolving piston *c*, valve *e*, and its actuating-mechanism, substantially as set forth.

95,993.—ALFRED S. DICKINSON, New York, N. Y.—*Curtain-Fixture.*—October 19, 1869.

Claim.—A curtain-fixture, combining in its construction a frame, A, and one or more semicircular glass sheaves, B, constructed and arranged, in relation to each other, as shown and described.

95,994.—ALFRED S. DICKINSON, New York, N. Y.—*Curtain-Fixture Device for Stopping the Motion of Cords.*—October 19, 1869.

Claim.—A device for stopping the motion of a cord or rope, consisting of a tube, A, pivoted at its upper end to any suitable frame, and having a tapering slit or slits, A′, as set forth.

95,995.—WILLIAM EWING, Columbia, La.—*Machine for Destroying Worms from Cotton-Plants.*—October 19, 1869.

Claim.—A machine or apparatus, constructed substantially as herein recited, for the purposes set forth.

95,996.—HENRY L. FRANKLIN and EUGENE CLARK, Nashua, N. H.—*Sad-Iron Holder and Clothes-Drier.*—October 19, 1869.

Claim.—1. The combination of sad-iron holder C and frame A, forming, with arms 1, 2, 3, &c., a clothes-drier, substantially as shown and described.

2. The combination of sad-iron holder C, clothes-drier described, and lock B D, substantially as shown and set forth.

95,997.—WILLIAM J. FUNK, Portland, Oregon.—*Gang-Plow.*—October 19, 1869.

Claim.—The combination of the rock-shaft M, the eye-piece F, links C and D, clevis E, roller L, incline L, and check J, on tongue K, when applied to a gang-plow as described and for the purposes set forth.

95,998.—WILLIAM GOLCHER, Saint Paul, Minn.—*Breech-Loading Fire-Arm.*—October 19, 1869.

Claim.—The snap-catch for fire-arms, as above described, consisting essentially of the slide-latch C, the stem B, having a head, *d*, that slides in contact with the under edges of the slot in the supporting-plate through which the stem extends, the inclined lever E, working in a vertical plane against the stem D, above the head *d*, and provided with an eccentric end, *m*, against which the spring *n* presses vertically, when said parts are constructed and arranged to operate in the manner and for the purposes set forth.

95,999.—VICTOR M. GRISWOLD, Peekskill, N. Y.—*Photographers' Plate-Vise.*—October 19, 1869; antedated October 7, 1869.

Claim.—1. The combination, with the frame and the sliding adjustable bar D, of the jaw E and the independently-adjustable jaw F, substantially as hereinbefore set forth.

2. The combination, with the frame and the sliding adjustable bar D, of the journals or handles C C′, or their equivalents, substantially as hereinabove set forth.

3. The combination, with the jaw F and bar D, of the screw *a*, nut *b*, and rods *c*, substantially as specified.

4. The combination, with the sliding bar D and the frame, of the pins *f* and holes *g*, substantially as set forth.

5. The revolving or reversible frame A A′ B B′, combined with the jaws E and F, and the adjustable bar D, substantially as set forth.

96,000.—WILLIAM M. HAMILTON, Jacksonville, Ill.—*Pump.*—October 19, 1869.

Claim.—The combination of the pipe A, flange B, sectional tapering cylinder E, tapering pipe F, rings G G and H H, and the flange or burr I, all constructed and arranged to operate substantially in the manner and for the purpose herein set forth.

96,001.—DAVID HARGER, Des Moines, Iowa.—*Furnace for Steam and other Devices.*—October 19, 1869.

Claim.—The pipe A, constructed, as described, with box-apertures *a a*, or a slotted aperture, *b*, with partitions *e e*, substantially as herein set forth.

96,002.—JESSE HARPSTER, Clyde, Ohio.—*Gate.*—October 19, 1869.

Claim.—The combination and arrangement of the gate-posts A A′, gate B, spring C, curved plate *a*, shoulders *b b*, hook *c*, eye *d*, and rubber-lined strip *e*, all constructed and operating substantially as shown and described.

96,003.—THOMAS HARRISON, Detroit, and WILLIAM HOLLMAN and WILLIAM CHART, Three Rivers, Mich.—*Chalk for Use at Billiard-Tables.*—October 19, 1869.

Claim.—The compound herein described, of the materials mentioned, for the uses and purposes specified.

96,004.—FRANKLIN B. HUNT, Richmond, Ind.—*Straw-Cutter.*—October 19, 1869.

Claim.—1. Securing the adjustable cutter-bar D to the bearing-bar C, by means of bolts E E, the heads of which are fitted in the elongated slots G G, as and for the purposes described.

2. The adjusting-keys *a a*, or their equivalents, in combination with the adjustable bar D, provided with vertical bolts, to hold it to its bed or bearings, substantially as and for the purpose shown and set forth.

96,005.—J. G. HUNTINGTON, Atkinson, assignor to himself and F. E. WILSON, North Bradford, Me.—*Horse Hay-Rake.*—October 19, 1869.

Claim.—1. The attachment of each tooth directly to the axle, by coiling it partially around a cylindrical groove or guide thereon, and leaving the end of the bend or coil free and unsecured, thus permitting a separate and independent rising and falling motion to each tooth, and without any strain thereon, as shown and described.

2. The arrangement of the frame G E E′ F upon the axle, and in relation to the loosely-hung teeth, turning on the axle as described, and so that the center of motion of the teeth shall not coincide with that of the frame.

3. The combination of the axle A, loosely-hung teeth H H, lever-frame sectors J and K, and lever M, when these parts are arranged and operate as described.

96,006.—Austin H. Jackson, Bear Valley, assignor to John C. Garland, Sacramento, Cal.—*Snow-Plow.*—October 19, 1869.

Claim.—1. The construction and arrangement of a snow-plow, in the manner and for the purpose herein described.

2. The peculiar construction of the wheel B, with its wings C enlarged at their base and convex sides, and combined with the concave bottom of the chamber D, in the manner and for the purpose herein described.

3. The combination of the wheel F with the concave chamber, within which it revolves, in the manner and for the purpose herein described.

4. The combination of the wheels B and F, constructed as described, revolving at right angles to each other, and within the concave chambers D and E, in the manner and for the purpose herein described.

5. The sliding doors I, with their extended racks J, operated by the gear-wheels K, substantially as above set forth.

6. The triangular wings N, secured to the sides of the car, and operated by means of levers *a* and *b*, substantially as and for the purpose herein described.

96,007.—Moses Johnson, Three Rivers, Mich.—*Potato-Digger and Cultivator.*—October 19, 1869.

Claim.—1. The concave wheels K, with their hooks *a*, staples S, and scrapers *v*, screws C, and nuts *n*, when constructed and arranged to operate substantially as specified.

2. The shields Y, in combination with the wheels K and beam A.

3. The potato-digger herein described, having adjustable concave wheels K, plow H, staples S, shield Y, and caster P, constructed and arranged to operate substantially as specified.

96,008.—Nelson Johnson, Jasper, N. Y.—*Saw-Gummer.*—October 19, 1869.

Claim.—1. The chain E, when used with the dogs, for the purpose of holding the saw against the cutter, substantially as set forth and described.

2. The dog G, consisting of a grooved metal block, provided with loops, substantially as specified.

3. The dog H, when formed like a hinge, with its rough and sharp projections, so as to prevent the saw from slipping, substantially as described.

4. The arrangement, upon the inner upper ends of the slotted frame A, of the two flat plates C C, placed at right angles with the frame, and provided with the central screw B and end screws D D, substantially as shown and described.

96,009.—Nelson Johnson, Jasper, N. Y.—*Saw-Swage.*—October 19, 1869.

Claim.—1. The adjustable gauge E, upon the end of the swage-pin, for the purpose of regulating the pitch of the teeth, substantially as set forth.

2. The key D, when used to hold the wedge C in its place, substantially as set forth and described.

3. The arrangement of the block A, with a slot in its end and side, pin B, wedge C, and key D, the several parts constructed and operated as specified.

96,010.—E. A. Kamerer, Greentown, Ohio.—*Shovel-Plow.*—October 19, 1869.

Claim.—1. A shovel-plow, provided with one and two movable shovels, when so constructed as that the movable shovels may be readily turned, so as to assume any required angle with the plow-beam, and may be set at any desired distance from said beam, and, also, so that said movable shovels may be readily moved into, or nearly into line with said fixed shovel, substantially as is herein set forth.

2. The arm M, rigidly attached to the shovel-standard G, and held by a bolt, P, working in a slot, *a*, in the plow-beam A, when said arm serves both to hold the shovel-standard G at the required distance from the plow-beam A, and, also, to regulate the angular position of said standard, with respect to said plow-beam, substantially as is herein specified.

3. Pivoting the standards G, of the side-shovels L, of a shovel-plow to the side beams F, by means of a hinge-pivot joint, H I K, and brace W, having a loose joint, *f*, with the standard G, substantially as is herein specified.

96,011.—George Karrmann, Ansonia, assignor to himself and Charles Alvord, Wolcottville, Conn.—*Machine for Making Needles for Sewing-Machines.*—October 19, 1869.

Claim.—1. The combination of a clamp or blank-holder with the tools *r′ s′*, arranged, in respect to each other and to the needle-blank, substantially as shown and described, and for the purposes set forth.

2. The combination of the tools *r′ s′* and *t* with the rotary clamp *b*, all arranged and operating substantially in the manner and for the purposes set forth.

96,012.—William M. Kimber, Sacramento City, Cal.—*Varnish for Plastered Walls and for Coating other Surfaces.*—October 19, 1869.

Claim.—A finish or varnish for covering and protecting walls and painted surfaces, composed of the ingredients herein enumerated, mixed and compounded in about the proportions and in the manner specified, substantially as and for the purpose above set forth.

96,013.—Stephen R. Kirby, New York, N. Y.—*Canal-Tug.*—October 19, 1869.

Claim.—The towing-chock, consisting essentially of the guide B and slide B′, in combination with the ropes *c* and blocks *d*, arranged and operating substantially as described.

96,014.—Frederick Hartt Knevitt and Henry Herbert Hazard, London, England, assignors to Frederick Hartt Knevitt.—*Window-Shutter and Blind.*—October 19, 1869.

Claim.—1. The two parallel-grooved parts, b^1 and b^2, constructed and operating together as herein described, in combination with the laths or slats of the revolving shutter or blind A, the said laths or slats having pins or studs fitted to work in the grooves of said parts, all substantially as herein set forth.

2. Effecting the separation and approximation of the two parts, b^1 b^2, of the compound groove by the segment *g*, arranged and operating in combination with the said parts, and provided with a cord or other means of adjustment, substantially as set forth.

96,015.—Daniel P. Leach, Franklin, Ind.—*Corn-Planter, Seed-Sower, and Cultivator.*—October 19, 1869.

Claim.—1. The arrangement of the knives B B′ and teeth C C, on the front end of the bed A, all substantially as shown and described.

2. The arrangement of the adjustable and changeable plow-beams H H and changeable plows J J, constructed substantially as described, and for the purposes set forth.

3. The arrangement of the adjustable strap *r*, connecting the bar *h* with the handle K, substantially as and for the purposes herein set forth.

4. The valve *i*, constructed as described, and for the purposes set forth.

5. The arrangement of the handles K K, connecting-bar I, and bars L L, for the purpose of adjusting the handles in any suitable manner, substantially as herein set forth.

6. The arrangement of the bed A with handles K K, pivoted platform M, with roller N, wheel R, bar

h, slide *d*, in box O, and devices for operating said slide, rod D, beam E, and teeth *a a*, all the parts being constructed and operating as specified.

96,016.—JOSEPH LETCHWORTH, Buffalo, N. Y. —*Breast-Strap Attachment for Harness.*—October 19, 1869.

Claim.—The breast-strap attachment A, as a new article of manufacture, cast of malleable iron, with fingers *c c* and transverse corrugation *i*, substantially as and for the purpose hereinbefore set forth.

96,017.—HENRY LOMAX, Over Darwen, Great Britain.—*Feeding-Mechanism for Sewing-Machines.* —October 19, 1869.

Claim.—1. The combination, with the bars carrying the feet D F, of levers B d^1, operated by a cam, A, or its equivalent, so that one foot shall be depressed, and the other simultaneously elevated, by the movement of the levers, substantially as set forth.

2. The feet E D, rods C E, and lever G, in combination with the levers B d^1, cam A, and set-screw H, or their equivalents.

96,018.—W. W. LOVE, Athens, Ohio.—*Metallic Double-Shovel Plow.*—October 19, 1869.

Claim.—The adjustable pivoted knees C C′, combined with the double extended draught-beam A A′ of a double-shovel plow or cultivator, constructed substantially as herein set forth.

96,019.—JAMES J. LYON, Cincinnati, Ohio.—*Catch-Basin for Sewers.*—October 19, 1869.

Claim.—In connection with a sewer "catch-basin," constructed substantially as described, the provision and attachment of the pipe F *f*, arranged and operating as and for the purpose described.

96,020.—J. C. LYONS, New York, N. Y.—*Manufacture of Hollow-Rubber Goods.*—October 19, 1869.

Claim.—1. A chamber of elastic gum, irregular in shape, and with walls of uniform thickness, and formed over a collapsible core.

2. A core for the above-named purpose, made of canvas or other suitable material, and filled with sharp, dry sand, or its equivalent.

3. The combination of the tube A and sand-bag B to form a hot core for vulcanizing irregular-shaped rubber chambers.

4. The tube A, provided with the feeding-tube D, in combination with the sand-bag B and ferrules F.

5. The herein-described process of forming rubber hollow ware, viz, by placing the raw-rubber blank upon a hollow sand-core, and then swathing the whole with strips of canvas, or other material, as set forth.

6. Curing of rubber ware by the transmission of heat through a sand-bath applied to one or more surfaces of the same.

96,021.—JOHN LYTH, Buffalo, N. Y.—*Manufacture of Sewer-Pipe.*—October 19, 1869.

Claim.—Forming and welding a socket to an already formed clay pipe, by applying a quantity of clay, and then subjecting it, within a mold, A B, to the pressure of the follower C, provided with flanges *d* and *d′*, substantially in the manner and for the purposes hereinbefore set forth.

96,022.—THOMAS J. MCGEARY, Newark, N. J. —*Plasterers' Hawk.*—October 19, 1869.

Claim.—A plasterers' hawk, having its upper plate, A, made of steel, and attached to the handle by means of the arms C C, as and for the purpose set forth.

96,023.—JOHN R. MOFFITT, Chelsea, Mass.—*Heel-Stiffener.*—October 19, 1869.

Claim.—A boot-heel stiffener, made of coarse textile fabric, molded into form by means of and in connection with a composition filling between the fabrics, substantially as described.

96,024.—F. B. MORSE, Plantsville, Conn., assignor to himself and PLANTS MANUFACTURING COMPANY, same place.—*Stump-Joint for Carriages.*—October 19, 1869.

Claim.—In a stump-joint for carriages, the extension *f* of the ear upon one part, and the corresponding recess in the ear of the other part, substantially as herein set forth.

96,025.—F. B. MORSE, Plantsville, Conn., assignor to himself and PLANTS MANUFACTURING COMPANY, same place.—*Stump-Joint for Carriages.*—October 19, 1869.

Claim.—As an article of manufacture, the herein-described joint, consisting of the two stumps A and B, with their ears *a* and *d*, constructed and united in the manner herein set forth.

96,026.—A. R. NETTLETON, Unionville, Conn.—*Music-Stand.*—October 19, 1869.

Claim.—The combination of the sheet-holder A, standard *d*, hub *a*, and legs *b*, substantially as set forth.

96,027.—PHILIP D. NORTHCRAFT, Thurston County, Washington Territory.—*Shingle-Machine.* —October 19, 1869.

Claim.—1. The drag-lifter M, secured to the carriage-frame, by staples S, and traveling with the carriage, the lever N, and drags U, V, and *o*, arranged as described, and operated by the groove *c*, lever W, and stop-frame S, and its pin *x*, substantially as and for the purposes set forth.

2. The upper rails B, provided with the slots *a b*, constructed as described, in combination with the gate or block O, with its vertically-moving head Q, provided with pins, to travel in groove *b*, and right-angled clamps *z*, rod P, and loops *t t*, all arranged and operating in the manner and for the purposes set forth.

3. The stop-frame S, provided with the stop *g* and pin *x*, performing the double duty of arresting the shingle, and lifting the drags, automatically, in the manner and for the purpose set forth.

4. In combination with the above, the knife *k* and roller J, as and for the purposes set forth.

5. The carriage-frame, moving inside of the ways, and provided on their exterior sides with the grooves *i*, so constructed that one end shall move over and raise and lower the lower shaving-knife *f*, and the other travel over the pin *x*, on the stop-frame, raising and lowering it automatically, and with reference to the movement of the knife *f*, in the manner and for the purpose set forth.

96,028.—JAMES O'CONNOR, Jackson, Mo.—*Carriage-Hub Shell.*—October 19, 1869.

Claim.—As a new article of manufacture, a shell A A′, of metal formed with flanges *e e*, spoke-recesses, and the beads *b b*, when made substantially as herein shown and described.

96,029.—JOHN S. OLIVER and EDWARD HARRIS, New York, N. Y.—*Distilling Whisky and other Spirits.*—October 19, 1869.

Claim.—1. The process of distilling whiskies and other spirituous liquors *in vacuo*, by means of an ordinary still, heated by fire, or a steam coil-pipe, a worm or condenser, an exhaust-pump, and a vacuum-receiving chamber, substantially as herein specified.

2. The combination, with the worm or condensing-tubes, of a still, and with said vacuum-chamber, of one or more shelves, arranged within the said chamber, substantially as and for the purposes herein specified.

3. The combination of the still, its worm or condensing-tubes, the receiving-chamber, and the exhaust-pump, arranged and operating in substantially the manner herein described.

96,030.—CHARLES T. PALMER, Norwich, Conn. —*Coffee-Roaster.*—October 19, 1869.

Claim.—1. A coffee-roaster, as made with the stationary head, provided with the retaining-arm and the tap-hole, as set forth.

2. A coffee-roaster, as so constructed, with the stationary head and the retaining-arm, as explained, and as having the set of stationary parallel rails *e e*, or the equivalent thereof, applied to or arranged with the same, as set forth.

96,031.—JOHN KINGSLEY PALMER, Cambridge, Mass.—*Water-Proof Coating or Paint for Wood and other Materials.*—October 19, 1869.

Claim.—The application of a solution of bichromate of potash to solutions of gelatine, in which pigments are mixed, substantially as and for the purpose described.

96,032.—WILLIAM P. PATTON, Harrisburgh, Pa., assignor to himself and ALFRED BOMGARDINER, same place.—*Spool-Rack.*—October 19, 1869.

Claim.—The combination of the elastic spring spool-supports *a a a a*, &c., with the frame of a spool-rack, constructed and operating substantially as herein set forth.

96,033.—CHARLES PERKES, Philadelphia, Pa.—*Compression-Cock.*—October 19, 1869.

Claim.—The combination of the spherical elastic loose-ball valve with the oblate-spheroidal seat and oblate-spheroidal compressing-cup, substantially as described.

96,034.—TRUMAN C. PHINNEY and CHARLES E. BANCROFT, Montpelier, Vt.—*Spouted Can.*—October 19, 1869.

Claim.—The can herein described, having spout E, tubes, Fig. 2 and Fig. 3, constructed with openings A and B respectively, and arranged as and for the purpose specified.

96,035.—A. J. PRESCOTT, Catawissa, Pa.—*Reamer.*—October 19, 1869.

Claim.—An outside ball or taper-reamer, having a hollow head, H, one or more cutting-sides C, one or more blank or smooth sides D, with cutting-edges G, open spaces 1, 2, 3, 4, and holes *i i*, all substantially as and for the purposes herein set forth.

96,036.—LEONARD QUETSCH, Urbana, Ill.—*Apparatus for Administering Medicated or Pure Steam to Brutes.*—October 19, 1869.

Claim.—The arrangement of the boiler A, furnace B, thermometer C, and flexible pipe D, all substantially as and for the purposes herein set forth.

96,037.—JOHN B. ROOT, New York, N. Y.—*Art of Making Metallic Tubes.*—October 19, 1869; antedated October 13, 1869.

Claim.—The improved method, herein described, of making tubes by rolling the skelp with longitudinal ridges and furrows, on its alternate edge-faces, and lapping the same in a spiral direction to form a lock in the manner specified.

96,038.—FREDERICK SCHAEFFER, Philadelphia, Pa.—*Apparatus for Dividing Powders.*—October 19, 1869.

Claim.—1. The box A, open at one side, and having a bottom, back, and side pieces, *a*, *b*, and *c*, the latter being furnished with horizontal and vertical grooves *f* and *h*, adapted to receive slides B and *i*, all substantially as and for the purpose herein described.

2. The combination of the said box A with the slide B, when the latter is furnished with wedge-shaped blocks *m*, arranged at regular distances apart, substantially as herein set forth.

96,039.—EDMUND A. SEELEY, Scotch Plains, N. J.—*Attachment to Rolls for Calendering Paper-Boards.*—October 19, 1869.

Claim.—The small perforated metal pipes E and F, when used in combination with the calenders for finishing paper-boards, in the manner herein specified.

96,040.—THOMAS SHARP, Carlisle, Pa.—*Machine for Cutting and Dressing Stone.*—October 19, 1869.

Claim.—1. A series of cutting chisels L, arranged in a sliding stock, J, in combination with a hammer which operates said chisels simultaneously, substantially as described.

2. A series of planing-chisels P, arranged in a sliding stock O, in combination with a ram, V, which operates said chisels simultaneously, substantially as described.

3. The sliding stocks carrying the cutting-chisels, and operating as described.

4. The adjustable guides, supporting the sliding tool-stocks, substantially as described.

96,041.—DANIEL SHEETS, Suisun, Cal.—*Gate-Latch.*—October 19, 1869.

Claim.—The projecting box *g*, on the lock-plate, as a protection to the end of the latch, to prevent its being bent or otherwise injured.

96,042.—JOHN B. SHERLOCK, Port Byron, Ill.—*Corn-Stalk Cutter.*—October 19, 1869.

Claim.—The combination and arrangement of the lever *g*, connected to the frame *b*, and the cord *e*, attached to the drag-bars *d*, whereby both the stalk-cutter and the drag-bars are raised or lowered simultaneously, as set forth.

96,043.—ALFRED E. SMITH, Bronxville, N. Y.—*Carriage-Axle.*—October 19, 1869.

Claim.—The combination of the case-hardened malleable iron ferrules, C and D, with and secured upon the spindle B, substantially as described, made and operating substantially as hereinbefore set forth.

96,044.—ELIAS SMITH, Normal, Ill.—*Galvanic Apparatus.*—October 19, 1869.

Claim.—1. The coil A, constructed as described, for the purpose of conducting a current of electricity around the whole or a part of the human body, substantially as herein set forth.

2. The method herein described of combining the primary and secondary currents of a galvanic or electric battery, for inducing magnetism in the living human body, by means of the coil A, battery B, helix C, and electrodes D and E, all constructed, arranged, and combined substantially as herein set forth.

96,045.—H. JULIUS SMITH, Boston, Mass.—*Mode of Attaching Diamonds for Stone-Drilling.*—October 19, 1869.

Claim.—1. A diamond-drill, or other tool, in which one or more diamonds are attached to the metallic head or stock, by casting the metal, under pressure, upon or around the diamonds, so that they shall be firmly embedded and held in the metal, as described.

2. A drill, or other tool, formed by setting or embedding single diamonds in separate plugs or settings of metal in the manner described, and screwing or otherwise inserting and fixing such plugs in the drill-head, or tool, substantially as specified.

96,046.—WRIGHT SMITH, Saint Louis, Mo.—*Superheating-Device for Steam and other Generators.*—October 19, 1869.

Claim.—1. The furnace B, hot-air pipe H, superheater F, and its tubes *f*, and the return-pipe I, combined substantially as set forth.

2. The return-pipe I, arranged to deliver the air to the furnace B, in the direction of the draught of the hot gases in said furnaces, substantially as set forth.

96,047.—DANIEL E. SOMES, Washington, D. C.—*Mode of Ventilating and Cooling.*—October 19, 1869.

Claim—1. Cooling the air which is supplied to a building, by passing it through ducts or channels containing a series of pipes, through which cool water is circulated, substantially as described, in combination with the shower-bath *d'*.

2. The air-pipes c^1, at the tops of the series C, provided with stop-cocks or open tubes, in combination with an air-duct, as and for the purpose set forth.

3. The combination of the supply-pipes B, series of pipes C C D, and cock *c*, with the air-ducts A A, substantially as described.

4. The dampers a^2, air-ducts, pipes, registers, valves a^1, or their equivalents, substantially as and for the purpose set forth.

5. Inclined boards E, air-duets, shower-bath, and water-pipes, in combination with the registers *a*, substantially as and for the purpose described.

96,048.—DANIEL E. SOMES, Washington, D. C.—*Process and Apparatus for Cooling and Preserving Perishable Articles.*—October 19, 1869.

Claim.—1. The air-duct P, with water-pipes and shower-bath and valves Q, in combination with ventilators B' B'', registers R, and the devices herein described, for cooling or freezing.

2. The chambers S, and apparatus for cooling the

same, when arranged in a market-house or store-house, as described, in combination with a railroad-track, as and for the purposes set forth.

3. The combination of the devices herein shown, whereby air and liquids may be cooled by several processes, successively applied, as described.

4. The combination of devices whereby the temperature of several apartments of a building, car, or vessel may be regulated at will, as described.

5. The combination of devices described, whereby air in several adjoining apartments may be cooled, dried, or purified, separately or together, as described.

96,049. — WILLIAM E. SPARKS, New Haven, Conn., assignor to SARGENT & CO., same place.—*Reversible Latch.*—October 19, 1869.

Claim.—1. In combination with the latch-bolt C and yoke D, the hub E and follower L, the said follower constructed with a stud, *f*, upon its inside, and so as to enter, through a corresponding opening in the hub, into the spindle-seat, substantially in the manner and for the purpose set forth.

96,050. — AUGUST STAUDINGER, Saint Louis, Mo.—*Fly-Trap.*—October 19, 1869.

Claim.—The trap formed of the wooden frame A, metal trough B, with its walls curved to a return at *b*, and a glass cover arranged to slide in or out, substantially as set forth.

96,051.—STEPHEN R. STINARD, Paterson, N. J.—*Railway-Car Brake.*—October 19, 1869.

Claim.—1. The combination of the rods D, D′, and G, sway-bars E, and levers F, with the brake-beams of a railroad-car, substantially as hereinbefore shown and described, for the purpose specified.

2. In combination with rods D, D′, and G, sway-bars E, and levers F, the mechanism seen at C, substantially as hereinbefore shown and described.

3. In combination with the elements of the second claim, the brake-staff chain, as specified.

96,052.—E. G. STORKE, Auburn, N. Y.—*Plane.*—October 19, 1869.

Claim.—A metallic plane, having the face grooved in lines parallel to the sides, in the manner and for the purpose specified.

96,053.—MICHAEL SWEENEY, Wheeling, West Va., assignor to SWEENEY, BELL & CO., same place.—*Lantern-Globe.*—October 19, 1869.

Claim.—As a new article of manufacture, a glass lantern-globe, constructed with four, more or less, concavo-convex reflectors, said reflectors being blown in the globe while being formed, substantially as set forth.

96,054.—STACY W. THOMPSON, Otsego, Ohio, assignor to himself, WILLIAM L. WARD, and WILLIAM D. WHITECAR, Philadelphia, Pa.—*Cotton-Seed Separator and Planter.*—October 19, 1869; antedated October 16, 1869.

Claim.—1. The combination, with the hopper F, having an opening *i*, of an agitator, G, and curved guide H, arranged within the said hopper, and operating substantially as and for the purpose set forth.

2. The spring catches *k k*, arranged, with respect to each other and to the opening *i* of the hopper, substantially as and for the purpose described.

3. The combination of the spring-catches *k k* with the pins *m*, of a revolving wheel J, all as herein set forth, for the purpose specified.

96,055.—CHARLES J. TRIPP, Wallingford, Conn.—*Flour-Sifter.*—October 19, 1869.

Claim.—The combination of the case A with its cover B and receptacle I, inner box C, with the crank-shaft E, arranged with a crank and connecting-rod F upon the inside of the case, attached to the box C, and the crank N outside, all constructed and arranged in the manner herein set forth.

96,056.—REUBEN DANIEL TURNER, New York, N. Y.—*Apparatus for Ageing Spirituous Liquors.*—October 19, 1869.

Claim. — 1. The combination of the air pipes *c* and liquid-pipes *d*, arranged radially around the chamber A, substantially as and for the purpose set forth.

2. The combination of the strainer G with the spray-chamber A, and arranged above the spray-tubes *c d*, for the separation of the spray from the escaping air, substantially as set forth.

3. The combination of the liquid-channel B, air-channel C, and their pipes *c d*, with the chamber A, arranged and operating substantially as and for the purpose specified.

4. The combination of the condenser H with the tank A and its spray-pipes or tubes *c d*, substantially as set forth.

5. The combination of the coil I with the tank A and its spray-pipes or tubes, essentially as and for the purpose specified.

96,057.—FLAVIUS J. UNDERWOOD, Rock Island, Ill.—*Rotary Colter.*—October 19, 1869.

Claim.—A rotary colter, having a hub, composed of the two parts B and C, constructed so as to screw together and clasp the blade A between them, substantially as described.

96,058.—WILLIAM VANSCOYOC, Oxford, Ohio.—*Tail-Board for Wagons.*—October 19, 1869.

Claim.—1. In connection with a wagon bed having a hinged tail-board, the quadrantal wings D D′, connected to the tail board for the purpose specified.

2. In the described combination with the quadrantal wings D D′ and hinged tail board B, the staples C, hooked bars or straps *d d′*, projections *d″*, and guides G G′, aranged and operating substantially in the manner and for the purpose stated.

96,059.—WILLIAM V. WALLACE, New York, N. Y.—*Railway-Car Coupling.*—October 19, 1869.

Claim.—1. A car-coupling, constructed and arranged in the manner herein described.

2. The combination, within the draw-head, of the coupler C and D, in the manner and for the purpose herein described.

3. The combination of the metallic plate *d* with the coupler C D, and the coupling-bar B, in the manner and for the purpose herein described.

96,060.—WILLIAM V. WALLACE, New York, N. Y.—*Spike.*—October 19, 1869.

Claim.—1. The combination of a spike, for railroad or other purposes, containing upon its shank, above the wedge-shaped point, grooves running to the top or head thereof, with a double-pronged clincher, containing a rib or ribs to fit into the aforesaid grooves, in the manner and for the purposes herein described.

2. The combination of the spike *a*, and its cap and double-pronged clincher *b*, as and for the purposes herein described.

96,061.—JETHRO W. WARNER, Dover, N. H.—*Lasting-Hammer.*—October 19, 1869.

Claim.—A lasting-hammer, provided at one end with an awl or awl-chuck, and at the other with a spacing-wheel, as herein shown and described.

96,062.—GARDNER WARREN, Boston, Mass.—*Laying Street-Pavement.*—October 19, 1869.

Claim.—The process, hereinbefore explained, of laying street-pavements, the same consisting, in brief, of first grading the road-bed, next puddling the mass of soil, and, after depositing the pavement thereupon, packing the interstices between the blocks of the latter, by means of sand and water.

96,063.—WILLIAM WEUSTHOFF, Dayton, Ohio.—*Seed-Wheel for Grain-Drills.*—October 19, 1869.

Claim. — The within described expansible seed-wheel, consisting of the sections C and D secured to the disks E and F, substantially as and for the purpose specified.

96,064.—W. WEUSTHOFF and CHARLES SCHMIDT, Dayton, Ohio.—*Grain-Drill.*—October 19, 1869.

Claim.—The slide G, provided with the lug H, in combination with the opening in the hopper-bottom A, and with the seed-wheel C, substantially as and for the purpose specified.

96,065.—JOHN M. WHEELER and CHARLES W. CHASE, Batavia, Iowa.—*Car Coupling.*—October 19, 1869.

Claim.—1. The combination and arrangement of the coupling-hook C and spring F, and the buffer A, substantially as and for the purpose specified.

2. The arrangement of the coupling-hook C and spring G, with reference to the projection upon the interior of the buffer, as a consequence of which the longitudinal movement of the coupling-hook is arrested, substantially as and for the purpose set forth.

96,066.—Earl A. White, Rock Island, Ill., assignor to himself and Basil D. Buford and Company, same place.—*Device for Grinding Metal Plates.*—October 19, 1869.

Claim.—1. The lever C, mounted on a fulcrum, in the manner described, so that it may be turned or adjusted at any desirable angle, laterally or vertically, and arranged to be operated by the attendant, substantially as set forth.

2. In combination with the lever C, the hinged holding-block, substantially as described.

3. The hand-lever E, in combination with the holding-blocks D T, as set forth.

4. The holding-block T, provided with the pin *v* and roller *n*, substantially as set forth.

5. The adjustable fulcrum F, having a ball or spherical head mounted in the rest L, and arranged to operate as herein described.

96,067.—S. Lloyd Wiegand, Philadelphia, Pa.—*Steam-Generator*—October 19, 1869.

Claim.—1. The tank B, constructed as shown and described.

2. The feed-pipe F, when combined and connected with the tanks, substantially as shown and described.

3. The separate supporting pieces K for the circulating-tubes, in combination with the caps, as shown and described.

4. The chamber Y, with the deflector T, arranged substantially as shown and described.

96,068.—Joseph B. Wilson, Philadelphia, Pa.—*Washing-Machine.*—October 19, 1869.

Claim.—1. A washing-machine, in which are combined, as described, the shaft E, vertical reciprocating beaters F, bevel-wheels *f* and *h*, shaft G, pulley *i*, and tube H, all operating as set forth.

2. The combination, with the tub and beaters, of a strip of elastic material, substantially as specified.

96,069.—John F. Worth, Brooklyn, N. Y., assignor to himself, Ira W. Gregory, and Alfred Gregory, same place.—*Tessellated Floor.*—October 19, 1869.

Claim.—The angular metal tongues, in combination with the blocks or slabs of wooden tessellated pavement, substantially as described, for the purpose set forth.

96,070.—J. S. Merriken, Baltimore, Md., assignor to himself and William Colton, same place.—*Railway-Car Coupling.*—October 19, 1869.

Claim.—1. The coupling pin D, provided with a collar, *b*, and passing through a tube or bushing, *d*, in the top of the bumper, substantially as and for the purposes herein set forth.

2. The coupling-link B, constructed as described, with its rear end rounded, and provided with springs C C, and its front end forked, and provided with hooks *a a*, substantially as and for the purposes herein set forth.

3. The block H, constructed as described, and screwed on to the coupling-pin G, substantially as and for the purposes herein set forth.

4. The coupling-pin G, passing through the bushing F, and having a screw-wheel I at its upper end, and the block H screwed on at or near its middle, substantially as and for the purposes herein set forth.

5. The set-screw J and lever L, arranged as described, and operating substantially in the manner and for the purposes herein set forth.

96,071.—A. Albee, Worcester, Mass.—*Heat-Radiator.*—October 26, 1869.

Claim.—The combination of the radiator A and the adjustable shelf F, arranged substantially as described, for the purposes set forth.

96,072.—Mason C. Ames, Hartford, Conn., assignor to himself and W. Edgar Simonds, same place.—*Stilt.*—October 26, 1869.

Claim.—1. The foot-rest B and the clamp-link C, when constructed as described for the purpose described.

2. The combination of the foot-rest B and clamp-link C, when constructed and arranged as described for the purpose described.

3. The combination of the foot-rest B, clamp link C, and stick A, when constructed and arranged as described for the purpose described.

96,073.—Arthur Barbarin, New Orleans, La.—*Machine for Carbureting Atmospheric Air.*—October 26, 1869.

Claim.—1. The combination of the supplementary tube K, stop-cock *l*, and perforations *q q q*, as described, and stop-cock M, with a metal air or ordinary gas-holder, A′, and its water-tank A, in the manner herein stated, and for the purposes set forth, whether said stop-cocks *l* and M, or equivalents, be used in conjunction with each other, or separately, as specified.

2. The combination of the pipe *v′*, provided with the perforated end *w*, the post V, provided with chamber *v″*, and the burner *x′*, arranged and operating substantially as set forth.

3. The combination of the funnel shaped opening J of the pipe H, with an air or gas holder, as shown upon the drawings, for the purpose set forth.

4. The combination of the pipes H and K, cocks *h* and *l*, carbureter Y, air-holder A′, and tank A, operating as set forth.

5. In combination with an apparatus for carbureting atmospheric air, the pipe H V, connected by intermediate pipes R, heated by burners S′, substantially as and for the purpose set forth.

6. The divisional pipes R, to connect the main pipe H to its continuation U, upon any part of the same, between the air-holder and the carbureter, for the purposes set forth.

7. The combination of vapor or other burners S′, with the divisional pipes R of the main pipe H, and continuation U, as herein described, for the purposes set forth.

8. The peculiar-shaped eccentric or cams 10′, Fig. 4.

96,074.—Arthur Barbarin, New Orleans, La., and Antoine Ernest Dupas, Paris, France.—*Apparatus for Carbureting Air.*—October 26, 1869.

Claim.—1. The revolving feeding-wheel B, when constructed and mounted as described, in combination with a box-recipient, A, therefor, in which is employed a water or other suitable liquid packing, as specified, when all the parts are arranged and operate substantially as described, for the purposes set forth.

2. The receiver F, when provided with two (2) apertures *l* and *m*, and surrounded by the outer vessel G, and this latter is connected with the box A by a pipe, *k*, substantially as and for the purposes set forth.

3. The combination of the receiver F and its adjuncts with the subject of our first claim, by means of a pipe *e*, and its elbow *e′*, substantially as described, for the purpose set forth.

4. The above combinations in combination with an indicator, L, provided with a gauge, *n*, substantially as and for the purpose described.

5. The carbureter N, when the same is divided into the gas and hydrocarbon chambers 1 and 2, and the latter is enveloped by the water-containing spaces 3 4, by means of an outer vessel, P, with a thermo-siphon, S, in which there is a globe-section, S′, when these parts are arranged, relatively to each other, as set forth, for the purpose specified.

6. The above combination in combination with the subjects of our first, second, third, and fourth claims, and a pipe, M, substantially as described, for the purpose set forth.

7. The carbureter N, when provided with the adjuncts herein specified, in combination with a reservoir, R, when the hydrocarbon is automatically fed from the latter, by means of pressure from the gas that passes therein from the former, in the manner herein described.

96,075.—Thomas Bell, Bellport, N. Y.—*Propeller.*—October 26, 1869.

Claim.—Making the shank of a paddle or blade, used for propelling-purposes, so that it will act as a torsion-spring, substantially as and for the purposes set forth.

96,076.—J. P. Benoit, Detroit, Mich.—*Pitching Barrel.*—October 26, 1869.

Claim.—As an attachment to a pitching furnace, a system of pipes, E F I, and valves G H, arranged, with respect thereto, in the manner shown and described, and for the purpose specified.

96,077.—B. Blackstone, Warren, Ill.—*Combined Saw Set, Clamp, and Vise.*—October 26, 1869.

Claim.—The combination of the set R P, provided with projections *c c c*, &c., with the wedge-shaped gauge N, jaws J K and L′ M, and standards A B, as and for the purpose set forth.

96,078.—Levi N. Borem, Kennard, Ohio.—*Machine for Sharpening Saws.*—October 26, 1869.

Claim.—The combination and arrangement of the frame B, with its openings *t*, *u*, and *v*, for the reception of the clamp in which the saw to be filed is secured, with the saw-plane C, its clasp *y*, and file-holders *w* and *x*, when constructed substantially as herein described.

96,079.—R. A. Boulware, Doniphan, Kans.—*Stalk-Cutter.*—October 26, 1869.

Claim.—The arrangement of the revolving frame F, carrying the cutters E, the roller D, guide-rods B, and pivoted lever G, with its caster or roller H, as herein described, for the purpose specified.

96,080.—Abraham N. Breneman, Lancaster, Pa.—*Samples for Shoe-Dealers.*—October 26, 1869.

Claim.—The exact similitude or sample of the cut trimmings, and ornamentation of shoes, gaiters, bootees, &c., on a flat surface, made in the manner and for the purpose specified.

96,081.—M. S. Bringier, Ascension Parish, La.—*Apparatus for Evaporating Cane Juice.*—October 26, 1869.

Claim.—1. Applying the heat from the furnace of the boilers of sugar-mills to the evaporation of cane-juice, when the same is done by the means of the pans C B A, and in the manner substantially as herein described, for the purpose set forth.

2. The arrangement of pipes *b*, within evaporating-pans, constructed, arranged, and operating as herein described, for the purpose set forth.

3. The pans A B C, when provided with pipes *a*, and otherwise constructed as herein described, in combination with the furnace of the sugar-mill, or an independent furnace, in lieu thereof, substantially as herein described, for the purpose set forth.

96,082.—T. B. Burgert, Crestline, Ohio.—*Lantern.*—October 26, 1869.

Claim.—1. The combination of the ears *b*, notches *a*, and spring *f*, with the top D, and rim C, when constructed to operate in the manner and for the purpose substantially as described.

2. The spring frill *h*, and removable cap G, in combination with the top D, when constructed to be applied and to operate in the manner substantially as described.

96,083.—D. S. Butler, Otterville, Mo.—*Buckle.*—October 26, 1869.

Claim.—1. A buckle, having a tongue-plate, B, with teeth *d* on its swinging end, combined with a bar, *c*, having corresponding teeth affixed thereto, as set forth.

2. A pivoted tongue-plate, B, having teeth *d*, and two pins, *f g*, in combination with frame A, having toothed bar *c*, and the recesses and perforations, shown and described.

96,084.—Jacob Closs, Decatur, Ind.—*Portable Fence.*—October 26, 1869.

Claim.—1. In combination with a fence, the braces D, hooked stakes E, and double iron clevises F, combined and arranged substantially as described, and for the purpose set forth.

2. Making each brace in two parts, and spreading the parts so as to admit a stake between them, substantially as and for the purpose described.

96,085.—Frederick Cole, Kankakee, Ill.—*Pallet and Brush for Graining.*—October 26, 1869.

Claim.—Distributing various colors on to a brush, S, provided with sections P, in combination with a pallet, A B C, provided with compartments I, to hold various colored paints, as set forth.

96,086.—Austin B. Culver, Westfield, N. Y.—*Ticket-Clip.*—October 26, 1869.

Claim.—The method above described of preventing fraudulent voting, namely, by inclosing the ticket of each elector, as soon as presented, with a clip of soft metal, substantially as specified.

96,087.—C. D. Cutting, Boston, Mass., assignor to himself and William J. Keefe, same place.—*Surge-Reliever.*—October 26, 1869.

Claim.—1. The oscillating disk B, in combination with the lower or fixed disk A and springs, arranged substantially as described, and for the purpose set forth.

2. The disk B, in combination with the springs V V′, diaphragm H, and springs S, working substantially as described, and for the purpose set forth.

96,088.—Anthony Demarce, Fairfield, Iowa.—*Sugar-Cane Mill.*—October 26, 1869.

Claim.—A cane-mill, consisting of the frame, constructed substantially as described, with the adjustable cross-bars E and rods *f*, and having the rollers F and G, and bed-plate J, all constructed and arranged substantially as set forth.

96,089.—Arnold F. Duckwitz, New York, N. Y.—*Aerated Medicinal Beverage.*—October 26, 1869.

Claim.—The medical compound herein described, made as set forth.

96,090.—Charles Durant, Jersey City, N. J.—*Telegraph-Apparatus.*—October 26, 1869.

Claim.—1. So combining a relay-machine, and one or more batteries, or other electrical supply, with a telegraph-instrument, that when, by the operation of the instrument, the main telegraph-circuit is opened and closed, another circuit, communicating with the same relay-machine, will be correspondently closed and opened, and the attractive power developed in the relay-magnet be thereby modified, substantially as described.

2. The conducting-spring E, or its equivalent, in combination with a telegraph-instrument, for the purpose described.

3. The lever-button Q, operating as described.

4. The combination of the screw J with the lever-key D and spring I, substantially as described.

5. The employment of the insulated adjusting-screw S′, in combination with the spring E, substantially as described.

96,091.—Charlton Eden, Indianapolis, Ind.—*Machine for Making Rope-Moldings.*—October 26, 1869.

Claim.—1. The combination of the rest R, the guide T, the bearing K K, the shaft O, and the pulley P, when the same are combined and used for the purpose of cutting rope-molding, substantially as herein set forth.

2. The combination of the rest R and guide T with the cutter Q, substantially as herein set forth.

3. The combination of the rest R, the slide S, and the guide T, substantially as herein set forth.

96,092.—Gilbert Eguillon, Paris, France.—*Method of Hanging Bells.*—October 26, 1869; antedated October 16, 1869.

Claim.—The system of suspended and oscillating levers for hanging bells, in the manner herein set forth, and illustrated by the accompanying drawings.

96,093.—Frank J. Eisenman, Chicago, Ill.—*Egg-Detector.*—October 26, 1869.

Claim.—As a new article of manufacture, the egg-detector, constructed as described, of the cylinder A, having the side opening *a* and annular rim F, the

drum B having the funnel-shaped opening C and the inclined reflectors D E, all arranged as herein set forth and shown, for the purpose specified.

96,094.—William H. Emmons, New York, N Y., and Franklin Kissam, Newark, N. J.—*Burglar-Alarm.*—October 26, 1869.

Claim.—1. An inner casing of glass, to which the alarm is connected by cords or wires secured to it, so that upon the breaking of the glass, the alarm is sounded, and protected by the outer case, as shown and described.

2. In combination with the above, the hollow shaft, protected by the pipe, passing through a safe, and connecting the alarm with the door-lock or sides of the safe, and allowing the alarm to be wound up from the inside of the safe, or vault, or room, to which it may be attached.

96,095.—James J. Essex, Newport, R. I.—*Uterine Syringe.*—October 26, 1869.

Claim.—An improved syringe, as specified, consisting of the bulb C, elastic neck E, body A, and rigid discharge-tube B, each of said parts being constructed as hereinbefore described.

96,096.—Samuel F. Estell, Richmond, Ind.—*Folding School-Desk.*—October 26, 1869.

Claim.—1. The book-box A, provided with slots B, in combination with pins G, and pivoted braces I, constructed and arranged to operate as herein described, for the purpose specified.

2. In combination with the above, the automatic locking-device C, when arranged to operate as herein described, for the purpose specified.

3. The friction-plate D, arms E, and lugs R, for the purpose specified, in combination with a school-desk, constructed and arranged to operate as herein described.

96,097.—Alonzo Farrar, Longwood, Mass.—*Process of Obtaining Useful Oil from the Acid Residuum of Petroleum.*—October 26, 1869.

Claim.—1. My new process, substantially as described, for treating the oily residuum obtained in the purification of the spent acid, as above mentioned.

2. As a new or improved manufacture, the deodorized oily product resulting from the employment of such process, in manner as set forth.

96,098.—Eugene De B. Freer, Lima Centre, Mich.—*Railway-Car Brake.*—October 26, 1869.

Claim.—The combination of the rack and coupling-bar *a* with the clutch and pinion, *e* and *b*, spring *i*, windlass *c*, longitudinal bar *f*, and coupling *g*, arranged substantially in the manner and for the purpose set forth.

96,099.—Alfonzo D. Gates, Surrey, Wis.—*Pump.*—October 26, 1869.

Claim.—1. The hollow plunger B, united directly to the valve Q of the pump, by means of a yielding connection, for the purpose substantially as before described.

2. The lower valve-stem D, having a stop, *c*, for arresting the ascent of the valve, substantially as described, in combination with the yielding connection of the valve and plunger, substantially as before described.

3. A valve, Q, having a notched or toothed bar, P, connected with the plunger, and a stem, D, connected with the seat of the valve, in the manner and for the purpose substantially as hereinbefore described.

96,100.—H. E. Gillet, Oswego, N. Y.—*Folding Desk and Seat.*—October 26, 1869.

Claim.—1. The improved friction-joint for the seat-arms, consisting of the hub L, of the end supports, whereon the arms are suspended, the metallic washers O and P, the yielding washer Y, and the bolt M, all arranged as and for the purpose specified.

2. The combination, with the braces O and the end supports A, of the crank-shaft V, having the tappets W, as and for the purpose specified.

96,101.—Louis M. Goldsborough, Washington, D. C.—*Refrigerator and Water and Wine Cooler.*—October 26, 1869.

Claim.—1. The construction and arrangement (in one piece) of a series of coils of pipes, two or more, within a refrigerator, in such a manner that they may be connected with the supply pipes through which water is convey d through and into a house or building, in the manner and for the purpose herein described.

2. The combination of the coiled water-supply pipes in a refrigerator, and the waste-pipes of the same, with the supply and waste pipes of the house or building, in the manner and for the purpose herein described.

3. In combination with the above, the shelf E, with the refrigerator A, and the supply-pipe G, and the waste-pipes H H′, in the manner and for the purpose herein described.

96,102.—Aaron Goodspeed, Granville, N. Y.—*Apparatus for Removing Electricity from Wool in Roving-Machines.*—October 26, 1869.

Claim.—The combination of the standards E F, the straight wires D, attached to adjustable arms, and the conducting-wire G, with the condensers of a roving-machine, all constructed and arranged as described, for the purpose specified.

96,103.—H. C. Grube, Plaquemine, La.—*Sofa-Attachment.*—October 26, 1869.

Claim.—The lounge or sofa, provided centrally with the drawer K, at one end with the bureau I, and at the opposite end with the sliding wash-stand F, toilet-drawers H, and sliding, hinged, and folding table A, having the spring B, and the spring-catch C, operated by the catch E, all arranged as and for the purpose herein set forth.

96,104.—Henry G. Haedrich, Philadelphia, Pa.—*Combined Horseshoe and Boot.*—October 26, 1869.

Claim.—The combined horseshoe and boot, composed of parts A, D, and C, with or without projections B, as described.

96,105.—William Hamilton, Toronto, Canada, assignor to himself and Hiram Kimball, Randolph, Vt.—*Fluid-Meter.*—October 26, 1869.

Claim.—1. The combination and arrangement, substantially as described, of the balanced reciprocating piston A C C, and balanced valves G G, constructed and operated substantially in the manner described, for the purpose set forth.

2. The combination, with the valves G G, mounted on a common rod, G′, of the oscillating "arms" F F F′, constructed and operated substantially as described, for the purpose set forth.

3. In combination with the piston A and the oscillating shaft O, actuated by said piston, the weight E E′ and arms F F F′, constructed and operating substantially in the manner described, for the purpose of instantaneously shifting the valves at the ends of the strokes of the piston, as set forth.

4. In combination with the reciprocating rack M, actuated by the piston, as described, the pawls *m m*, and ratchet-wheel N, employed and operating substantially as and for the purpose set forth.

96,106.—Reuben Hatch, Jr., Traverse City, Mich.—*Gate.*—October 26, 1869.

Claim.—The combination of the bar F, having notches on each side, with the button J and the gate herein described, substantially as and for the purpose hereinbefore set forth, whereby the gate may be fastened either open or shut, and when the gate is being opened, the bar F is self-acting.

96,107.—James Hatfield, Sparta, Wis.—*Clothes-Rack.*—October 26, 1869.

Claim.—The combination and arrangement of the foot-braces E, arm-braces D, head-plates F, and journal box J, when constructed and arranged substantially as shown and described, and operating in the manner and for the purpose set forth.

96,108.—George M. Hendrickson, Albany, N. Y.—*Paper Box.*—October 26, 1869.

Claim.—In combination with square paper boxes,

the pieces B, of woven fabric, leather, or other sheet-material, manipulated and applied substantially as described, for the purpose set forth.

96,109.—GEORGE HENSLER, Kankakee, Ill.—*Lime-Kiln.*—October 26, 1869.

Claim.—The rotating valve J N, operated by pinion *b* and ratchet-lever *d e*, in combination with chamber B, cupola D G F G, and kiln, as described.

96,110.—GEORGE W. HERRICK, Stuyvesant, N. Y.—*Base-Burning Stove.*—October 26, 1869.

Claim.—The shell A, provided with the apertures *e e*, in combination with the draught cylinder D, which has the apertures *a a*, all arranged substantially as described, to facilitate the combustion of the gases, and to constitute an illuminating-stove, as set forth.

96,111.—SELAH HILER, New York, N. Y.—*Stair-Rod.*—October 26, 1869.

Claim.—An enameled stair-rod, as a new manufacture, when made substantially as and for the purpose described.

96,112.—R. D. HAY and J. M. HILL, Crooked Creek, N. C.—*Nipple-Guards for Fire-Arms.*—October 26, 1869.

Claim.—The combination, with the barrel and the nipple-guard cap A, of a raised projection, B, substantially as specified.

96,113.—PHILIP HINKLE, San Francisco, Cal.—*Implement for Laying Wood Pavement.*—October 26, 1869.

Claim.—The gauge described, consisting of the vertical strip A, bent plate B, lugs C C, and posts E E, when arranged and adapted to the tamping bar, as described, for the purpose set forth.

96,114.—ROBERT HITCHCOCK, Springfield, Mass. *Railroad-Car Ventilator.*—October 26, 1869.

Claim.—1. A car-ventilator, having the case A, formed with the direct passage B through it, and the double walls, and having the opening G through the top of the passage B, through which air is forced, so as to pass around through the hollow sides, and through the supply-pipe, the parts being arranged substantially as shown.

2. In combination with the above, the balance-doors E and F, arranged with stops *a a*, &c., substantially as herein shown.

96,115.—EDMUND HOLDEN, Hartford, Mich.—*Filtering-Sections for Tube-Wells.*—October 26, 1869.

Claim.—A filter, constructed of two concentric tubes of copper, brass, galvanized iron, or other metal not liable to corrode, the inner tube being easily removable for cleansing, all substantially as shown and described.

96,116.—VICTOR AMEDÉE HOUDAILLE, Paris, France.—*Bung.*—October 26, 1869.

Claim.—The system of metallic bung hereinbefore described, and illustration of the accompanying drawings.

96,117.—N. W. HUBBARD, New York, N. Y.—*Parlor Skate.*—October 26, 1869.

Claim.—A skate, having its three wheels arranged relatively to the foot-piece, substantially as shown and described.

96,118.—JAMES P. JONES, Bloomfield, N. J., assignor to JASON CRANE, same place.—*Muff and Collar Box.*—October 26, 1869.

Claim.—A rectangular paper or pasteboard box A, having within it a rectangular apartment, B, and cylindrical apartment C as described.

96,119.—PHILIP P. JOSEF, Buffalo, N. Y., assignor to himself and WALLACE JOHNSON, same place.—*Egg-Carrier.*—October 26, 1869.

Claim.—A slatted support for the cells or pockets of egg carriers, constructed and arranged substantially as and for the purpose set forth.

96,120.—SAMUEL KEEN, East Bridgewater, Mass.—*Heel-Cutting Machine.*—October 26, 1869.

Claim.—1. The reciprocating knife H^1, operated by the cam D, or its equivalent, substantially as described, and for the purpose set forth.

2. The combination and arrangement of the cam K^2, the knife H^1, and the guard K^1, substantially as described and for the purpose set forth.

3. The combination of the adjusting cam N′ with the jacking-device L L^1 L^2, substantially as described, and for the purpose set forth.

96,121.—J. W. LARIMORE, Chicago, Ill., assignor to himself and ALONZO MARKS, same place.—*Sign for Street-Lamps.*—October 26, 1869; antedated October 12, 1869.

Claim.—The arrangement of the frame B, on which the names of the streets are painted, inclined forward at a suitable angle, and provided with the springs or other fastenings D D, in connection with an ordinary street-lamp. A, substantially as herein shown and described, and for the purposes set forth.

96,122.—JAMES A. LAWSON, Troy, N. Y.—*Handle for Pans and other Cooking-Utensils.*—October 26, 1869; antedated October 9, 1869.

Claim.—An ear or handle for pans or other similar or cooking-utensils, constructed from wrought or malleable cast iron, and stamped, cast, or pressed in the form or shape substantially as herein described and set forth.

96,123.—FABIUS H. LAWTON, Fluvanna, N. Y., assignor to himself, DAVID W. PROSSER, and JOSHUA CHENEY, same place.—*Washing-Machine.*—October 26, 1869.

Claim.—1. The combination, in an oscillating presser, of unyielding adjustable rubbing-bars L, with a series of intermediate rollers D, operating as described.

2. The combination of the vertically adjustable, unyielding rubbing-bars L, with the eccentric roller N and springs *e*, operating to either project the bars below the surface of the rollers, or to retract them, as described.

3. In combination with the above, the concave bed of rollers C, with the braking-brands or straps *r*, operating as described.

4. The arrangement of the armed pulley I, in combination with the stirrup *c*, strap J, and the vertically adjustable rubber frame G, as described.

96,124.—EDWARD A. LEWIS, Saint Charles, Mo.—*Velocipede.*—October 26, 1869.

Claim.—The sliding crank E, having the guide-pins *a*, in combination with the fixed eccentric ring or track D, to operate substantially as herein shown and described.

96,125.—WILLIAM LIDDELL, Boston, Mass., assignor to himself and B. S. BINNEY, same place.—*Machine for Making Tags.*—October 26, 1869.

Claim.—1. The combination of the glue-feeding device F^3 F^4 with the glue-roll F^5, operating substantially as described, and for the purpose set forth.

2. The combination and arrangement of the eyeleting-punchers O^4 H^2 and the compressing-jaws H^3 H^4, working substantially as described, and for the purpose set forth.

3. The bar K′, in combination with the levers L^1 L^2, when used for passing the string S forward into the fold of the tag, operating substantially as described, and for the purpose set forth.

4. The string carrier E^6 E^7, operating substantially as described, and for the purpose set forth.

96,126.—JAMES H. LOCKIE Humphrey, N. Y.—*Cultivator.*—October 26, 1869; antedated October 16, 1869.

Claim.—The combination, with the central beam A, of the outer beams B B, when the same are constructed, as described, and connected by the three-armed piece C, substantially as described for the purpose specified.

96,127.—BARON LUDWIG LO PRESTI, Vienna, Austria.—*Railway-Track.*—October 26, 1869; patented in England, October 22, 1868.

Claim.—1. A railway-track, consisting of beams A, rails D, and supports B, constructed and arranged as and for the purpose hereinbefore set forth.

2. The combination of vertical double-coned keys *c*. with the tranverse bolts *d*, to unite the longitudinal halves of a beam, in the manner shown and described.

3. The application of the rollers *e*, between the supporting-beam and trestle, for the purpose of allowing slight lateral motion to the track, substantially as herein shown and described.

96,128.—George Lowden, Brooklyn, N. Y.—*Velocipede.*—October 26, 1869.

Claim.—1. In combination with a velocipede, the ratchet-wheel E, pawls *f* and *g*, and yokes *h* and J, arranged and operating on the axle A, substantially as described.

2. In combination with the ratchet-wheel E and weighted yokes *h* and J, the reach M, post O, brake S, and rods *r*, arranged substantially as described, for the purposes set forth.

96,129.—Daniel Lucas and James Lucas, Green Bay, Wis.—*Wash-Boiler.*—October 26, 1869.

Claim.—In combination with a wash-boiler, the conical false bottom A, tubular stands B B, and perforated tube C, constructed arranged, and operating substantially as described, for the purposes specified.

96,130.—John Marston, Saratoga Springs, N. Y.—*Railway-Car Coupling.*—October 26, 1869.

Claim.—The combination of the stock A, links D E and springs K, when the link D is jointed to the stock, and all arranged substantially as specified.

96,131.—Louis Martaresche, Pittsburgh, Pa.—*Molding and Casting Pipe.*—October 26, 1869.

Claim.—1. Providing the flask A with curved feet *e*, so pivoted to the table B as to admit of the flask being opened substantially in the manner shown and set forth.

2. Providing the swinging door S, of the flask A, with a circular flange or rim, *n*, on its face or upper side, for the purpose of holding in place the small flask T, as shown and described.

3. In combination with the swinging door S, the use of the small flask T, for holding sand to give form to the lower end of the pipe, as described.

4. The bulb or enlargement C, on the lower end of the core bar K, in combination with the flask A, provided with a swinging door, S, for the purposes hereinbefore set forth.

5. The use of a stove, D, placed in a vertical line beneath the flask A, when so attached thereto, by means of the table B and its legs *g g*, as to be moved with the flask A, as described.

96,132.—John A. McClelland, Louisville, Ky.—*Mode of Producing Useful Articles from Collodion and its Compounds.*—October 26, 1869.

Claim.—The production of useful and ornamental wares or objects, of compounds as herein described, by the application thereto of heat, substantially as described.

96,133.—Robert McKenzie, New Orleans, La.—*Tool for Expanding Boiler-Tubes.*—October 26, 1869.

Claim.—The annular and slotted plates A A′, screw-bolts and nuts B C, constituting a frame, substantially as described, in combination with a series of sets of rolls of different sizes, each with one journal only, the projecting pins H, lever I, and tapered mandrel E, all constructed and arranged substantially as set forth.

96,134.—James McMorries, Columbus, Miss.—*Combined Knife and Fork.*—October 26, 1869.

Claim.—The arrangement of the circular revolving blade F, operated toward the hinged fork-shank M, of Fig. 1, and the arrangement of the circular revolving blade F, operated parallel with or alongside the pivoted fork R, of Fig. 2, substantially as figured and described, and for the purposes set forth.

96,135.—John McNeight, Wakefield, Mass.—*Coal-Stove.*—October 26, 1869.

Claim.—1. The gas-mixing chamber, formed by gas-ring *c* and plate P, with dampers D D, substantially as set forth.

2. The combination of gas-mixing chamber, described, with gas-ring *c*, as set forth.

3. The combination of gas-mixing chamber, described, fire-box B, and gas-ring *c*, substantially as herein set forth.

4. The combination of fire-box B, ring *c*, gas-mixing chamber, described, cold-air passages E E and K K, and draught-passages *i i*, as herein set forth.

5. The combination of dampers D D and D′ with fire-box B and plate P, as herein described.

6. A gas-utilizing stove, formed by the combination of all the parts named above, arranged and operating substantially as specified.

96,136.—Thomas Metzler, Wooster, Ohio.—*Pump.*—October 26, 1869.

Claim.—1. The combination, with the pump A, of the squeezers D, arranged for operation substantially as specified.

2. The platforms C′ and H, connected by braces or supports I K, and combined with the pump and operating-devices, substantially as specified.

96,137.—Alfred A. Mixer, Hamilton, Ohio.—*Pedals for Pianos, &c.*—October 26, 1869.

Claim.—1. An auxiliary adjustable pedal for pianofortes, organs, &c., constructed and operating substantially as and for the purposes described.

2. The combination of the loop B, angular bar A, and adjustable part D H, applied and used in the manner and for the purpose substantially as described.

96,138.—Monroe Morse and Charles H. Morse, Franklin, Mass.—*Grate-Bar for Steam and other Enginery.*—October 26, 1869.

Claim.—In combination with a grate-bar, the false bar or rider C, constructed and arranged substantially as and for the purposes described.

96,139.—J. Nicolai and J. Ph. Rinn, Boston, Mass.—*Folding Chair.*—October 26, 1869.

Claim.—The combination of the loops P Q P′ Q′ with the seat C, rung L M, and legs A A′, substantially as described, and for the purpose set forth.

96,140.—A. P. Odholm, Bridgeport, Conn.—*Spirit-Level.*—October 26, 1869; antedated October 16, 1869.

Claim.—As a new article of manufacture, the spirit-level and plumb, constructed, as described, of the hard-rubber box B, (which contains the alcohol,) shrunk upon the glass plates *e e*, one of which is provided with the disk *g*, in the manner described, for the purpose specified.

96,141.—Richard Orford, Dowagiac, Mich.—*Saccharine Evaporator.*—October 26, 1869; antedated October 12, 1869.

Claim.—The combination and arrangement of the furnace B, with its bars H, rivets *j*, dampers E and F, brackets S, and bar G, with the pan A of a saccharine evaporator.

96,142.—Henry O. Peabody, Boston, Mass.—*Centrifugal Machine for Extracting Honey from the Comb.*—October 26, 1869.

Claim.—1. So constructing a centrifugal machine that a single revolving vessel shall serve the purpose of both the revolving basket and stationary tub, as heretofore constructed, substantially as described.

2. The use, in centrifugal machines, of the portable wire-gauze frames I, or their equivalents, constructed and applied substantially as described, for the purpose specified.

3. The combination, with the revolving vessel E, of the central opening L, the annular groove B, and the discharge-orifices C C, substantially as described.

96,143.—A. E. Peck, Brooklyn, N. Y.—*Fire-Cracker Holder.*—October 26, 1869.

Claim.—An improved cracker-holder, formed in two sections A B, substantially as specified.

96,144.—Benjamin W. Putnam, Boston, Mass.—*Flower-Pot.*—October 26, 1869.

Claim.—A flower-pot constructed substantially as

described, that is to say, with a centrally-arranged water-reservoir, and one or more earth vessels, situated concentric thereto, the wall intervening between the reservoir and earth-vessel or vessels being of porous material to admit of the percolation of the water through the same, for the purpose specified.

96,145.—William Quail, New York, N. Y.—*Printers' Galley.*—October 26, 1869.

Claim.—1. The parallel bars I D, connected with each other by the arms J, and combined with the side and end of an ordinary printers' galley, in such a way that the longitudinal movement of the bar D may give a lateral movement to the bar I, substantially as herein shown and described.

2. The combination of the spring pawl F H and rack-bar G with the sliding bar D and side B of the galley, substantially as herein shown and described, and for the purpose set forth.

96,146.—Matthew Quinn, Wataga, Ill.—*Railway-Car Coupling.*—October 26, 1869.

Claim.—1. The detachable incline a', in combination with the bumper-head A, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the coupling-pins or catches B and slides C with each other, and with the bumper-head A, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the coupling-pins or catches B, slides C, bars E, connecting-bar F, and guide-bar or pin G, provided with a spring-catch, H, with each other, and with the bumper-head A, substantially as herein shown and described, and for the purpose set forth.

96,147.—F. M. Ranons, Little Shasta Valley, Cal.—*Gate-Latch.*—October 26, 1869.

Claim.—The catch E, constructed as described, in combination with the hooked slide-latch A, and springs D and G, all arranged and operating substantially as herein shown and described, for the purpose specified.

96,148.—Christian S. Rauh, Boston, Mass.—*Compound for Making Water-Proof Paper.*—October 26, 1869.

Claim.—The application and use of the above ingredients, or their equivalents, when compounded substantially in or about the proportions set forth, and in the manner and for the purpose described.

96,149.—Erastus W. Scott, Wauregan, Conn.—*Shutter-Worker.*—October 26, 1869; antedated October 16, 1869.

Claim.—1. The combination and arrangement of the sleeve D, slotted and recessed, as described, with the knob E, the spindle C, the stud *c*, the arm *g*, the slotted plate *i*, and the spring-latch F, to operate with catches I K, applied to the window-frame A and the building, as explained.

2. The arrangement of the latch F, the pawl G, the arms *n p*, and the two springs *o q*, applied to the said arms, latch, and pawl, as set forth.

3. The combination of the spindle C, its arm *g*, and the slotted plate *i*, with the pawl G, the spring *q*, ratchet H, arm *v*, and bar *t*, the whole being applied to the blind and the window-frame, substantially in manner and for the purposes as set forth.

96,150.—Louis A. Seward, New Orleans, La.—*Key-Face for Concertina.*—October 26, 1869.

Claim.—The making of the outward faces of the key boards of concertinas in the way herein described and shown on the drawing.

96,151.—Louis A. Seward, New Orleans, La.—*Apparatus for Teaching Music, &c.*—October 26, 1869.

Claim.—1. The combination of an upright supplemental key board, with the ordinary horizontal keyboard of piano-fortes or other like instruments, when the former is used in connection with vertical standards, C C, on which are fixed transverse bars D E F G H, and front elastic strips *d e f g h*, provided with mechanical appliances for attaching removable notes, rests, &c., and means of connection with the horizontal keys of the instrument, substantially as herein described.

2. The combination of an upright key-board with the bars D E F G H, with or without the front strips *d e f g h*, when these parts are constructed substantially as herein described, and applied to the purposes specified.

96,152.—William C. Shipherd, Willoughby, Ohio.—*Shoe-Last.*—October 26, 1869.

Claim.—The combination of an instep-plate, B, formed with a hollow recess, G, extending through to the outer end, with the eccentric-notched plate A and spring-catch E, arranged as shown and described.

96,153.—Joseph J. Singley, La Fayette, Ind.—*Potato-Digger.*—October 26, 1869.

Claim.—1. The combination, with the plow and plow-beams, of the reciprocating cutters M, substantially as specified.

2. The combination, with the carrier-screen, of the earth-receiving plate R and discharger S, substantially as specified.

3. The arrangement of the plow-beam H, cords I, adjusting-shaft K, and cords L together, and with the frame, substantially as specified.

4. The combination, with the carrier-screen, of the revolving brush V, when arranged substantially as specified.

5. The combination, with the carrier-screen, of the fixed cutter X, substantially as specified.

96,154.—R. H. Sipes, Bloody Run, Pa.—*Washing-Machine.*—October 26, 1869.

Claim.—Fluted roller-crank *c*, small rollers N, spring K, pendent hook H, checks F, hooks *o*, slits E, and screw P, when combined and arranged as described.

96,155.—Evan Skelly, Plaquemine, La.—*Machine for Bleaching Cane-Juice.*—October 26, 1869.

Claim.—1. Combination, with the furnace A, of the air-conductor C, valve D, arranged for operating to vary the supply, the hopper H, and revolving recessed feeding-valve I, all substantially as specified.

2. The combination, with the furnace A, and the distributing-wheel and trough, of a gas-cooler, arranged substantially as specified.

3. The combination, with a closed agitating trough arranged for passing the liquid through it, of a revolving agitating-wheel, arranged for receiving the gas from a furnace, or over or through water, and for exhausting the air from the said agitating-chamber, and delivering the gas to the liquid therein, substantially as specified.

4. The combination, with the trough, of the pendent plates C^1, and float-valves E^1, substantially as specified.

5. The combination, with the air-valves D, of the valve F^1, when connected and arranged substantially as described.

6. The combination, with the agitating-trough and wheel X, of the perforated plate A^1, substantially as specified.

7. The mode of increasing or diminishing the capacity or area of the burning-surface, by the employment, in combination with the said furnace, of pans B, in which to burn the sulphur, substantially as specified.

96,156.—H. Sloat, Watertown, N. Y.—*Saw-Set.*—October 26, 1869.

Claim.—1. A saw-set, consisting of the shank B, fixed jaw C, movable jaw E, levers D H, and punch F, all combined and operating substantially as herein shown and described.

2. The notched plates I, arranged in combination with the movable jaws E and punch F of a saw-set, substantially as herein shown and described.

96,157.—Edward Smeeth, Chicago, Ill.—*Condenser for Alcohol-Stills.*—October 26, 1869.

Claim.—One or more overflow-pipes applied to a still, in such manner as to retain part of the liquid resulting from condensation of vapor in the lower portions of such condenser, and allow the surplus liquid to escape back into the still, substantially as described.

96,158.—A. D. SMITH, Grafton, Ohio.—*Faucet.*—October 26, 1869.

Claim.—1. The combination of the bloek E with the gate B and body of the faueet A, for the purpose set forth.

2. The combination of the screw D with the body of the faueet A, when so arranged, in relation to their adjoining parts, that, by turning in the screw D, the gate B is pressed against the opposite side of the aperture C from the screw D, for the purpose set forth.

96,159.—D. N. SMITH, San Bernardino, Cal.—*Gopher-Trap.*—October 26, 1869.

Claim.—A gopher-trap, eonsisting of the tube A, lever C, slides D E, pin *i*, trigger-pin F, and springs *c*, all arranged and operating substantially as herein shown and deseribed.

96,160.—EARLE HARRY SMITH, Bergen, N. J.—*Sewing-Machine.*—October 26, 1869; antedated October 13, 1869.

Claim.—The eombination of the looper, the brush-returner, or its equivalent, and the take-up, the whole operating together substantially as described.

96,161.—GEORGE SMITH, Providenee, R. I., assignor to himself and J. C. DE LANG, Detroit, Mich.—*Apparatus for Unloading Hay.*—October 26, 1869.

Claim.—1. A eentral-discharging hay-sling, eomposed of two detachable flexible sections, when the sections are arranged as shown, and conneeted together by one of their respective ends, and the free end of one of the sections is provided with a pulley or its equivalent, and the free end of the other section is provided with a ring or eye, substantially as described.

2. An attaching and a releasing-device, consisting of spring-jaws, a locking and tripping-dog, or its equivalent, and a bar a^1, with headed fingers applied to it, eombined substantially as and for the purposes described.

3. The combination, with a sectional or central-discharge hay-sling, of loop D, ring C, and a detachable fastening and compressing rope, S, substantially as and for the purposes described.

4. The arrangement of the traveling pulley-block K, fixed pulley-bloeks J J, and elevating and compressing-rope S, in combination with the sling T T′, which opens and discharges at the center, substantially as described.

96,162.—R. HALE SMITH, Springfield, Mass.—*Hand-Stamp.*—October 26, 1869.

Claim.—The application of indicating-eharacters to the front side of two or more printing-wheels, when said wheels are so constructed that each has its own bearing upon the eentral shaft or axis, in combination with radial openings through the front wheel or wheels, for the purpose of exposing to view that portion of eaeh wheel whieh bears the said indicating-characters.

96,163.—AUGUST STEINBÖK, New York, N. Y.—*Match-Safe.*—October 26, 1869.

Claim.—The self-igniting wick B, in combination with the closed case A, having the sliding eover C, ratchet *a*, and adjustable candle-holder E, all arranged as deseribed, for the purpose specified.

96,164.—E. H. STEWART, Philadelphia, Pa.—*Halter Clasp.*—Oetober 26, 1869.

Claim.—A halter-elasp, when eonstrueted and operated in the manner and for the purpose above set forth and deseribed.

96,165.—AUGUSTA N. THOMPSON, Holyoke, Mass.—*Blacking-Brush.*—October 26, 1869.

Claim.—An improvement in "stove-blacking brush," the arrangement and connection of the sponge with its staple *a*, knob *b*, in combination with brush B, as shown and described.

96,166.—THEODORE R. TIMBY, Saratoga, N. Y.—*Thimble.*—Oetober 26, 1869.

Claim.—As a new article of manufaeture, the thimble herein deseribed, provided with grooves or eorrugations *a c* and apertures *d*, eombined and arranged substantially as set forth.

96,167.—DUDLEY W. TRAVIS, Enfield, N. Y.—*Corn-Cultivator.*—October 26, 1869; antedated October 12, 1869.

Claim.—1. The eombination of the adjustable plows G and H frame D F F′, and rods C, substantially as described.

2. The arrangement of the lever L, in eombination with the plows, frame, rods, and carriage, as set forth.

3. The eonstruction of the spring K, in eombination with a earriage plow frame, as set forth.

4. The combination of the whole, made by the two-wheeled carriage A, eross-bar B, rods C, longitudinal pieces D, posts E, adjustable plows G and H, seat I, spring K, and lever L, arranged and operating together, substantially as set forth.

96,168.—B. W. TUTTLE, Galena, Ill.—*Water-Wheel.*—October 26, 1869.

Claim.—1. The penstock C and tubular extension B, provided with the lateral openings E, and extending above the water, when arranged as specified.

2. The combination, with the wheel A, of a tubular extension, when provided with an air chamber, and arranged as and for the purpose specified.

3. The air-chamber D, formed in the bottom of the wheel, substantially as specified.

4. The combination, with the buckets, of the shaft I, disk sleeve K′, worm-shaft N, shaft O, gearing with the shaft I, all substantially as speeified.

5. The detachable rings Q, let into the top and bottom plates of the wheel, substantially as and for the purpose specified.

6. The penstock C and tubular extension B, when arranged substantially as represented.

7. The combination, with the wheel A, of the fixed wheel R, substantially as specified.

8. The combination, with the wheel A, of the secondary buckets T, substantially as specified.

9. The arrangement of the packing-rings U and V, tubular extension B, and penstock C, all substantially as specified.

96,169.—WILLIAM E. VAN SCHAICK, Delavan, Wis.—*Sleigh-Coupling.*—October 26, 1869.

Claim.—The combination of the roller on the front of rear bob with adjustable chains, adjustable reaeh, swiveled at each end, and eonnecting-staples on front bob, as and for the purpose specified.

96,170.—JOHN P. VAN SICKLE, Geneva, N. Y.—*Harvester.*—October 26, 1869.

Claim.—1. The main frame C, of harvesters, when so constructed that a portion earrying the countershaft *c* is elevated above the rear part, and the portion to which the tongue is attached is still further elevated, as and for the purpose set forth.

2. Suspending the bar L, by the hanger K, from the main frame C, and from the angle-lever *r*, by the vertically moving connecting-rod *x*, pivoted eye-bolt *u*, and yoke *y*, as herein deseribed, and for the purpose set forth.

3. The hinged finger-bar P, and pivoted arm d', in combination with the handle R, when said handle is adjustable longitudinally and transversely to the machine, as and for the purpose set forth.

4. The vertically adjustable arm m^4, pivoted foot-rest n^3, in combination with the horizontal adjustable seat r^2, as herein shown and for the purpose set forth.

5. The seat r^2, in combination with the springs q^2, constructed as herein shown, and for the purpose set forth.

6. The pivoted traek-cleaner c^3, in eombination with the adjustable shoe a^3, as herein shown and deseribed.

96,171.—ADOLPH VELGUTH, Milwaukee, Wis.—*Blind-Hinge.*—October 26, 1869.

Claim.—A blind-fastening hinge, when eonstructed with fastening-bar C, with a joint at E, with projection F, so arranged, that when closed, that part of the fastener C, inside of the joint E, hooks on over F, and fastens the hinge together, and, when open, that part of fastener C, at H, shall hook over projection F, and keep it open, substantially as described.

96,172.—Moses N. Ward, Bangor, Me.—*Car-Starter.*—October 26, 1869.

Claim.—1. The combination and arrangement of the two ratchets, E E, the draw-pawls G G, the main levers F F, the cross-lever N, and the pedals I I, the whole being connected together and applied to the carriage-axle and body, so as to operate as set forth.

2. The combination of the hand-lever K and its pitman or rods L L with the pedals G G, the levers F F, the cross-lever N, the draw-pawls G G, and the ratchets E E, the whole being applied to the carriage in manner and so as to operate as hereinbefore explained.

3. The combination of the draw-pawl lifting mechanism as described, with the ratchets and with the draw-pawls, provided with mechanism, as set forth, for operating them, so as to effect the rotary movements of the ratchets.

96,173.—Chauncey E. Warner, Syracuse, N. Y.—*Horse Hay-Fork.*—October 26, 1869; antedated October 16, 1869.

Claim.—1. In connection with the curved tines A A′, the toothed segments *a a′* and vertically-sliding loop C *c d d*, all constructed and operating substantially as herein shown, and for the purpose described.

2. In combination with the curved tines A A′, the toothed segments *a a′*, fixed to said tines, and arranged concentrically with the main pivot *b*, and used in connection with a suitable device for engaging or disengaging them at will, for the purpose specified.

96,174.—A. W. White, Boston, and John J. Watson, Gloucester, Mass.—*Chin-Rest for Violin.*—October 26, 1869.

Claim.—The combination and arrangement of the screw *e* with the handle *c* attached, combined and arranged with the holds or shields *d* and *f*, for the purpose of tightening and loosening a chin-rest for the violin and viola.

96,175.—Theophilus Weaver, Harrisburgh, Pa., assignor to J. W. Moffitt, same place.—*Combined Latch and Lock.*—October 26, 1869.

Claim.—1. The traversing spring-retaining yoke L N Y, when made to operate substantially in the manner as and for the purpose herein set forth.

2. In the swinging lever A M, the loop B F, pin *a*, and notch O, all arranged as and for the purpose specified.

3. The combination of yoke L N Y, with lever-arm A B F, when arranged to support the spring in the chord-line E S *w*.

4. The adjustable keeper, consisting of the plates H and I, constructed and arranged as herein set forth.

96,176.—J. R. Webber, Chicago, Ill.—*Weather-Strip.*—October 26, 1869.

Claim.—The slotted springs J, attached to the edges of the door T, in combination with the strip A, provided with a friction plate, L, elbow-lever E G, rod H, plate P, and adjustable set-screw I, the latter being used to regulate the distance which the strip A is to project from the bottom of the door T, as and for the purpose set forth.

96,177.—Frank A. Wells, Memphis, Tenn.—*Cotton-Seed Hulling-Machine.*—October 26, 1869.

Claim.—1. The cylinder A, having knives B, shaped and applied as specified, in combination with the corresponding knives C, of the concave shell, all operating together, substantially in the manner described.

2. The combination of revolving knives B with cutters C, arranged at a pitch below the center of the cylinder, and having an independent radial adjustment, by means of set-screws or their equivalents, substantially as set forth.

3. The improved concave clamp E, provided with means for the separate adjustment of each square-ended tool, with its cutting-edge at a pitch below a radial line, and removable at the extremities of the concave, all as shown and described.

96,178.—Homer Wright, Pittsburgh, Pa., assignor to himself, Henry H. Collins, and Benjamin F. Collins, same place.—*Means of Attaching Tops to Jugs, Cruets, &c.*—October 26, 1869; antedated October 9, 1869.

Claim.—As a new article of manufacture, attaching tops to jugs and cruets by the use of the flange A, in combination with the groove or convex E, ring, or flaring mouth or lip B, on the jug or cruet, when attached together, substantially as described.

96,179.—C. C. Williams, Brooklyn, N. Y.—*Apparatus for Preserving Fruit.*—October 26, 1869.

Claim.—1. An improved boiler-apparatus, consisting of boiler proper A and steam-chest D, screwed thereon, and having a perforated bottom, as shown and described.

2. The removable steam-chest D, with apertured bottom, in combination with a series of pipes, F H, and air-excluding sleeves G, as and for the purpose specified.

96,180.—Enoch S. Yentzer, Ottawa, Ill.—*Attachment for Sewing-Machines.*—October 26, 1869.

Claim.—1. An instrument for producing the seam herein described, consisting of parts A, *a′*, B, D, *d*, and *s′*, constructed so as to operate substantially as set forth.

2. The adjustable lapping-hook *d* and turner or guide C, combined with a gauge, *s′*, substantially as described.

3. The lapping-hook *d*, the turner or guide C, the guide *t*, and the follower-plate B, constructed and combined substantially as described.

96,181.—L. J. Adams, Hoosick Falls, N. Y., assignor to himself, William Hyland, and A. B. Miller, same place.—*Clothes-Drier.*—October 26, 1869.

Claim.—The combination, with the panel or frame, composed of the posts A B and bars C, arranged in pairs, of the frames, consisting of the posts D and bars C, when the said bars D are pivoted between the bars C, either to bolts F or the posts A, substantially as specified.

96,182.—J. S. Anderson, Oconomowoc, Wis.—*Water-Wheel.*—October 26, 1869.

Claim.—The combination of a supply-chute, B, and the wheel D, mounted in an oscillating frame, C, so arranged as to adjust the wheel in relation to the chute, substantially as described.

96,183.—John Andrews, New Bedford, Mass.—*Clothes-Line Supporter.*—October 26, 1869.

Claim.—The combination of legs A^1, points E^1, brace C^1, and hinge B^1, as herein described, for the purpose specified.

96,184.—Olney Arnold, Pawtucket, R. I.—*Machine for Cutting Cork.*—October 26, 1869.

Claim.—1. The movable frames A A^1 and cutter-shafts B B′, in combination with the movable parts E E′ and cutter-blades *e* e^1, when constructed to operate substantially as and for the purposes described.

2. The combination of rock-shafts M and N, crank O, slide Q, levers L J, rod J′, and adjustable stop *r*, when adapted to operate together, in the manner described, and for the purposes specified.

3. The arrangement of the cutters *e e*, heads *b b*, shafts B B′, C C′, D, and adjustable gearing *c*, c^1, c^2, c^3, c^4, c^5, *d*, *d′*, when constructed and adapted to operate together as and for the purposes set forth.

4. The arrangement of the cutter-shafts B B′ with the movable boxes *i i*, blocks H H, and screws G G, substantially as and for the purposes indicated.

5. The cutter-blades *e e*, of the form shown in Fig. 4, when employed in connection with the heads *b b* and parts E E′, in the manner and for the purposes set forth.

6. The adjustable table T′, in combination with the rocking-frame T and screws *t t* T″ T‴, substantially as and for the purposes set forth.

96,185.—N. M. Barnes and A. T. Barnes, Tiffin, Ohio, assignors to themselves and Tiffin Ag-

RICULTURAL WORKS, same place. — *Machine for Driving Rake-Teeth.*—October 26, 1869.

Claim. — 1. The hammer F′, provided with a socket in its face to fit the end of a rake-tooth, when used as and for the purpose set forth.

2. The combination of the guide-rests H and I, placed just far enough apart to permit the rake-teeth to pass between them, substantially as and for the purpose specified.

3. The spring-plate J, combined with the lugs *i i*, and arranged and operating, with respect to the rake-head, substantially as set forth.

96,186.—HENRY W. BARTOL, Philadelphia, Pa. —*Centrifugal Sugar-Draining Machine.* — October 26, 1869.

Claim.—1. The segmental bearing D, and cap C, in combination with the pulley P, shaft S, and nuts N N′, when constructed and arranged substantially as and for the purpose set forth.

2. A cone or cylinder, K, in combination with a gate, G, when constructed and operated substantially as and for the purpose described.

96,187. — A. ELY BEACH, Stratford, Conn.— *Method of Transporting Letters and Parcels.*—October 26, 1869.

Claim.—1. The transportation of letters and parcels, by submitting the same to the direct action of air-currents within conveying-tubes, substantially as herein set forth.

2. The combination, with the air-tubes, of a mechanism for depositing the letters or parcels within the air-tubes, so operating as to prevent air-escape, substantially as set forth.

3. The combination, with the air-tubes, of a mechanism which will collect or arrest the contents of the tubes without interrupting the flow of the air-current, substantially as set forth.

4. The combination, with the air-tubes, of a discharging-mechanism, so operating as to prevent air-escape, substantially as set forth.

5. Operating the movable portions of the air-tube by electricity, substantially as and for the purpose set forth.

6. Effecting the return-signals, substantially as set forth.

96,188. — AARON BEARDSLEY, Mount Zion, Iowa.—*Show Counter.*—October 26, 1869.

Claim.—The store-counter, constructed substantially as herein described, with apertures D, through which articles placed in suitable receptacles under or within the counter may be viewed, as set forth.

96,189.—J. D. BECK, Liberty, Pa.— *Vise.*—October 26, 1869.

Claim.—1. The combination of the jaw B with its groove and slot C, as described, the pivot-bolt *a*, bolt *d*, auxiliary jaw L, and bar D, substantially as and for the purpose specified.

2. The combination of the slotted bar H, auxiliary jaw K, bolt *n*, latch R, and plate *l*, arranged, with reference to the extension-bar D and jaw A, substantially as described.

96,190. — CALVIN G. BEITEL, Easton, Pa. — *Steam-Generator.*—October 26, 1869.

Claim. — The construction of the boiler, of sections or boxes A A and B B, of less length than the dimension of the boiler, where they are applied, so that two or more lengths thereof are required to reach the extent of the boiler, and in arranging the said short sections, so that the contiguous courses or layers lap by each other alternately, and connect with different opposite sections in part, substantially as and for the purposes herein specified.

96,191. — R. N. BENNETT, Union Mills, Ind.— *Harrow.*—October 26, 1869.

Claim. — The combination of the land-lever B, chains C C, or their equivalents, with a double harrow, substantially as shown and described.

96,192.—WILLIAM N. BERKELEY, Cedar Rapids, Iowa.—*Horse Power.*—October 26, 1869.

Claim.—1. The revolving wheel or frame F, the shaft D, the drive-wheel I, crank-shaped bearing Q, and wheel K, when constructed, combined, and operating with a rack A, and cog-wheel J, (or equivalents,) as a horse-power, substantially as set forth.

2. The wheel or frame F, shaft D, crank-shaped bearing Q, wheel K, and crank T, when constructed, combined, and operating with a rack, A, and cog-wheel J, (or equivalents,) as a man-power, substantially as described and shown.

3. The brace-strap O, provided with a bearing for the shaft D, and constructed and arranged so as to operate substantially as described and shown.

96,193. — JOEL BOWMAN and JOHN B. OVERMYER, Reading, Ohio.—*Railway Cattle-Gate.* — October 26, 1869.

Claim.—1. In combination with the rails of a railroad-track and the gates H *b*, the parallel bars C, pivoted levers *c d*, and the weighted levers G, or their equivalent, substantially as described, for the purpose specified.

2. The blocks J, in combination with the rails A and the bars C, having their upper surfaces depressed near the center, substantially as described, for the purpose specified.

3. The hooked bars *b*, arranged, as described, upon the oscillating shafts D, when their proximate edges are sharpened, for the purpose specified.

4. In combination with the rails of a railroad-track, the bars C, pivoted levers *c d*, blocks J, gate H *b*, pulleys H, and weighted levers G, all arranged as described, for the purpose specified.

96,194.—JOHN F. BOYNTON, Syracuse, N. Y.— *Lightning-Rod Point.*—October 26, 1869.

Claim.—1. A lightning-rod point, with compound corrugations, and constructed as above described.

2. The compound corrugated point, combined with a swaged ferrule or tube, for connecting it with the rod.

96,195.—EDMUND BROWN, Burlington, Vt., assignor to himself and ARTEMUS PROUTY, same place.—*Boot and Shoe.*—October 26, 1869.

Claim.—1. The stiffening-frame B, composed of the bars or plates *a a b*, when arranged on a gaiter-boot or shoe, as herein described, for the purpose specified.

2. The combination of the plates *e e* with the frame B, having the bars *a a b*, all arranged as herein described, to be applied to a gaiter-boot or shoe, leaving the instep elastic, for the purpose specified.

96,196.—SANFORD S. BURR, Dedham, Mass.— *Cabinet-Bedstead.*—October 26, 1869.

Claim.—1. A cabinet or secretary bedstead, composed of a case or structure, A, and a divided bed-frame, which, while hinged to said case so as to be turned bodily up or down upon its pivot, is also capable of longitudinal expansion and contraction, substantially as and for the purpose herein shown and described.

2. A bed-bottom for cabinet or secretary bedsteads, composed of two end-frames, united by a tongued rail, as explained, or its equivalent, and provided with the transverse slats *e*, secured together by the elastic cords *f*, and provided with the springs *i*, overlaid by the sacking *j*, substantially as and for the purposes herein shown and described.

3. The combination of the pivoted shelf *l* with the hinged and divided bed-frame and the case A, in the manner and for the purposes shown and set forth.

96,197.—CHARLES A. BUSH, New London, assignor, for one-quarter of his right to HENRY P. OSTRUM, New Haven, Conn.—*Mode of Cleaning Gas-Retorts.*—October 26, 1869.

Claim.—1. The combination of salt and shells, and of salt, sulphur, and shells, for the purpose set forth.

2. The combination of salt, sulphur, and limestone, for the purpose set forth.

96,198.—CHARLES A. BUSH, New London, assignor, for two-thirds of his right, to HENRY P. OSTRUM and T. CLIFFORD BUSH, New Haven, Conn.—*Insulator for Telegraph-Wires.*—October 26, 1869.

Claim.—1. The rubber cap or covering for the

bracket or pintle, substantially as and for the purpose hereinbefore set forth.

2. The rubber lining for glass, porcelain, or other non-conducting substance, substantially as and for the purpose hereinbefore set forth.

96,199. — JEAN ARMAND CALLAUD, Nantes, France. — *Galvanic Battery.* — October 26, 1869; patented in France, May 19, 1858.

Claim.—1. The combination and arrangement of the jar A, zinc B, hooks *b' b'*, rod *c*, rubber tubing E, and sheet-copper D, in the manner and for the purpose herein described.

2. The combination and arrangement of the devices above mentioned, in the form and proportions herein described.

96,200.—GEORGE H. CHINNOCK, New York, N. Y., assignor to NEW LAMP-CHIMNEY COMPANY, same place.—*Lamp Burner.*—October 26, 1869.

Claim. —The movable cone *h*, surrounding the draught-plate *e*, in combination with said draught-plate *e*, and a perforated air distributer and chimney-holder, removable from the ratchet-cap *d*, as and for the purposes set forth.

96,201.—GEORGE CLARK, Buffalo, N. Y.—*Distilling and Treating Alcoholic Spirits.*—October 26, 1869.

Claim.—1. In the treatment of the various kinds of liquors, the combined application of a current of air and an exhaust, substantially in the manner and for the purposes set forth.

2. In a distilling or ageing apparatus, consisting of two or more receivers, the combination of an air-exhaust, applied to the extremity of the worm, or equivalent part, with a current of air admitted into the first receiver, at the bottom, substantially as described.

96,202.—LEWIS T. CLEMENT, Smyrna, Tenn.—*Machine for Cleaning Cotton.*—October 26, 1869

Claim.—The combination and arrangement of the feed-table G, feed-aperture *a*, and discharge-spout *a'*, with the revolving screen B, and revolving shaft C, provided with beaters *e*, substantially as shown and described, for the purpose set forth.

96,203. — LORING COES, Worcester, Mass. — *Wrench.*—October 26, 1869.

Claim.—1. The combination and arrangement of the wrench-jaws, shanks thereof, and right and left-handed screws extending transversely to the lengths of the shanks, so that both the said jaws and shanks are caused to separate and approach by turning the said screws, as described.

2. The combination and arrangement of the wrench-jaws, shanks thereof, right and left-handed screws, and guide, as described.

96,204.—B. E. COLLEY, Boston, Mass.—*Piano-Forte Action.*—October 26, 1869.

Claim.—In the class of piano-actions above described, a detached connection between a hammer-head, through its stem or part attached thereto, arranged, or located inside of the point of motion and escape of the jack, and the jack-frame, or any suitable part thereof, for operation, substantially as described, and for the purpose specified.

96,205.—MYRTILLUS A. CRAVATH and ISAAC M. CRAVATH, Bloomington, Ill.—*Snow Plow.*—October 26, 1869; antedated October 16, 1869.

Claim.—1. The construction and arrangement of mold-boards, with hinged joints near the point, and with rack and pinion for operating the same, in the manner and for the purpose herein described.

2. The construction and arrangement of plows with horizontal arms H and I, upright shaft E, journal-boxes *a a*, worm-pin G, and horizontal screw F, for operating the same, in the manner and for the purpose herein described.

96,206.—SAMUEL DANKS, Cincinnati, Ohio.—*Rotary Puddling-Furnace.*—October 26, 1869.

Claim.—1. The annular water, steam, or air collar G, constructed substantially as herein shown and described, for the purpose of preserving a low temperature of one or each of the ends of the rotary refining-chamber of puddling-furnaces, with which the collar is in contact.

2. The water, steam, or air pipe J, located in the arch of the passage from the grate *a* to the refining-chamber A, substantially as and for the purpose set forth.

3. The water, steam, or air casing I, constructed substantially in the manner and for the purpose herein shown and described.

4. The annular water, steam, or air pipe *l*, located in the edge of the shiftable piece K, which is in immediate contact with the mouth of the refining-chamber when a heat is on, as and for the purpose specified.

5. The water, steam, or air chamber *k*, located upon the outside face of the shiftable piece K, as and for the purpose herein set forth.

6. The annular metallic facings L, secured to the conical ends of the rotary refining-chamber A, substantially in the manner and for the purpose specified.

96,207.—H. M. DARLING, Bridgeport, Conn.—*Lathe-Chuck.*—October 26, 1869.

Claim.—In combination with the radial jaws *a*, their respective screws B, with toothed heads *b*, arranged relatively to the jaw, and the internally-threaded ring C, operating in the teeth of the screw-head so as to move the jaws, substantially in the manner as herein set forth.

96,208.—CHARLES E. DAYTON, Meriden, Conn. —*Velocipede.*—October 26, 1869.

Claim.—The bell crank levers C C, provided with the adjustable foot-rests *e e*, pivoted at their angles to the sides of the reach A, and at their upper ends *a* connected to the crank-axle by the rods *b*, all arranged in such a manner, that both arms, *a d*, of the bell-cranks, swing round the pivot, whereby the foot-rests are adapted to operate with an up and down movement, as herein described, for the purpose specified.

96,209.—JACOB DOURSON, Columbus, Ohio, assignor to himself and F. A. COMSTOCK, same place. —*Extension-Table.*—October 26, 1869.

Claim.—1. The metal roller-slides G, consisting of the castings *a*, and one or more rollers, *c*, when constructed substantially in the manner and for the purpose set forth.

2. The cross-pieces C, having a groove formed in each side, and provided with a roller slide, G, upon opposite sides and end, and upon which the slides D are made to open and close, substantially as set forth and described.

3. The cross-pieces C, slides D, roller-slides G, frames H, and rods K, when all are arranged and combined so as to form an extension-table, substantially as described.

96,210.—MILTON L. DRAKE, Rockford, Ill. — *Shaft and Coupling-Shield.*—October 26, 1869.

Claim.—The box A, shield B, box D, and shield C, with hinge *c* and hook *c'*, when combined and arranged as described, for the purpose set forth.

96,211.—JAMES E. EMERSON, Trenton, N. J.—*Rocking-Chair.*—October 26, 1869.

Claim.—1. The combination of the pivot-pieces or supports C with the steps *e*, for forming a rocking connection between the upper and under portions of the chair, as described and represented.

2. The combination of the pivot-pieces, steps, and spring, with the oscillating seat and stationary under portion, as and for the purpose herein described and represented.

3. In combination with the pivot-pieces and steps, the concentric slot and set-screw, for admitting of the rocking motion of the upper upon the under portion, without allowing them to separate when being lifted or carried, as set forth.

96,212.—LEWIS C. ENGLAND, Philadelphia, Pa. —*Tan-Bark Leach.*—October 26, 1869.

Claim.—1. The lower perforated tubes T, T^1, &c., and upper perforated tubes C and C', arranged and operating as herein specified.

2. The arrangement of the outside tube B, upright or side tubes S, S¹, &c., connecting-pipes D, and plugs P and P¹, as and for the purpose specified.

3. The arrangement of the steam pipe E, placed in the bottom of the vats, and on top of the perforated tubes T, T¹, &c., as and for the purpose specified.

96,213.—William R. English and Jason McClure, English Centre, Pa.—*Wagon-Seat.*—October 26, 1869.

Claim.—The combination, with the grooved bottom of the seat B, of the upper and lower wood-springs A C, wedges D D, metal cross-pieces E E, and bolts *a a*, all constructed, arranged, and operating substantially as set forth.

96,214.—Samuel Epley, McGrawsville, Ind.—*Tuyere.*—October 26, 1869.

Claim.—1. The construction of the air-passage D D′ having the tubes d^2 and d^3, and annular passage d^4, substantially as and for the purpose set forth.

2. The arrangement of the flanged ring C, and annular air passage d^4, with reference to the cylinder B, substantially as shown and described.

96,215.—James M. Ferguson, Summit, Miss.—*Medical Compound for the Cure of Fever and Ague.*—October 26, 1869.

Claim.—The several ingredients forming the compound for the cure of ague and chills and fevers, as herein specified.

96,216.—E. R. Ferry, New Haven, Conn., assignor to himself and P. Ferry, same place.—*Spring Perch for Carriages.*—October 26, 1869.

Claim.—In combination with the side-springs E E of a carriage, the two arms F F of the perch, extending from the axle to the socket H, the extension G passing through the socket H, and provided with a spring, to operate upon the said extension, as described.

96,217.—Kasson Frazer, Syracuse, N. Y.—*Mode of Plating, Coating, and Ornamenting Articles of Iron and Steel.*—October 26, 1869.

Claim.—1. The herein-described method of plating and coating articles made as herein described, the said process consisting in first coating or varnishing, then removing the coating or varnish from the parts to be plated, and afterward plating the same, substantially as described.

2. The new article of manufacture made by the process herein described.

96,218.—P. L. Gibbs, Dunleith, Ill.—*Lock-Nut.*—October 26, 1869.

Claim.—The nuts D, having a rebate around their inner face, in combination with the washer E, having an angular opening to fit said rebate for operation in connection with the grooved plates B B′, as shown and described.

96,219.—Samuel Gibson, Safe Harbor, Pa.—*Scrubbing Brush.*—October 26, 1869.

Claim.—The combination of the brush A, L-shaped bar B, socket D, and one or more rubber strips C, connected to the brush-body by the screws *a*, all constructed and arranged as shown and described.

96,220.—Nathan Goddard, Boston, Mass., assignor to himself and D. B Saunders, same place.—*Machine for Splitting Whalebone.*—October 26, 1869.

Claim.—1. The rectangular clamp B, provided with the screws *a a* and *b b*, in combination with the knives *k k* and rollers *d d*, all the parts constructed substantially as described and for the purpose specified.

2. In combination with the above, the presser-roller *l*, constructed and operated as shown and described.

96,221.—E. A. Goodes, Philadelphia, Pa., assignor to Francis M. Wood, Henry F. Hays, Samuel Allen, Joseph S. Brown, Theodore E. Weidersheim, and Thomas S. Keyser, same place.—*Treadle-Motion.*—October 26, 1869.

Claim.—The combination of the pendulum A, disk B, or its equivalent, pivot-bolt C, treadle C, connecting-rod F, and a holding-device, E, substantially as specified.

96,222.—Solomon H. Greenbaum, New York, N. Y.—*Hat-Tip.*—October 26, 1869.

Claim.—1. A hat, or other article of head-dress, in the interior of which is formed or arranged a closet or box, closed by a door, substantially as and for the purposes herein shown and described.

2. A hat tip, furnished with a closet or box, closed by a door, substantially as herein shown and described.

96,223.—John Grimm, Saint Louis, Mo.—*Air-Blast Engine.*—October 26, 1869.

Claim.—The apparatus for forcing air and heating the same, composed of the cylinders B, operated by a beam, E, and connecting with the diaphragms H, pipes I, the heater K, and blast-tube L, when arranged substantially as and for the purposes set forth.

96,224.—J. P. Grosvenor, Lowell, Mass.—*Method of Adjusting Circular Saws.*—October 26, 1869.

Claim.—The described construction and combination of the swinging plate E, capable of being fixed by means of the slot *e′ e′* and pin *n*, the plate D, having the projection D′, as described and shown, the mandrel M, the saw S, and the frames C D, all constructed and operating together in the manner and for the purpose herein set forth.

96,225.—John A. Hafner, Commerce, Mo.—*Horse-Power Connection.*—October 26, 1869.

Claim.—1. The casing A, constructed as described, with a dome-shaped projection, B, in the center, substantially as and for the purposes herein set forth.

2. The clutch C, constructed as described, so as to fit over and turn freely on the dome B, substantially as and for the purposes herein set forth.

3. The cover G, having a recess, *f*, and stops *g g*, in combination with the lug or stop *h*, on the clutch C, substantially as and for the purposes herein set forth.

4. The combination of the casing A, dome B, clutch C, spring F, and cover G, all constructed as described, and operating substantially in the manner and for the purposes herein set forth.

96,226.—Peter L. Hains, Freeburgh, Pa.—*Extension-Scaffold.*—October 26, 1869.

Claim.—The upright shafts *b*, extension *j*, pulleys *i*, *h*, *g*, and *f*, ropes *m* and *n*, and platform *d*, all constructed, arranged, and operating substantially as herein described, and for the purpose set forth.

96,227.—John Hale, Scranton, Pa.—*Drilling-Machine.*—October 26, 1869.

Claim.—The arrangement of the frame A, the drill-spindle B, extension-bar C, set-screw D, casing E, plunger *b*, spiral spring *c*, and face-plate *d*, all substantially as shown and described.

96,228.—Albert Hallowell and Abel T. Atherton, Lowell, Mass.—*Gas Flat-Iron.*—October 26, 1869.

Claim.—The combination, with a hollow flat-iron, as described, of a series of gas-burners, constructed, arranged, and applied, substantially in the manner and for the purpose specified.

96,229.—Cornelius A. Haring, Peoria, Ill.—*Bag-Fastener.*—October 26, 1869.

Claim.—An improvement in bag-ties, consisting of the segments A B, when provided on their concave surfaces with spurs *c*, and united together by link *d*, said parts being constructed and arranged together, as and for the purposes herein shown and set forth.

96,230.—A. V. Hartwell, Chicago, Ill.—*Lock for Car-Door.*—October 6, 1869.

Claim.—1. The bolt F, inserted through a hole in the wall, and secured therein by a spring-latch on the inside, said bolt bearing against, or being located in rear of the sliding door of a car, substantially as described.

2. In combination with said bolt, the pivoted latch B, with its incline *n*. the sliding bar C, with its guard *a*, and the tumblers D, all constructed and arranged within a case, A, substantially as described.

96,231.—GEORGE W. HATFIELD, Dayton, Ohio. —*Manufacture of Putty.*—October 26, 1869.

Claim.—As an article of manufacture, putty compounded from the ingredients named, and as set forth.

96,232.—VIRGIL HAYES, Tekonsha, and LEWIS CUATT, Eckford, Mich.—*Pruning-Shears.*—October 26, 1869.

Claim.—The pruning-shears, herein described, consisting of the hook B, pivoted blade C, link E, lever D, rod F, curved hand-lever L, pole A, and bent handle H, with guard G, all constructed, arranged, and operating substantially as set forth.

96,233.—JOHN A. HEMBERGER, Reading, Ohio. —*Gutter for Door-Sill.*—October 26, 1869.

Claim.—1. The provision of the gutter C and flap or deflector E to a door-sill, substantially as set forth.

2. The arrangement of the door-sill gutter C, hinged flap or deflector E, lever F, and bolt or other projection G, substantially as set forth.

3. In the described combination with the elements C, E, and F, the bolt G and slot H, or their equivalents, for the objects designated.

96,234.—JAMES HIGGINS and JOHN W. HIGGINS, Orth, Ind.—*Plow Clod-Fender.*—October 26, 1869.

Claim.—The clod-fender herein described, having wooden beam and bent plate, as specified, together with the bent teeth *v*, chain D, and adjustable bar E, constructed and arranged as set forth.

96,235.—GEORGE M. HOFFMAN and PETER HERMAS, Jr., Rahway, N. J.— *Wind and Tide Alarm.*—October 26, 1869.

Claim.—The combination, with the alarm A, of the locking and tripping lever *b*, arranged for operation, as described, in connection with the connecting-cord *f* and the sinker H, whereby the said alarm is released by the drifting or change of position of the boat, substantially as set forth.

96,236.—THOMAS HUNT, New York, N. Y.—*Traveling-Trunk.*—October 26, 1869.

Claim.—Hanging the lower portion of the section *e* to the front of the trunk at *f*, and applying the lock or hasp at the upper portion, so as to be covered by the lid *w*, when the trunk is closed, substantially as set forth, and, in combination therewith, the drawer *l* and sliding cover *i*, arranged in the manner and for the purposes specified.

96,237.—JOHN JOHNSON, Brooklyn, E. D., N. Y. —*Rubber Compound for Packing.*—October 26, 1869.

Claim.—A compound composed of the ingredients and made in substantially the manner herein specified.

96,238.—ABRAHAM JONES, Clinton, Ill.—*Hand-Loom.*—October 26, 1869.

Claim.—1. The lever B, connecting-bar C, arm D, main shaft E, and fly-wheels K K, all constructed as described, and arranged to operate the lay, substantially in the manner herein set forth.

2. The main shaft E and pulley F, connected by a cross-belt to the ratchet-pulley G on the treadle-shaft I, constructed and arranged as shown, to operate the treadle-shaft.

96,239.—VINCENT E. KEEGAN, Boston Highlands, Mass.—*Process of Reducing Wood and Woody Fibers for Paper-Pulp.*—October 26, 1869; antedated October 20, 1869.

Claim.—The process for reducing wood and woody fibers, for the manufacture of paper-pulp, with alkalies, in the manner of the process as described, or its substantial equivalent.

96,240.—JACOB J. KISER, Middletown, Ind.— *Railway-Car Brake.*—October 26, 1869.

Claim.—1. The combination of a hand-lever, L, with a foot-lever, P, when arranged to operate simultaneously, to rotate the shaft J, substantially as before described.

2. A hand-lever, L, arranged to move in the arc of a circle, and a foot-lever, P, arranged to move vertically, when the latter is connected, by the intermediate lever N, with the double-cranked rock shaft J, substantially as before described.

3. The foot-lever P, when arranged to operate the hand lever L, so as to bring the latter toward the lever P, and within the grasp of the attendant, in braking the cars, substantially as before described.

4. The combination and arrangement of the double-crank rock-shaft J, with the single toggle-joint *g*, when the latter is located between the central timber E of the truck and the body of the car, and connected to the braking-bars by the double-cranked studs *b*, substantially as before described.

5. The combination of the double-cranked rock-shaft J, the single toggle-joint *g*, with its connecting-rod *f*, and the hand and foot levers L P, constructed, arranged, and operating substantially as before described.

6. The arrangement of the hand-lever L, in connection with the double cranked rock-shaft J, in such manner, that when the brake is released, the weight of the hand-lever L, and its inclined position, will not only keep the brakes from the wheels, but the foot-lever P elevated, ready for action, substantially as before described.

96,241.—WILLIAM KOEHLER, Norwalk, Conn., assignor to JOHN M. PENDLETON.—*Method of Recovering Grease from Waste Soap-Liquor.*—October 26, 1869.

Claim.—1. The use of a solution of alkali and salt as an agent in assisting to recover grease from waste soap-liquors.

2. The pressing of the jelly-like mass, which is obtained from soap-liquors, while immersed in boiling water, substantially in the manner and for the purpose specified.

96,242.—CHARLES LAUTH, Paris, France.—*Coloring Material for Dyeing and Printing.*—October 26, 1869.

Claim.—The process herein described for dyeing animal and vegetable fibers or fabrics, aniline black.

96,243.—C. EDWARDS LESTER, New York, N. Y.—*Fuel for Metallurgic Purposes.*—October 26, 1869.

Claim.—1. Desulphurizing and dephosphorizing coal or its refuse, when placed in union with any other substance or substances, for the purpose described.

2. The production of a solid hydrocarbon, substantially as herein set forth, that is to say, by the union of hydrogenous and carbonaceous substances, when said substances are treated chemically and mechanically, substantially in the manner and for the purposes described.

96,244.—JOHN S. LEWIS, Elkader, Iowa.—*Harrow.*—October 26, 1869.

Claim.—1. The colter H, arranged and employed substantially as set forth.

2. In combination with the colter H, the handle I, as and for the purpose described.

3. The combination, in a harrow, of a frame, A B B D E F G, teeth C, colter H, handle I, and clevis K, constructed and arranged as herein represented and described, for the purposes set forth.

96,245.—WILLIAM R. LOUNT, Austin, Texas.— *Compound for Treating the Human Hair.*—October 26, 1869.

Claim.—The compound, substantially as herein described, prepared by combining the oil of the wild cucumber, (or *Acuminata*,) with either or all of the other materials herein named, or their equivalent.

96,246.—EGBERT MACY, Brooklyn, N. Y.—*Safe.* —October 26, 1869.

Claim.—1. A safe, having its depositing-chamber constructed within or incased by a combination-lock, substantially as specified.

2. The chamber A and the lid B, provided with notched locking-bars C, in combination with lock-

ing-rings, arranged around the exterior of the safe, substantially as set forth.

96,247.—S. T. McDougall, Brooklyn, N. Y.—*Washing Machine.*—October 26, 1869.

Claim.—The combination and arrangement of the connecting-rod F, levers G and K, pounders H, and pushers J, with the shaft W and box A, when constructed as and for the purpose set forth.

96,248.—William Mills, New York, N. Y., assignor to himself, G. A. Lilliendahl, and J. J. Detwiller, same place.—*Explosive Compound.*—October 26, 1869.

Claim.—1. In the formation of an explosive compound, the combination of carbolic acid, nitric acid, potassa, and aloes, substantially as and for the purposes described.

2. The use of carbolic acid in an explosive compound, substantially as described.

3. The use of aloes in an explosive compound, substantially as described.

96,249.—Robert B. Mitchell, Chicago, Ill.—*Kerosene-Stove.*—October 26, 1869.

Claim.—1. The combination of the chimneys J and plates D and K, when constructed and arranged in a kerosene-stove, substantially as and for the purposes specified and shown.

2. The projections or ribs O, on the upper surface of the plate K, in combination with the chimneys J, in a kerosene-stove, when constructed and arranged substantially as and for the purposes described.

3. The ring S, in combination with the rim or ring P, when constructed and operating substantially as and for the purposes set forth.

4. The combination of the plate D, flange E, and perforated plate or diaphragm F, when constructed and arranged substantially as and for the purposes specified and shown.

96,250.—F. B. Morse, Plantsville, Conn.—*Die for Forming Thill-Irons.*—October 26, 1869.

Claim.—The dies, constructed as herein described, for forging thill-irons.

96,251.—F. B. Morse, Plantsville, Conn.—*Series of Dies for Forming King-Bolts.*—October 26, 1869.

Claim.—The series of dies C D, E F, and G I, constructed as described, to form king-bolts for carriages.

96,252.—F. B. Morse, Plantsville, Conn., assignor to himself and H. D. Smith and Company, same place.—*Carriage-Clip.*—October 26, 1869.

Claim.—Carriage-clips, as an article of manufacture, constructed and formed substantially as herein described.

96,253.—F. B. Morse, Plantsville, Conn., assignor to himself and H. D. Smith and Company, same place.—*Slat-Iron for Carriages.*—October 26, 1869.

Claim.—The herein-described slat-iron, consisting of the base E, with its arms A′, B′, &c., corresponding to and combined with the irons A B, &c., when the said irons and arms are constructed and jointed together, substantially in the manner herein set forth.

96,254.—F. B. Morse, Plantsville, Conn., assignor to himself and H. D. Smith and Company, same place.—*Top-Prop for Carriages.*—October 26, 1869.

Claim.—1. The combination of the threaded stud C, with the sleeve F, on which said sleeve a bearing is formed for the joint G, and its outer end fitted to receive the nut H, substantially as set forth.

2. In combination with the subject-matter of the first clause of claims, the bolt I, constructed and applied substantially as set forth.

96,255.—F. B. Morse, Plantsville, Conn., assignor to himself and H. D. Smith and Company, same place.—*Bolt for Whiffletrees.*—October 26, 1869.

Claim.—As an improved article of manufacture, the herein described whiffletree-bolt, the head B having fins *a* formed at the end, upon the under side of the head, substantially as and for the purpose set forth.

96,256.—F. B. Morse, Plantsville, Conn., assignor to himself and H. D. Smith and Company, same place.—*Carriage-Shackle.*—October 26, 1869.

Claim.—1. A carriage-clip, having the bar D forged thereon, in one and the same piece, for the purpose of coupling the shackle thereto.

2. In combination with the bar D, the grooved cylinder E, coupling L, and bolt-key F G, constructed so as to operate in the manner described.

96,257.—Charles Müller, Albany, N. Y.—*Cigar-Machine.*—October 26, 1869.

Claim.—The combination of the fixed grooves *a*, knife-slats N, and open or reticulated slats O, with revolving cylinder M and hopper H, substantially as and for the purpose hereinbefore set forth.

96,258.—Georg Müller, New York, N. Y., assignor to himself and Francis Burnet, same place.—*Carpenters' Plane.*—October 26, 1869.

Claim.—The arrangement of the stationary box H, pivoted to the plane-stock, and fitting closely the throat thereof laterally, in combination with the cap-iron D, which is moved and adjusted beneath the said box, substantially as and for the purpose herein specified.

96,259.—John G. Murdock, Cincinnati, Ohio.—*Lavatory-Attachment for Railroad-Cars.*—October 26, 1869.

Claim.—1. The described lavatory-attachment for railway-cars, consisting of a waste-way basin H I J, a tank, B, and a pump, N, constructed and arranged substantially as shown and set forth.

2. The pipe M, adapted to form the overflow of the tank, and the waste-way of the basin, as set forth.

96,260.—Hiram B. Musgrave, Cincinnati, Ohio.—*Gas-Heater.*—October 26, 1869.

Claim.—The provision, in a gas-heating stove, of one or more heating-tubes E F F′, provided with a longitudinal partition or partitions, as and for the purpose set forth.

96,261.—Thomas Nelson, Philadelphia, Pa.—*Tool for Cutting Tubes.*—October 26, 1869.

Claim.—Constructing a pipe-cutting machine of the several pieces A B B′, the screw C, knife D, and jaw-facings E E′, in the manner set forth.

96,262.—Alfred Colerick Pilliner and James Charles Hill, Oakfield Works, near Newport, England.—*Steam-Enginery for Motive-Power.*—October 26, 1869; patented in England, January 28, 1868.

Claim.—1. The combination of the casing with the double-headed rocking partition, constructed with fixed heads, the whole constructed to operate substantially as before set forth.

2. The combination of the casing, the double-headed rocking partition, the crank-pin, the crank-arm, and the crank-axis, passing through the front of the casing, the whole constructed to operate substantially as before set forth.

3. The combination of the casing, the double-headed rocking partition, the filter-plate, and the dash-plate, the whole constructed to operate substantially as before set forth.

96,263.—J. C. Pinner, Newbern, Tenn.—*Screw-Driver.*—October 26, 1869.

Claim.—The instrument above described, consisting of the handle A, ferrule A′, having rib *a*; block D, having notch *d*; stem B, having gains *b b*; blade C, having shoulders *c c*; spring-jaws E E, shaped as described, and having grooves *v v*, and sliding clasp or strap S, all constructed substantially in the manner and for the purposes herein set forth.

96,264.—D. J Powers and Henry B. Stevens, Madison, Wis., assignor to D. J. Powers, assignor to Buffalo Agricultural-Machine Works.—*Sugar and Sorghum Mill.*—October 26, 1869.

Claim.—1. The combination and arrangement of the driving-shaft B and the pinions F and H thereon, with the lower rollers D E, and their respective pinions G and I, so that the shaft extends underneath,

the length of the rollers, and its pinions P and H gear respectively into the pinions G and I, at opposite ends of the rollers, thereby to enable the rollers to be located close together, for the purpose herein specified.

2. In combination with the above, the arrangement of the bagasse-carrier, so that its belt is driven by the pinion G, or the rear lower roller G, by means of two pinions *n* and *o*, around the shaft of which latter the carrier turns for adjustment, thereby bringing the belt in close proximity and proper relation to the said roller, as herein set forth.

3. The sliding shoe P, of the carrier, arranged and operating substantially as and for the purpose herein specified.

96,265.—SILAS G. RANDALL, Providence, R. I.—*Pneumatic Diaphragm Water-Elevator.*—October 26, 1869.

Claim.—In a compartment-pump, in which the matter to be forced or elevated is separated from the operative mechanism, the combination of the pipes *b* and *c*, and the alternating valve *l*, connected to and operated by the reciprocating compartment, substantially as shown and described.

96,266.—R. M. REEBY, Worcester, Mass.—*Lounge and Sofa-Bed.*—October, 26, 1869.

Claim.—1. The combination of the folding parts C B D with the frame A, under the arrangement substantially as described, so that when the said parts are folded up, the latter two will be received within the frame, and the former will rest on top of the frame, and form the sofa-seat, as set forth.

2. A lounge or sofa-bed, the parts of which are constructed and combined together substantially as shown and described.

96,267.—PATRICK REILLY, Reading, Pa., assignor to SEYFERT, MCMANUS AND COMPANY, same place.—*Furnace for Heating Tubes.*—October 26, 1869.

Claim.—The arrangement, substantially as described, of the furnace A, fire-places D D, and outlet-flue *a* to the chimney.

96,268.—WILLIAM S. REYBURN and F. J. MARTIN, Philadelphia, Pa.—*Lightning-Rod.*—October 26, 1869.

Claim.—As an article of manufacture, a section of lightning-rod, composed of a sheet-zinc center, bent upon itself in webs, and a copper covering, similarly formed, substantially in the manner and for the purpose described.

96,269.—LAWRENCE ROY, Plattsburgh, Mo., assignor to himself and CHARLES J. NESBITT, same place.—*Medicine for Cancer.*—October 26, 1869.

Claim.—1. The combination of a caustic-potash plaster, a spikenard-poultice, and a powder formed of salt, saltpeter, alum, and copperas, each of said three instrumentalities being prepared and applied at the times and in the manner hereinbefore specified, for the treatment of cancer.

2. A compound formed of lead and sulphur, in the respective proportions of two to one, and made to combine in the manner set forth, for the purpose of drawing cancers to a head, in the manner described.

3. A compound formed of burnt common salt, alum, saltpeter, and copperas, in the respective proportions of 3, 1, 1, 1, all mixed and prepared in the form of a powder, as specified, for the purpose of loosening the cancer in its socket.

96,270.—DANIEL W. SAWYER, Booth Bay, Me.—*Lace-Leader for Sails.*—October 26, 1869.

Claim.—A lace-leader, consisting of a perforated portion, B, and right-angular stay-portions C C, substantially as described.

96,271.—SILAS C. SCHOFIELD, Chicago, Ill.—*Combined Cultivator and Seeder.*—October 26, 1869; antedated October 16, 1869.

Claim.—1. The combination of the main beams F and angle-beams H, when constructed and operated substantially as and for the purposes specified.

2. The elbow-plates I, when constructed substantially as described, and used for the purpose of adjusting the angle of the beams B and H, substantially as specified.

3. The swivel-plate J, when constructed and operating substantially as and for the purposes described.

4. The metallic stall P, when constructed and operating substantially as and for the purposes specified.

5. The combination of the treadle T, chain R, and metallic stall P, when arranged and operating substantially as set forth.

96,272.—SILAS C. SCHOFIELD and A. JUDSON WISE, Chicago, assignors to SILAS C. SCHOFIELD and WILLIAM D. ANDREWS, Rockford, Ill.—*Horse-Rake.*—October 26, 1869.

Claim.—1. The transverse slots or notches in the axle B, and cap C, in combination with the coil of the rake-tooth, for the purposes of securing the rake-teeth, substantially as and for the purposes specified.

2. The combination of the plates F, provided with the notches H, the crank-axle I, and bolt J, when constructed and arranged substantially as and for the purposes specified.

96,273.—ALFRED L. SEABURY and DAVIDSON MORRIS, Norfolk, Va.—*Blind-Hinge.*—October 26, 1869.

Claim.—Connecting the upper and lower hinges of shutters, when the hinges are used for holding the shutters in any desired position, by means of a rod, or its equivalent, substantially as shown and described.

96,274.—CONRAD SEIMEL, Brooklyn, N. Y., assignor to CHARLES PRATT, New York City.—*Oil-Can Stopper.*—October 26, 1869.

Claim.—1. A stopper for oil-cans, or other receptacles for liquids, provided with an opening or spout for outflow of the liquid, in combination with a vent-opening or tube, substantially as shown and described.

2. The combination of the body of the stopper with the vent and outflow-tubes, and the disks for holding the body and tubes together, substantially as shown and set forth.

96,275.—LOUISE F. SHAW, New York, N. Y.—*Imitation Hair for Ladies' Head-Dress.*—October 26, 1869.

Claim.—The head-dress, prepared from twisted glazed thread, treated with glycerine, substantially as described.

96,276.—E. R. SHEPARD, Scranton, Pa.—*Compound Rail.*—October 26, 1869; antedated October 16, 1869.

Claim.—1. A compound rail, consisting of a lower permanent portion, B, and an upper detachable and reversible portion, A, adjusted to an inclined position on the base, substantially as and for the purpose described.

2. A compound rail, consisting of two portions, A and B, the latter having a base, a flange, and a recess, *e*, rounded to the arc of a circle, and the former being reversible, and having a head, *a*, and a flange, *b*, the lower edge of which is rounded to fit the recess *e*, substantially as and for the purpose described.

96,277.—ISAAC SILVERNAIL, Byron, Mich.—*Burglar-Alarm.*—October 26, 1869.

Claim.—1. The wire H, constructed or bent as described, so as to form the coil spring *f* and hammer *g*, substantially as and for the purposes herein set forth.

2. The arrangement of the wheel E, provided with pins *i i*, wheel or pulley D, cords *b e*, spring F, and pulley C, all substantially as and for the purposes herein set forth.

3. The combination of the gate or door A, hinge B, pulleys C D, wheel E, with pins *i i*, cords *b e*, spring F, bell G, and wire H, all constructed as described, and for the purposes set forth.

96,278.—FREDERICK H. SMITH, Baltimore, Md., assignor to SMITH, LATROBE AND COMPANY, same place.—*Bridge.*—October 26, 1869.

Claim.—1. The combination, in a beam-truss, of

the strut or post with the adjusting-devices herein described, or their mechanical equivalent, applied directly to the foot or base of said post, for the purpose of contracting or elongating its working-length, substantially as set forth.

2. The arrangement of the chord-bars, provided at their upper edge or edges with flanges or stiffening-irons, for the purpose specified, and jointed to the pins upon which their ends are supported, substantially as shown and set forth.

3. The attachment of the lateral-bracing systems to the joint-pins, by means of the bolt, which at once combines the pin, strut, loops, and adjustable ties into a hinged joint in the lateral plane of the truss, substantially as shown and specified.

4. The combination, with the feet of the struts or posts, of the adjusting-loops and joint-pins, with which the lateral-bracing system is connected, substantially as herein shown and set forth.

96,279.—J. A. SMITH, Lacon, Ill.—*Cultivator.*—October 26, 1869.

Claim.—1. The frames D D, when provided with plates *g g*, and adjusting-holes at top and bottom, substantially as and for the purpose described.

2. The combination of the beams B B with the vertical cylindrical bars *h h*, when said bars are provided with the plates G and F, the plates being pivoted together substantially as and for the purpose specified.

3. The double-tree H, provided with pendants *m m*, in combination with rods I I, or their equivalent, the said rods being connected with a pulley, *t*, on double-tree H, in the manner and for the purpose set forth.

96,280.—JAMES L. SMITH, Passaic, N. J.—*Apparatus for Elevating and Distributing Water in Buildings.*—October 26, 1869.

Claim.—The within-described apparatus, composed of the cylinder or case B, with suitable valves, piston C, adjustable load D, and elevating means, all arranged relatively to each other, and to the tank A and delivery-system J, with means, substantially as shown, for restraining or allowing the delivery at will, as and for the purposes herein set forth.

96,281.—MICHAEL M. SMITH, Saint Louis, Mo.—*Self-Feeding Boiling and Evaporating Apparatus.*—October 26, 1869.

Claim.—1. The heater-pipe B′, combined with the feed-pipe C, and its stop-cock or valve *c*, operating substantially as set forth.

2. The boiler A, pipe B, heater-pipe B′, feed-pipe C, when operating substantially as and for the purpose set forth.

96,282.—ANSON P. STEPHENS, Brooklyn, N. Y., assignor to himself, MELVIN STEPHENS, and NATHAN STEPHENS, same place.—*Base for Bench-Vises.*—October 26, 1869.

Claim.—The base *a*, with a conical edge, in combination with the turn-table *c*, that is attached to the vise, and provided with a circular flange, having an inclined inner surface, to be clamped to the base *a*, and the screw *f*, substantially as and for the purposes set forth.

96,283.—HENRY B. STEVENS, Buffalo, N. Y., and D. J. POWERS, Madison, Wis., assignors to GEORGE L. SQUIER, Buffalo, N. Y.—*Cane-Mill.*—October 26, 1869.

Claim.—The turn-plate P, constructed substantially as described, and arranged with its semi-circular groove, and rod *p*, fitting therein, and the adjusting-screw *s*, in combination with the minor rollers of the vertical cane-mill, substantially as and for the purpose herein specified.

96,284.—EDWARD SULLIVAN, Pittsburgh, Pa.—*Steam-Engine-Piston Packing.*—October 26, 1869.

Claim.—Providing the packing-ring A with the laps C and B, said ring and laps being constructed and arranged substantially as herein described.

96,285.—GEORGE TANGYE, Birmingham, England.—*Copying-Press.*—October 26, 1869.

Claim.—The combination of the hollow uprights *c c* and rods *e e*, for carrying the lower and upper platens or surfaces, respectively, of the press, the said uprights and rods being so jointed to the base-plate of the press, that on turning them on their joints, the said platens are made to approach to or recede from one another, substantially in the manner and for the purpose shown and described.

96,286.—J. C. THOMPSON, Charlestown, assignor to himself and JOHN H. ROGERS, Boston, Mass.—*Hose and Pipe Coupling.*—October 26, 1869.

Claim.—The combination of the hose *a* with the coupling-neck *c*, by means of the ring *b*, applied and operating substantially as described.

96,287.—R. M. THOMPSON, Coshocton, Ohio.—*Wrench.*—October 26, 1869.

Claim.—The improved wrench herein described, consisting of the standard B, with jaw A, corrugated face C, and slots J and K, movable jaw D, with corrugated face E, neck L, and head F, and the retaining-wedge G, with headed malleable arms I I and thumb-piece H, the several parts being constructed and combined substantially as and for the purpose specified.

96,288.—GEORGE T. THORP, Philadelphia, Pa.—*Fish-Bait.*—October 26, 1869.

Claim.—The fish-bait made of one or more of the within-mentioned ingredients, and used substantially in the manner herein described.

96,289.—J. S. VAN BUREN, Green Island, N. Y.—*Summer-Furnace.*—October 26, 1869.

Claim.—The summer-furnace herein described, having diving-flue Y, dumping-plate H, and cap G, constructed and arranged to operate in connection with an ordinary cooking-stove, or independently, substantially as specified.

96,290.—ELISHA WALKER and JOSIAH J. PLATT, La Porte, Ind.—*Cultivator.*—October 26, 1869.

Claim.—The double-tree A, provided with the stirrup-shaped iron frames E E, with the pivoted regulating-bars F F and the chains K K, when combined and operating upon a cultivator, substantially as described and shown.

96,291.—WILLIAM M. WALTON, Newark, N. J., assignor to himself and JOSEPH J. WALTON, same place.—*Sash-Holder.*—October 26, 1869.

Claim.—The hinged pressure-pad *b*, united to the plate *a* by hooks, as shown, in combination with the cam *c*, acting directly against the back of the pad *b*, as specified.

96,292.—EDWARD L. WILSON, Philadelphia, Pa.—*Photographers' Rest.*—October 26, 1869.

Claim.—1. The base A of a photographers' rest, when recessed on its under side for the reception of a movable plate, C, for the purpose specified.

2. The plate C, with its wheels *f*, contained within the recess of the base A, and so connected to the frame of the apparatus, and operated by a rod, H, and lever I, or their equivalents, that it may be sufficiently depressed to raise the said base, all substantially as and for the purpose herein described.

3. The combination of the bolt *p* with the clamps M and M′, when the latter are adapted for attachment to the rods of a photographers' rest, substantially as and for the purpose set forth.

96,293.—LEWIS C. WITT and W. F. JONES, Boston, Ind.—*Fender for Corn-Plows.*—October 26, 1869.

Claim.—1. A fender, constructed in the manner described, in combination with the two slotted bars B and C, the vertical rod I, and chain W, the whole being arranged and operated substantially as herein set forth.

2. In combination with the fender, as described, the lever K, ratchet-bar M, and spring N, the whole being constructed and operated substantially as set forth.

96,294.—JAMES R. WOODWORTH, Nunda, N. Y.—*Pruning-Implement.*—October 26, 1869.

Claim.—1. The slotted bed-piece P, in the handle *k*, in combination with the lever J and rod *g*, by means of which the shears are operated, substantially in the manner described.

2. The pruning-shears, composed of bed-piece *r*, slotted arm *c*, and knife *b*, when operated by means of a lever J, and rod, *g*, fastened to said lever, and secured thereto by a screw, working in the slotted arm-handle, substantially in the manner and for the purpose described.

96,295.—J. C. YOUNG, Toledo, Ohio.—*Sash-Holder.*—October 26, 1869.

Claim.—The adjustable pinion and axle, with the tooth-bar and spring, when the latter is arranged to act upon the pinion, so as to lock the sash, in the manner substantially as described.

96,296.—THOMAS N. YOUNG, Richmond, Ind.—*Straw-Cutter.*—October 26, 1869.

Claim.—1. The sliding head-block F and inclined groove I, constructed as described, and used in combination with the knife G and swinging arm P, in the manner and for the purposes specified.

2. The pivoted bar D, pawls *n n*, adjusting-hook L, and head-block F, when constructed and operated in combination, substantially as described.

3. The combination of the feed-rollers with the springs *a*, the guide-board K, and compressing-board Y, when constructed and arranged to operate as described.

96,297.—HUMPHREY CALDER and GEORGE BURGESS, Richmond, Va.—*Shoemakers' Last-Holder.*—October 26, 1869.

Claim.—1. A last-attaching stem, G, having, in addition to the movement permitted by an intermediate ball-and-socket adjusting-joint, *e' e'' g*, a rotary movement on a horizontal axis, *e*, to enable the holder to be adjusted, so as to be worked at either in a sitting or standing posture, substantially as herein described.

2. The combination, with the ball-and-socket adjusting-joint *e' e'' g*, of the joint *b' e*, adapted to permit independent horizontal adjustment, as described.

3. The combination, with the ball-and-socket adjusting-joint *e' e'' g*, of the joint *b e*, adapted to permit separate horizontal adjustment, as described.

96,298.—ALBERT F. ALLEN, Providence, R. I.—*Shot-Pouch.*—November 2, 1869.

Claim.—The combination of a gate with a many-chambered shot-pouch and charger, whereby the mouths of all but one of the chambers are closed, either of which may be opened at will by means of the movable neck or charger and spring-catch, substantially as specified.

96,299.—BRUNO BEUCHEL, Kalamazoo, Mich., assignor to himself and W. RODIGER, same place.—*Hoisting-Jack.*—November 2, 1869.

Claim.—The combination of screw G, lifting-bar, Fig. 2, gears J, K, L, M, and latch O, in the manner and for the purpose set forth.

96,300.—WILLIAM B. BILLINGS, Chicago, Ill.—*Mode of Making the Beds of Billiard-Tables.*—November 2, 1869; antedated October 29, 1869.

Claim.—1. The molding of billiard-beds out of artificial slate, stone, concrete, ashlar, or cement of any kind, substantially as described and set forth.

2. The combined use of the said artificial slate, stone, concrete, ashlar, or cement, with wood or metal, substantially as and for the purposes set forth.

3. The metallic or wood border B, attached to a billiard-bed, substantially as described, and for the purposes set forth.

96,301.—HENRY BLAKE, Rindge, and AMOS J. BLAKE, Fitzwilliam, N. H.—*Machine for Shaping Wooden Trays.*—November 2, 1869.

Claim.—1. Hanging the cutters C C, and tracing-wheel E, a sufficient distance below the swinging frame D, to allow a free passage of the carriages R' and R'', while carrying the tray-blocks I I and model F underneath the same, substantially as herein shown and described, and for the purpose set forth.

2. The arrangement of the adjustable table or rest O, in combination with the carriage R', substantially in the manner herein shown and described, and for the purpose set forth.

96,302.—FRANK BLECKA, Elgin, Ill.—*Cheese-Box.*—November 2, 1869; antedated October 22, 1869.

Claim.—The application of the wooden plates or slivers to pasteboard hoops, as hereinbefore described, for the purpose set forth.

96,303.—JOHN BOUSFIELD, Cleveland, Ohio.—*Match-Box.*—November 2, 1869.

Claim.—The box or holder described, provided with an adjustable lappel C, and sanded or roughened surface, being a new article of manufacture, substantially as and for the purposes set forth.

96,304.—JOHN FREDERICK BRINJES, Fieldgate street, Whitechapel, England.—*Centrifugal Machine.*—November 2, 1869.

Claim.—1. The general construction and arrangement of what are known as "centrifugal machines," whereby they may be worked without stoppages, and so as to admit of the continuous introduction and discharge of the substances to be operated upon, substantially as hereinbefore described, and illustrated by my drawings.

2. The mode of driving or actuating the wire gauze, or other suitable straining-medium of centrifugal machines, when applied in the form of endless traveling bands, moving either in a horizontal or vertical direction during the revolution of the drum, substantially in the manner and for the purpose hereinbefore described.

3. The application of the wire gauze, or other suitable straining-medium of centrifugal machines, in the form of cylinders, composed of wire gauze, perforated metal, or other equivalent material, such cylinders being caused to rotate on their own axis during the revolution of the drum, substantially in the manner and for the purpose hereinbefore described.

4. The combination, in centrifugal machines, of endless traveling band, of wire gauze or other equivalent material, or of rotary cylinders, composed of the same material, with suitable discharge-openings disposed at intervals round the drum, substantially as and for the purpose hereinbefore described.

5. The application and use of the radial spouts or channels, for directing the substances which are fed into the drum against one end or portion of the endless traveling bands or rotating cylinders of wire gauze, or other suitable straining-medium, substantially as hereinbefore described.

96,305.—IRA S. BROWN and CHARLES N. BROWN, Providence, R. I., assignors to themselves and J. MASON GROSS, same place.—*Saw.*—November 2, 1869.

Claim.—The employment or use, in combination with a saw-plate, A, of one or more teeth, B B', whose planing-edges are furnished with back-irons, *c*, substantially as described, for the purposes specified.

96,306.—HARMON W. CORNELL, Owego, N. Y.—*Corn-Sheller.*—November 2, 1869.

Claim.—1. The combination of cylinder E, corrugated as described, and cylinder D, constructed with grooves and spiral corrugations, as shown, said cylinders being arranged parallel to one another, and running at different velocities, for the purpose specified.

2. The arrangement of wheel A, shafts *n d k*, and fly-wheel C, in combination with the corrugated shelling-cylinders D and E, when constructed and arranged in the manner and for the purpose herein specified.

96,307.—WILLIAM N. CHAMBERLAIN, Van Buren, Mich.—*Pump.*—November 2, 1869.

Claim.—1. The pipe A, with a piece or part A' at its lower end, and holding the valve E on its top, in combination with the cylinder B, and its valve G, substantially as and for the purposes set forth.

2. The combined whole, made by the pipes A A', cylinder B, valves E and G, frame F F', and lifting-rods D D', arranged substantially as set forth.

96,308.—James B. Clark, Plantsville, Conn.—*Bolt-Blank.*—November 2, 1869.

Claim.—A round bolt-blank, consisting of the round ends A and C, and the round taper B, substantially as shown and described, and for the purposes set forth.

96,309.—Lucas C. Clark, Plantsville, Conn.—*Teapot-Handle.*—November 2, 1869.

Claim.—1. A tea or coffee pot handle, constructed with the waves *a*, substantially as described, and for the purpose set forth.

2. The combination and arrangement of the connecting-tubes B B and button *d*, substantially as described, and for the purposes set forth.

96,310.—John Cleary, Brooklyn, N. Y.—*Thread-Holder and Cutter.*—November 2, 1869; antedated October 16, 1869.

Claim.—The thread-holder and cutter, composed of the vertical spool-axles *a a'*, with the horizontal axle fitted thereto, as described, the thread-guide *b* and the fixed and movable cutting-blades C C', arranged for operation substantially as herein set forth.

96,311.—William Cogswell, Ottawa, Ill., assignor to himself and William H. W. Cushman.—*Harvester.*—November 2, 1869.

Claim.—1. In combination with the shaft C and driving-gearing *d d' e*, the box I, eccentric to the said shaft C, and adapted for independent motion or adjustment thereon, substantially as and for the purposes explained.

2. The flange J', formed on the cap J of the bearing of the eccentric-box I, and provided with the holes or sockets *j* j*' j*''*, for the engagement of the catch of the shifting-lever in the three positions of the gearing, substantially as set forth.

3. The flange J', constructed with the separate adjustable sections or slides *j'*, for the reception of the holes or sockets *j*' j*''*, substantially as described, for the purposes set forth.

4. The combination, with the shoe Q, of the upturned front end *q*, having a vertical slot for the reception of the drag-bar, and transverse perforations *q**, for the reception of an adjusting-pin, as set forth.

96,312.—Solomon Darkess, Deerfield, Ind.—*Millstone-Driver.*—November 2, 1869.

Claim.—The millstone-driver E, composed of the parts *e e e'*, pivoted together, and operating with the bail D, in the manner and for the purpose set forth.

96,313.—Edwin Dayton, Meriden, Conn.—*Apparatus for Coating Cement Pipes.*—November 2, 1869.

Claim.—The within-described apparatus for covering or coating the outside of cement water-pipes, by passing them through a funnel-shaped tube, either with or without the internal guides, substantially as herein shown and described.

96,314.—Edward Fales, Lancaster, Mo.—*Stump-Extractor.*—November 2, 1869.

Claim.—1. The arrangement, upon the bed A, having side-beams D D, of the pivoted tail-piece B, stationary shaft E, with cylinder F, and revolving drum G, provided with beveled teeth *a a*, all substantially as shown and described.

2. The sweep H, around the shaft E, and having projections *e e* on its under side, in combination with the pin *b*, slotted lever J, and notched standard K, all substantially as and for the purposes herein set forth.

3. The tackle-pole L, provided with wheels *m m*, and pulley *h*, in combination with the rope or chain *f*, pulley *i*, and drum G all substantially as and for the purposes herein set forth.

96,315.—William H. H. Gloker, Southold, N. Y.—*Apparatus for Extracting Oil from Fish.*—November 2, 1869.

Claim.—1. The combination of the stationary platen K, sliding press-box H, and bed L.

2. The combination of the bed L, press box H, and lugs *b* and *c*.

3. The combination of the revolving frame G, stationary platen K, bed L, and sliding press-box H.

4. The combination of the stationary filling-table F, revolving frame G, sliding press-boxes H, platen K, and elevating-bed L.

5. The combination of the revolving frame G and press-boxes H, the latter being constructed in the form described, so as to utilize the available space of the revolving frame, substantially as hereinbefore set forth.

96,316.—Marcus A. Hardy, Cambridge, Mass.—*Mechanical Movement.*—November 2, 1869.

Claim.—The arrangement of wheels F F', gearing together upon the opposite ends of the rocking-arm E, and each of them alternately meshing with pinion B, substantially as and for the purpose described.

96,317.—John T. Harris, Tyngsborough, Mass.—*Cattle-Food.*—November 2, 1869.

Claim.—A compound for cattle-feed, composed of gluten, obtained as herein set forth, and compounded with the other ingredients described, in the manner specified.

96,318.—William H. Hawley, Utica, N. Y.—*Axle and Shaft.*—November 2, 1869.

Claim.—The combination of four or more, or fewer, iron or steel bearings B B B B, upon all sorts of shafts, and upon all sorts of axles, whether used in machinery, or in carriages or vehicles of any sort whatsoever, with the metal bearings A' A, substantially as and for the purpose hereinbefore set forth.

96,319.—Jacob C. Hazen, West Independence, Ohio.—*Combined Corn-Planter and Cultivator.*—November 2, 1869.

Claim.—The combination of the detachable seed-hopper K, and tube M, the standard B, the shears E G G, and adjustable roller H, the several parts being constructed and arranged as specified.

96,320.—John G. Henderson, Keokuk, Iowa.—*Loom.*—November 2, 1869.

Claim.—1. The pattern-cylinder, placed on the top of the loom-jacks *e e*, rod *b*, pulleys *f g h*, and connecting-cords, and the lever *c*, all combined and arranged as shown, to form the shed.

2. The arrangement, with the jacks and harness-frames, of the looped cord *r u*, to adjust the position of the harness, to form a small or large shed without untying the strings, as described.

96,321.—James Hogben, Cleveland, Ohio.—*Bluing-Compound for the Manufacture of Paper.*—November 2, 1869.

Claim.—The herein-described compound, prepared and used substantially as and for the purpose set forth.

96,322.—David E. Holt, Wilkinson County, Miss.—*Combined Cultivator and Seed-Planter.*—November 2, 1869.

Claim.—1. The curved bars I, in combination with the plows F F', and a frame, consisting of parts A and A', that are connected together by bolts 1 and 2, when all the parts are constructed, arranged, and operate substantially as herein described, for the purpose set forth.

2. The above combination, in combination with a trench-opening plow, H, that is provided with an adjusting-bar, J, and with a hopper, M, that is provided with adjustable supplemental sides N, a cylinder that will plant cotton-seed or corn, and an agitating-cylinder above the same, which are driven by a shaft, O, and suitable gearing connected therewith, and with the wheel E, when all the parts are constructed and arranged with respect to each other, and operate substantially as described, for the purpose set forth.

96,323.—David E. Holt, Wilkinson County, Miss.—*Corn and Cotton-Seed Planter.*—November 2, 1869.

Claim.—1. The supplemental adjustable sides *a b* with the hopper F, when the latter is provided with

stirrer-shaft G and cylinder H, substantially as herein described, for the purpose set forth.

2. The combination of the hopper F, when provided with supplemental adjustable sides *a b*, with the shaft I, and its adjuncts and the gearing connected therewith, when all the parts are arranged and operate substantially as herein described, for the purpose set forth.

96,324.—SAMUEL EVAN JOHNSON, Jr., Brooklyn, N. Y.—*Troche.*—November 2, 1869.

Claim. — The manufacture or preparation of a compound, which I denominate "I. D. Smith & Co. Troche," of the ingredients, in the proportions, and for the purposes set forth.

96,325.—PETER KEFFER, Berks County, Pa., assignor to himself, I. S. HOYER, and SOLOMON A. STOUT, same place.—*Sash-Supporter.*—November 2, 1869.

Claim.—The double bracket B, constructed of a single piece of metal, and provided with slots *b*, spring-slides C C, and rollers D D, in combination with the jambs A A, when arranged to operate in relation to the upper and lower sashes as hereinbefore described.

96,326.—ANTON KIRN, Buffalo, N. Y., assignor to himself and JOHN E. KRASSELT, same place.—*Meat-Cutting Machine.*—November 2, 1869.

Claim.—In a meat-cutting machine, in which the cutting-knives are connected to a horizontal crank-shaft, and operate upon a circular block revolving around a central pivot, the system of levers and rods H I J K, in combination with the crank-shaft C, pawls E and E′, and circular ratchet-bar G upon the block D, all these parts being arranged and operating substantially as herein described.

96,327.—KELLEY LE BEAU, Chicago, Ill.—*Ore-Washer.*—November 2, 1869.

Claim.—The combination of the washing-box S A, provided with a partition, M, perforated pan E, provided with covering F, hopper C, provided with a grate, D, trough I, provided with gate K, and pump B U V W X, as and for the purpose set forth.

96,328.—WILLIAM H. LEE and CHARLES M. HARDENBERGH, Minneapolis, Minn.—*Hot-Air Furnace.*—November 2, 1869.

Claim.—1. The diaphragm *n*, in combination with check-valve H, in smoke-box G, for distributing, equalizing, and controlling the combustion, according to circumstances, as set forth.

2. In combination with the diaphragm and check-valve, as claimed under the preceding clause, the valve E, horizontal tubes F and I, and smoke-box G, substantially as set forth.

3. In combination with the valves, tubes, and smoke-box claimed in the manner set forth in the preceding clause, the fire-box A and cylinder K, operated as and for the purposes set forth.

4. The construction of the ends of the furnace of cast iron in a single casting, with flanges *a′ a′ a* upon each figure, and to receive at once cylinders and flues F I J, the whole drawn together smoke-tight.

96,329. — THOMAS LING, Hartford, Conn.—*Pump-Valve.*—November 2, 1869; antedated October 27, 1869.

Claim.—The pump-valve, composed of the rod A, with the flange perforated at *x*; the core B, with the openings *m* and the lugs *o*; the rim C, in sections, with the notches for lugs *o* and the thin webs *y*; the cap *s* and screw *i*; the leather ring *r*, and the wire spring *n*, all arranged and constructed as described, for the purpose described.

96,330.—GEORGE LITTLE, Rutherford Park, N. J.—*Apparatus for Perforating Paper for Telegraphing.*—November 2, 1869.

Claim.—1. A wheel for feeding along a strip of paper to be perforated, in combination with an armature swinging on the same axis as the feed-wheel, and an electro-magnet, substantially as set forth.

2. The punch *i* and presser-plate *c*, in combination with the feed-wheel *b*, die *c*, and sleeve *f*, substantially as and for the purposes set forth.

3. The magnets *h* and *l*, arranged as specified, in combination with the lever *g*, on the fulcrum 7, that is one pole of the magnet *h*, and with the circuit-changer *n*, substantially as and for the purposes set forth.

4. An apparatus for composing telegraphic communications, consisting of a magnet, lever, punch, and die, to perforate or emboss the paper, in combination with a feed-wheel and an electro-magnet, to move said feed-wheel progressively, substantially as set forth.

5. Mechanism for feeding the paper by magnetism, and mechanism actuated by an electro-magnet, for perforating the paper, in combination with mechanism for closing the circuits to the respective magnets in such an alternate manner as to compose a telegraphic communication on a strip of paper, substantially as set forth.

6. The tablet *t*, formed of conductors, arranged substantially as set forth, in combination with a movable stylus or circuit-closer that is to be moved, in contact with the conductors of the tablet, to produce alternate pulsations of electricity for feeding the paper and punching the same by magnetism.

96,331.—GEORGE LITTLE, Rutherford Park, N. J.—*Apparatus for Perforating Paper for Telegraphing.*—November 2, 1869.

Claim.—1. The circuit-closer *p* in the groove of the cylinder *o*, in combination with the band *s*, key n^3, and finger *v*, substantially as and for the purposes set forth.

2. The feeding-disk *c* on the shaft *b* of the cylinder *o*, in combination with the frictional connection *d*, and holding magnet m^2, for moving the paper by the direct action of the cylinder *o*, and arresting the movement of the paper when the punch is acting, substantially as and for the purposes set forth.

3. The magnet *l*, in combination with the magnet *h*, lever *f*, punch *n*, and circuit-changer *m*, for perforating the paper, and then drawing back the punch by magnetism, substantially as set forth.

4. The circuit-changer *m*, in combination with the magnets *h* and *l*, and lever *f*, to direct the electric current, substantially as set forth.

96,332.—GEORGE LITTLE, Rutherford Park, N. J.—*Electro-Magnetic Motor.*—November 2, 1869.

Claim. — 1. An electro-magnetic motor, formed with armatures upon a spindle, in combination with stationary magnets and governor-balls, applied in substantially the manner specified, to communicate an end movement to the spindle, and regulate the speed by the friction resulting from such end movement, substantially as set forth.

2. The cylinder *k*, collar 5, sleeves *n* and *q*, and governor-balls *p*, arranged and applied substantially as set forth, in combination with the spindle *d*, armatures *e*, and electro-magnets *b c*, substantially as set forth.

3. The adjustable step *l* and spring 6, in combination with the spindle *d*, carrying the armatures *e* and friction-collar 5, so that the spindle *d* and its parts are sustained or balanced by the said spring 6, for the purposes and as set forth.

96,333.—GEORGE LITTLE, Rutherford Park, N. J.—*Automatic Telegraph-Apparatus.*—November 2, 1869.

Claim.—1. The adjustable brush 20, in combination with the roller *b′* and stylus, substantially as and for the purposes set forth.

2. The stylus, formed of a disk, with a platina or non-corrosive edge, in combination with the arm *n′* and roller *b′*, as and for the purposes set forth.

96,334.—HENRY P. MCCLEAVE, Tomales, Cal.—*Gang-Plow Cultivator.*—November 2, 1869.

Claim.—The frame A, constructed substantially in the manner described, with parallel braces B B B, diagonal strap J, through which the ends of the standards pass, and the draught-rod D, attached to the rear cross-beam B, as specified, for the purpose set forth.

96,335.—THOMAS MCDONOUGH, Newburgh, N. Y.—*Hot-Air Engine.*—November 2, 1869.

Claim.—1. The arrangement of the shaft directly over the cylinder, substantially as described.

2. The combination of the two cylinders with the balls and shaft to form an air-engine, substantially as described.

96,336.—Samuel Meadows, Toronto, Canada, assignor for one-half to Thomas Kearton Morgan, same place.—*Reflector.*—November 2, 1869.

Claim.—1. The adjustable concave reflectors E, combined with the case A, having the corrugated reflectors B, and all arranged substantially as specified.

2. The combination, with the reflector A, of the inverted reflector G, the former being adapted to receive an adjustable reflector, as and for the purpose specified.

3. The sectional glass-supporting plates, joined together by the recessed flanges *a*, projections *b*, and links or ties C, all substantially as specified.

96,337.—David Metz, Washington, D. C.—*Axle-Box.*—November 2, 1869.

Claim.—1. The clamp *b* and prolonged equalizing-beam *a*, arranged as described, and for the purpose of holding the axle-box within the pedestal, as set forth.

2. The packing-box *g*, with perforations for the passage of lubricating-material, within an exterior box or reservoir for holding oil, said packing-box having also a grooved, inclined, and channeled bottom, *h i*, constructed and arranged as described, and for the purposes set forth.

3. The projection *k* or double lid, for closing the whole box at the same time, constructed as described.

4. Constructing the bearing with a groove, connecting the tallow-cells, and with flanges *m m'*, arranged as described, and for the purposes set forth.

96,338.—George Rodney Moore, Philadelphia, Pa.—*Oven.*—November 2, 1869.

Claim.—1. The construction of oven-doors and sides, with casings of paper and wood, or their equivalents, substantially as and for the purpose herein set forth.

2. The pyrometrical levers A B C, arranged as herein shown with oven-doors and sides incased, as above shown.

96,339.—Byron W. Nichols, Canton, Ohio, assignor to Canton Malleable-Iron Company, same place.—*Shears.*—November 2, 1869.

Claim.—The construction of the blades of shears, with a groove, cavity, or recess, as and for the purpose set forth.

96,340.—Person Noyes, Lowell, Mass.—*Apparatus for Measuring Liquids.*—November 2, 1869.

Claim.—1. A pumping and measuring apparatus, as described, all the parts of which are constructed, combined, and arranged in the manner and for the purpose specified.

2. The tank A, in combination with the pump-tube *a* and the return-tube *b*, having outlets 3 and gates *g*, as described, and for the purpose specified.

3. The return-tube *b*, having outlets 3 and gates *g*, when combined with the pump-tube *a*, in the manner and for the purpose specified.

4. The combination, with the tank A and with the tube *b*, having outlets 3 and gates *g*, or with the return-tube I and the tube *u* of the removable pump, and with the conical cover D, constructed and adapted for the purposes described, of a platform grating, C, in the manner and for the purpose specified.

96,341.—Canceled.

96,342.—James Old, Pittsburgh, Pa.—*Fire-Place Grate.*—November 2, 1869.

Claim.—1. The link-piece *m*, keyed, or fastened in other equivalent manner, to the bars *a*, and carrying, by bearings *s*, a tilting-bar, *e*, the parts named being combined substantially in the manner set forth.

2. The arrangement of the link-pieces *m* with the grate-bars *a*, so as to effect the pivoting of the bearings *s* above the grate-bars, instead of below.

96,343.—Charles Page, Boston, Mass.—*Creasing-Attachment for Sewing-Machines.*—November 2, 1869.

Claim.—1. The combination of a sewing-machine, A, and a pair of rollers, C D, composed of long cylinders arranged therewith, substantially in manner and for the purpose described, that is, to operate to prevent the cloth, while passing between them, from becoming puckered or gathered.

2. The combination and arrangement of the creasing-rib *n*, and groove *m*, with the pair of smoothing-cylinders C D, and a sewing-machine, A, arranged together in manner and so as to operate substantially as described.

3. The arrangement and combination of the socketed roller-carrier B, and the joint piece *i* hinged thereto, with the journals *h h'*, and the rollers C D thereof, the whole constituting an apparatus or mechanism to be applied to a sewing-machine, for the purposes as set forth.

96,344.—Francis L. Perry, Canandaigua, N. Y.—*Cultivator.*—November 2, 1869.

Claim.—1. The arrangement of a series of cultivating-teeth, in front of and in combination with the horizontal knife or cutter S, which follows the teeth.

2. Arranging the points of the teeth, which run in advance of the horizontal cutter, lower than the cutter, to protect the cutter from stones and other obstructions.

3. Curving the ends of the horizontal cutter, as shown and described, so as not to cut too deep near the rows of plants cultivated.

4. Making the horizontal cutter adjustable higher or lower on the frame, substantially as described.

5. In combination with the stirring-teeth and horizontal cutter, the hilling-shares, arranged in rear of the horizontal cutter, substantially as described.

6. The combined clevis and gauge-wheel stand or plate, arranged to vibrate in the end of the beam, and provided with a notched segment and spring-latch, so that the workman can release, adjust, and lock the clevis and gauge-wheel in the position required while the cultivator is at work or in motion.

96,345.—John Pickles, Wigan, England, assignor to James Foley, John T. Harris, and Willard W. Harris, Montreal, Canada.—*Solid or Dry Extract of Bark for Tanning, &c.*—November 2, 1869.

Claim.—As an article of new manufacture, the liquid or semi-liquid extract of bark, when reduced to a powdered condition or dry state, substantially in the manner and for the purposes herein described.

96,346.—J. D. Pratt, Cleveland, Ohio.—*Bed-Bottom.*—November 2, 1869.

Claim.—The combination of the section C, attached to ring or loop E, and having ribs *a* and pin *c*, section D having hook *b*, with the rods F F, all constructed to operate in the manner and for the purpose described.

96,347.—Thomas J. Price, Macomb, Ill.—*Seed-Sower.*—November 2, 1869.

Claim.—A seed-sower, having distributer P, pulley *m*, wheel B, valve *s*, slide *n*, shaft R, and hopper *o*, constructed and arranged to operate substantially as specified.

96,348.—Silas S. Putnam, Dorchester, Mass.—*Self-Lubricating Axle-Box.*—November 2, 1869.

Claim.—A chamber *a*, with its slots, in combination with openings *b*, constructed substantially as described.

96,349.—Silas S. Putnam, Neponset, Mass.—*Thill-Coupling.*—November 2, 1869.

Claim.—The mechanical arrangement described, for tightening the thill-iron G on its connecting-bolt C, for the purpose set forth.

96,350.—Amos Rank, Salem, Ohio.—*Harvester.*—November 2, 1869.

Claim.—1. The relative arrangement, as set forth, of the finger-beam, the rocking-bar, the platform-sections, connected with the rocking-bar at the front ends only, and the supporting-brackets underlapping but not united to the finger-beam.

2. An oscillating grating or clearer on the divider-side of the platform, in combination with overlapping slatted platform-sections, turning on axes transverse to the finger-beam, as set forth.

3. The combination of a vibrating clearer, with its adjacent platform-section operated by means of cranks, and a slotted link, substantially as set forth.

4. The bar n^2, connecting the rear ends of the platform-sections with the clearer, as set forth.

5. A vibrating grating or cleaning rake, turning on an axis transverse to the finger-beam, and located at the divider-end of the platform, substantially in the manner described.

96,351.—AMOS RANK, Salem, Ohio.—*Harvester.*—November 2, 1869.

Claim.—1. The combination, with the driving-gearing of a harvester, of a wheel having external teeth on one side and internal teeth on the other, whereby the speed of the cutters is varied simply by reversing the wheel on its shaft, as set forth.

2. The combination of the crank-shaft and its pinion with the counter-shaft and its reversible gear-wheel, all constructed to operate substantially as set forth.

96,352.—AMOS RANK, Salem, Ohio.—*Harvester.*—November 2, 1869.

Claim.—1. The combination of the hollow slotted shaft, the loose pinions thereon, the slide-rod, and its locking-pin, all constructed to operate as hereinbefore set forth.

2. The combination of the shipping-lever, its sliding sleeve, the locking-plate, the slide-rod, and the pinions, all constructed to operate as hereinbefore set forth.

96,353.—AMOS RANK, Salem, Ohio.—*Harvester-Rake.*—November 2, 1869.

Claim.—1. The combination of the guide-cam and its switch p, with the rock-shaft for opening the switch passing through the axis of rotation of the rakes, substantially as hereinbefore set forth.

2. The arrangement, as set forth, of the guide-cam, the switch p, the lug p^2, and the closing spring p^3.

3. The arm O, bifurcated, for the attachment of alternate rakes and beaters, substantially as set forth.

4. The combination of the guide-cam, the switch p, the bifurcated arm O, the friction-roller o', and its arm o, all these parts being constructed to operate as set forth.

96,354.—JAMES BRADEN, Indianapolis, Ind., administrator of the estate of JAMES SCANLAN, deceased.—*Circulating-Grate for Steam-Generators.*—November 2, 1869.

Claim.—1. The combination of the feeding-pump or the pipe connected therewith, the pipe which conducts the water to the grate, the tubular grates, the waste-pipe, and the mud-drum or generator, substantially as shown and described.

2. The combination of a reservoir, feed-pipe, tubular grates, and waste-pipe, substantially as and for the purpose set forth.

3. The combination of a waste-pipe, having in it a cock or valve for permitting a portion of the water to be wasted through such valve or cock, and a series of tubular grates, when the feed-water is passed through such grates previous to its entering the generator, substantially as and for the purpose specified.

96,355.—CHARLES M. SHAW, Portland, Me.—*Floor-Set.*—November 2, 1869; antedated October 22, 1869.

Claim.—The floor-set as described, having the different parts herein set forth.

96,356.—GERARD SICKELS, Boston, Mass.—*Folding Bedstead.*—November 2, 1869.

Claim.—The head and foot boards A B, folding rails C C′, and upwardly-folding bed-bottom, in combination with bars h h', brackets G G′, and cam-blocks i i', in the manner and for the purpose substantially as described.

96,357.—FREDERICK H. SMITH, Baltimore, Md.—*Column or Tube.*—November 2, 1869.

Claim.—A column or tube, for engineering and other purposes, composed of two or more concentric layers of wrought-iron, steel, or other metallic segments, united substantially as described, and arranged so that the segments of one layer shall break joint with those of the other.

96,358.—HAMILTON E. SMITH, New York, N. Y.—*Perforated Wearing Apparel.*—November 2, 1869.

Claim.—As a new article of manufacture, the inner garment above described, made of buck or partially tanned skins, perforated, as and for the purpose specified.

96,359.—HAMILTON ERASTUS SMITH, New York, N. Y., assignor to MARY JANE SMITH, same place.—*Clothes-Mangle.*—November 2, 1869; antedated October 16, 1869.

Claim.—A clothes-mangle, consisting of the revolving drum or shaft A, and of the shell C, fitted around it, said shell being held in place by springs or their equivalents, as set forth, so that a roller, carrying the articles to be smoothened, can be introduced between the drum and shell, to operate as set forth.

96,360.—HAMILTON ERASTUS SMITH, New York, N. Y., assignor to MARY JANE SMITH, same place.—*Clothes-Mangle.*—November 2, 1869; antedated October 22, 1869.

Claim.—1. The combination of the swinging frame D′, rollers F F′, and springs j, with the stationary frame A, rollers C C, and springs K, substantially in the manner described, for the purpose set forth.

2. The swinging frame D, in combination with spring K, treadle E, and spring-catch I, substantially as and for the purpose specified.

3. The rollers F and F′, journaled in the boxes G, whereby they are adapted for both vertical and horizontal adjustment, substantially as herein shown and described, for the purpose indicated.

4. The clothes-mangle, consisting of the stationary frame A, carrying the rollers C, of the pivoted frame D, carrying the rollers F, and of the treadle E, and springs K and l, all made and operating substantially as herein shown and described.

96,361.—HAMILTON ERASTUS SMITH, New York, N. Y., assignor to MARY JANE SMITH, same place.—*Clothes-Mangle.*—November 2, 1869; antedated October 22, 1869.

Claim.—The plates l, on the swinging frame D, in combination with the plates m, on the stationary frame A, when arranged to support and hold the ends of the roller J, upon which the articles to be rolled are wound, as specified.

96,362.—JOHN W. STREET, Marshalltown, Iowa.—*Railway Cattle-Car.*—November 2, 1869.

Claim.—1. Dividing a car for the transportation of animals into stalls, by swinging gates or partitions, hinged, with detachable hinges, at both ends, so that either end can be swung around to admit the animal, or to release him from the stall, and so that both ends of the gate may be detached, to clear the car for common freight, substantially as described.

2. Arranging a store-room or feed-bin in the top of the car, provided with doors or hatches in the roof, for filling the same, and with openings through its floor, at the side of the car, for dropping the feed into mangers or feed-boxes in the ends of the stalls below, substantially as described.

3. The arrangement of the reservoir O in the side of the car, at a suitable height to supply water to the drinking-troughs or basins, without the use of a pipe and stop-cock, substantially as described.

4. The arrangement of the troughs L, with reference to the reservoir O, whereby the water may be allowed to flow freely through openings in the side of the reservoir into the troughs, and stand at the same level in both, substantially as described.

5. The arrangement of the reservoir O, whereby it is made to convey water from end to end of the car, without obstructing the doorway, by passing under the same, substantially as set forth.

96,363.—JAMES A. THORN, Chicago, Ill.—*Window-Screen.*—November 2, 1869.

Claim.—In the construction and arrangement of

adjustable screens, the guide-pieces K J, provided with tongues *f* running in grooves *h*, in combination with the plates I, said parts being used to facilitate the adjusting of the frames C D E and F G H, and shut the space between the rail G and sash B, and between the rail H and sill Z, as described.

96,364.—JOEL TIFFANY, Albany, N. Y.—*Apparatus for Carbureting and Applying Air for Lighting and Heating.*—November 2, 1869.

Claim.—1. The shallow basins *a a a a a*, in combination with the feeding-chamber *f f*, substantially in the manner and for the purpose herein set forth.

2. Said basins, or either of them, or their equivalent surface, in combination with the tube *d d d*, arranged substantially in the manner and for the purposes herein set forth.

3. The vessel, Fig. 1, as a generator, in combination with its burner, stop-cock, and tube *d d d*, for the purposes herein set forth.

4. The above-described method, or its substantial equivalent, of charging the basins, as a safe mode of operating said apparatus, substantially as set forth.

5. The above-described device to prevent blowing at the burner, consisting in the use of a pipe of small capacity, in the manner herein set forth.

6. The combination of the above device for generating gas, or its equivalent, with desks, tables, melodeons, sewing-machines, and other similar furniture, instruments, and machines, substantially as described.

7. The burner for a stove, constructed substantially in the manner and for the purpose herein described.

96,365.—BENJAMIN C. TILGHMAN, Philadelphia, Pa.—*Making Tanning and Dyeing Extracts.*—November 2, 1869; antedated October 30, 1869.

Claim.—The process of extracting tanning and dyeing materials from roots, barks, woods, and other vegetable substances, by digesting them with a solution of sulphurous acid, in water, with or without the addition of sulphites, either in close vessels, at a high temperature and pressure, or at temperatures not exceeding 212° Fahrenheit, and at atmospheric pressures.

96,366.—CLARK L. TYLER, Ithaca, N. Y.—*Pencil-Attachment to Compass.*—November 2, 1869.

Claim.—The combination and arrangement of the double-tubed socket A B, united by the open web C, with the variable block or frame, formed of the two parts D and E joined together, the pin or axis of which plays in the transverse slot G″ of the said web C, substantially as described.

96,367.—CALVIN WARDWELL, Painesville, Ohio, assignor to himself and H. H. COE, same place.—*Ring Stopper Nipper.*—November 2, 1869.

Claim.—The combination of the mortise B in the cat-head A, sheave C, toothed cam D, pin F, and lock-lever G, to be used in combination, for the purpose as described.

96,368.—JAMES D. WARNER, Brooklyn, N. Y.—*Steam Water-Elevator.*—November 2, 1869.

Claim.—1. The combination, with a heater and condenser, arranged substantially as described, of a cut-off valve, arranged to be operated by the action of water and gravity for opening and closing the passage from the generator to the condenser, substantially as specified.

2. The combination, with the generator and condenser, of one or more pistons, to urge and regulate the return of the water to the generator, either with or without the valves, guides, and weight, or any of them, substantially as described.

3. The combination of the generator, condenser, automatic valve-device, and pistons, either with their valve and weight V or not, substantially as specified.

96,369.—HORATIO B. WEAVER, Hartford, Conn.—*Lock.*—November 2, 1869.

Claim.—The combination of disk *a*, ring *a′*, connection F, with the circular notched tumblers 1, 2, 3, 4, and the fences C and D, the whole operating together in the manner and for the purpose specified.

96,370.—GEORGE W. B. YOCOM, ROBERT J. WALKER, and ELIAS SHARP, Arcata, Cal.—*Potato-Digger.*—November 2, 1869.

Claim.—The potato-digger described, consisting of the plow E, with open throat and double shares, hinged arms D^2, cam D^1, cutters I′, and windlass H, the whole being combined and arranged as described, for the purpose set forth.

96,371.—MORTIMER WILLIAMS, Middletown, Ohio.—*Compound for the Cure of Cancer.*—November 2, 1869.

Claim.—The several articles, put in solution, in the manner and substantially as specified, for the purpose described.

96,372.—JOSEPH B. WIGGENHORN, Saint Louis, Mo.—*Machine for Threading Bolts, &c.*—November 2, 1869.

Claim.—1. Laterally-adjustable guides F F, in combination with screw-thread swaging-dies L, substantially as described.

2. The stops *p p*, in combination with guides and screw threading swaging-dies, substantially as described.

96,373.—FRIEDRICH WOHLGEMUTH, New York, N. Y.—*Cartridge.*—November 2, 1869.

Claim.—A metallic cartridge-shell, consisting of a plain parallel tube open from end to end, fitted with a screw-thread and a hollow screw breech-piece, as shown and described.

96,374.—OTTO WUTH, Pittsburgh, Pa.—*Manufacture of Carbonate of Soda.*—November 2, 1869.

Claim.—1. The process, hereinbefore described, of producing commercially pure monohydrate of carbonate of soda from the soda-ash of commerce.

2. The process, hereinbefore described, whereby, from the residual liquor of the process first described, (for obtaining the monohydrate of carbonate of soda,) sal-soda and a low grade of soda-ash are procured, thereby avoiding any loss of soda in the process.

96,375.—GEORGE W. B. YOCOM and EDWARD COWAN, Arcata, Cal.—*Railway-Car Brake.*—November 2, 1869.

Claim.—1. The brake A, consisting of two arms, A′ A′, with beveled ends, and joint B, constructed and arranged substantially as described, and for the purpose set forth.

2. The crank-axle F with arms F′, by which connection is made with the brake by the link G, in combination with the said brake A, substantially as specified.

96,376.—MOSES ADAMS, Chilmark, Mass.—*Combination-Lock.*—November 2, 1869.

Claim.—1. The employment of the tongue-bolts G G, in combination with the sets of ratchet-wheels T and T′, constructed and operating substantially as above set forth.

2. The movable frame, composed of the plates K and N, and their supports U U, in combination with the key-bolt X, constructed as and for the purpose above set forth.

3. The key-bolt X, in combination with the cog-wheel E, the mortise-block B, the spindle S, the tongue-bolts G G, the sets of ratchet-wheels T and T′, and the lock-bolt H, constructed and operating substantially as above set forth.

96,377.—JAMES C. ANDERSON, Webster, Pa.—*Weather-Boarding.*—November 2, 1869.

Claim.—An outer weather-boarding and inner lining for buildings, when constructed of boards, having formed upon their surface projections in the board or boards, in the nature of panels or pillars, in the manner and for the purpose herein described.

96,378.—WILLIAM H. ANDERSON, Brooklyn, N. Y.—*Machine for Grinding Seats of Valves.*—November 2, 1869.

Claim.—1. In combination with a vertical or horizontal stand or pipe, A, the slide-bar E, to which are fitted a lathe-head and spindle, substantially as shown and described.

2. In combination with the sliding bar, lathe-head,

and spindle H, the pressure-spring L, arranged to act upon the spindle longitudinally, substantially as shown and described.

3. In combination with an adjustable sliding bar, lathe-head, and spindle, the clamp C, with its clamp-screws D, substantially as shown and described, for the purposes specified.

96,379. — WILLIAM T. BAKER, Lancaster, Texas.—*Cultivator.*—November 2, 1869.

Claim.—1. The cases C, in combination with the frame E, for supporting and guiding the beams and stock of the plow, arranged substantially as described.

2. The combination of the springs K, rod J, and levers G, arranged as described.

3. The foot-piece J and springs K, by which the plows may be simultaneously thrown from the ground.

4. The clevises O, arranged substantially as shown and described, in combination with the stock *m*, of the plow, for regulating the depth of the plow, substantially as described.

5. The combination of the rods F, having, at either end, adjustable screw-bolts and nuts, as shown, with the levers G and beams D, all arranged, as described, to regulate the depth and angle of inclination of the several plows, in the manner set forth.

6. In combination with a cultivator, the double-tree A, constructed and arranged substantially as and for the purposes herein shown and described.

96,380.—M. H. BARNES, Peoria, Ill., assignor to himself and ENOCH P. SLOAN, same place. — *Safety-Can.*—November 2, 1869.

Claim.—1. The tube B, opening out of the bottom of the can A, and provided at its lower end with the coils *a*, substantially as and for the purpose set forth.

2. The hollow plug C, provided with the vent-hole *c* and porous material *c''*, and arranged in respect to the can A, substantially as described.

96,381.—PETER BARRY, Newark, N. J.—*Machine for Wiring Blind-Slats, &c.*—November 2, 1869.

Claim.—1. The cut-off jaws *e*, provided with recesses *f*, in combination with the feed-guide E and tapering plunger D, substantially as set forth.

2. The vertical rack *p*, secured to the slide *c*, which carries the plunger D, in combination with the segment *q*, and horizontal rack H, carrying the pawl *t*, when the parts are combined and arranged to operate together, as described.

3. The arrangement of the jaws *e*, feed-guide E, tapering plunger D, racks *p* H, segment *q*, feed-pawl *t*, and screw *u*, substantially as and for the purpose described.

96,382.—E. CHARLES BEAN and FRANCIS N. WELDEN, Rockford, Ill.—*Cultivator.*—November 2, 1869.

Claim.—1. The combination of the bent metal bars, the axle, the pole, and the braces, to form the main frame of the machine, substantially as described.

2. The combination of adjustable foot-rest R with eye *r*, having the slot r^1 and recess r^2, with the standard S, having the projection *s*, as and for the purpose described.

3. The combination of the flanged bearing-block with the recessed bearing-plate, as described, for the purpose set forth.

4. The combination of the flanged bearing-block, recessed bearing-plate, and hook-bolt, with the shovel-beam and standard, as described, for the purpose set forth.

5. The band O, provided with the staple-shaped projection o^1 o^2, as and for the purpose described.

6. The employment of wings or arms, or their equivalents, substantially as described, for the purpose set forth.

96,383.—W. G. BECKWITH, Lowndesborough, Ala. — *Fastening Plowshares to Plow-Stocks.* — November 2, 1869.

Claim.—1 The rectangular socket B, when constructed as and for the purpose set forth.

2. The socket B, when furnished with projection C, knob *g*, and wedge *d*, in combination with plow-share H, the whole being constructed in the manner described.

96,384.—CALEB H. BENNETT and WILLIAM A. DAGGETT, South Vineland, N. J.—*Ironing-Board.*—November 2, 1869.

Claim. — The combination of the hinged and movable board A, hinged brace B, with notch *a*, button *b*, board C, strip D, notched hinges *d d*, and pins *t t*, all substantially as set forth.

96,385.—J. G. BERGER, Nuremberg, Bavaria.—*Apparatus for Emptying Privy-Vaults.*—November 2, 1869.

Claim.—1. The combination and arrangement of the driving-shaft H, with its gear-wheel M, crank-shaft L', with its wheel L and eccentric X, and valve-rod K, provided with the yoke and friction-rollers *x x*, as herein described.

2. The sharp inclined-edged steel plate O, secured to the cylinder at the inlet-ports, in combination with a similarly-edged plate *e'*, upon the face of the valve, whereby the said plates are made to operate like shear-blades, to cut or separate any substances that may tend to choke the ports, substantially as described.

96,386.—JOSHUA F. BISHOP, Afton, Iowa.—*Portable Fire-Wall.*—November 2, 1869.

Claim.—1. A fire-shield, or wall, constructed with an air-space between the walls or sheets thereof, substantially as and for the purpose set forth.

2. The combination of the sections A A', bolts or rods E, and bars D, for securing the sections in position, substantially as shown and described.

3. The arrangement of the nut or bar *a* with reference to the sections to which they are secured, substantially as shown and described.

4. The arrangement of the anchor G G', with reference to the shell A A', in such a manner as to prevent it from being toppled over, substantially as shown and described.

96,387.—LOUIS BLACK, Detroit. Mich.—*Spectacle.*—November 2, 1869.

Claim.—The bow A, open at both ends, but held at the inner by branches on the nose-piece B, as shown in Fig. 3 of drawing.

96,388.—JOHN I. BOSWELL, Christiansville, Va. — *Fertilizer-Attachment for Plows.*—November 2, 1869.

Claim.—1. The hopper D, constructed as described, with removable bottom *b*, stop-plate *d*, spring *e*, and wire *f*, all substantially as and for the purposes herein set forth.

2. Securing the hopper D to the plow-beam A, by means of the iron frame *a*, substantially as herein set forth.

3. The spring-bar F, provided with wheel H I, and pulley J, and connected to the plow-beam A, substantially in the manner and for the purposes herein set forth.

4. The stirrer *h i*, belt *m*, pulleys E J, arm *n*, and roller *o*, all constructed and arranged substantially in the manner and for the purposes herein set forth.

5. In combination with a plow, a fertilizer-attachment, constructed substantially as herein shown and described.

96,389.—JOHN BROUGHTON, New York, N. Y.—*Lubricator.*—November 2, 1869.

Claim. — The arrangement, relatively to the central filling-orifice F, of the oblique valve-stem D, guided above by an obliquely-disposed tube or nipple, and constructed to form a valve *d*, at its base, under the control and steadying action of a screw-thread, *e*, arranged to fit an internal screw-thread, *c*, substantially as specified.

96,390.—A. P. BUSSEY, Westernville, N. Y.—*Milk-Cooler.*—November 2, 1869.

Claim.—The improved cooling-vessel B, formed by the combination of a body and cover, with pipe *i* and ice-holder J, all substantially as shown and described.

96,391.—JOHN S. BUTLER, Silver City, Idaho Territory.—*Copy-Holder.*—November 2, 1869.

Claim.—1. The case A B C, constructed with two compartments or passages, as described, the roller D provided with a rubber friction-band, E, or equivalent, and the pressure-roller F, in combination with each other, said parts being constructed substantially as herein shown and described, and for the purpose set forth.

2. In combination with the partition C, the guide H, attached loosely to arms projecting from the ends of the holder, all arranged as described, whereby the guide may be turned back out of the way, as and for the purpose hereinbefore described.

96,392.—GEORGE D. CHANDLER, West Concord, Vt.—*Sap-Feeder.*—November 2, 1869.

Claim.—1. The comb of the faucet A, hollow stem E, float F, hinged stem G, and stopper H, when arranged to regulate the flow of sap self-actingly, substantially as specified.

2. The hollow hinged stem G, cup I, hollow stem E, and faucet A, all arranged as specified.

96,393.—STEPHEN CHANDLER, New York, N. Y. —*Furniture-Caster.*—November 2, 1869; antedated September 21, 1869.

Claim.—The suspended wires *f*, carrying the rod on which the friction-rollers are mounted, and continued into fingers *h*, in combination with lugs *b*, having open cavities to receive said rod, when the parts are constructed and operate together as described.

96,394.—WILLIAM P. CLARK, Medford, Mass.—*Faucet.*—November 2, 1869.

Claim.—1. The faucet, as made, with its body in two parts, united by screw-threads, packed at the joint by the ring *c*, which forms the valve-seat, and is confined, as described, from spreading and from removal, by the action thereon of the valve, and which can be moved, and another substituted, by dismemberment of the body of the faucet.

2. A faucet having a packing-ring, arranged, as described, with reference to the valve and valve-spindle, so as to be pinched between a shoulder on the valve and a shoulder on the faucet-body, to prevent leakage around the valve-stem when the valve is drawn off from its seat.

96,395.—MELVILLE CLEMENS, Springfield, Mass. —*Apparatus for Transmitting Rotary Motion.*—November 2, 1869.

Claim.—1. Transmitting, from one revolving shaft of machinery to another, equal and uniform rotary motion and power at all points of a revolution of them, whether the shafts are set in lines at right angles to each other, or at various other angles of divergence from each other, by means of one or more pairs of pivoted crank-arms, which are employed and adapted to connect the shafts together, and to produce thereby substantially the same mechanical action as that described in the described transmission of rotary motion and power from the shaft *a* to the shaft *b*.

2. The employment of one or more pairs of pivoted crank-arms, for connecting together two revolving shafts of machinery, and the adaptation of each pair of crank-arms to their shafts and to each other, substantially as set forth, so that the shafts so connected may be adjusted and set in lines at right angles to each other, or at various other angles of divergence from each other, and equal and uniform rotary motion and power be transmitted thereby from one shaft to the other, at all points of a revolution of them, substantially as set forth.

3. Joining together the outer ends of the crank-arms by the described connections, or by other connections which enable the described or equivalent rotary and pivot movements of the outer ends of the crank-arms, for the purposes set forth; and I further claim said outer-end connections of the crank-arms, in combination with the described inner-end connections of them to their shafts, or with other inner-end connections, which enable the described inner-end rotary and pivot movements of them, for the purposes set forth.

4. The one pair of crank-arms *h* and *k*, or their equivalents *i* and *l*, in combination with the shafts *a* and *b*, when the said pair of crank-arms is connected together and to the shafts *a* and *b*, substantially as described, and for the purposes set forth.

5. The two pairs of crank-arms *h k* and *i l*, in combination with the shafts *a* and *b*, when said crank-arms are connected together and to the shafts *a* and *b*, substantially as described, and so as to enable thereby a balanced transmission of rotary force from one shaft to the other, substantially as described.

6. The weights *m' n'* and *o' p'*, in combination with the crank-arms *h i* and *k l*, when employed substantially as described, and for the purposes set forth.

7. The supporting-plate *g*, in combination with the described shaft-coupler, with the curved slots *i'' i''* and *k'' k''*, substantially as described, and for the purposes set forth.

8. The crank-arms *u'* and *w'*, with their similar and connected crank-arms *y'* and *a''*, when constructed substantially as shown and described, and adapted in their combination together and with the shafts *a* and *b*, for transmission of rotary force from one shaft to the other, as described, and so as to balance each other on their shafts, substantially as described.

9. Extending each crank-arm of the described shaft-coupler across its shaft, so as to be thereby balanced on its shaft, substantially as described, and for the purposes set forth.

10. Extending each crank-arm across its shaft, so that the two parts of the two crank-arms lying on the one side of their shaft shall balance, as required and described, the two parts of the same crank-arms lying on the other opposite side of their shaft.

11. Balancing the crank-arms on their shafts, by means of weights, adjusted on and attached to the crank-arms, substantially as described.

12. Constructing the crank-arms substantially as shown and described, so that one crank-arm of one shaft shall balance, as described, the other opposite crank-arm of the same shaft.

13. The pivoted crank-shaft coupler, consisting of the hubs *c* and *e*, pivot-pins *j* and *m*, pivoted crank-arms *h i* and *k l*, ball-and-socket joints *r s* and *t u*, and balancing-weights *m' n'* and *o' p'*, all supported in journal-boxes *d* and *f*, and connecting the shafts *a* and *b*, substantially as described, and for the purposes set forth.

96,396.—JOHN C. CLINE, Philadelphia, Pa.—*Child's Carriage and Velocipede Combined.*—November 2, 1869.

Claim.—1. Combining, with a velocipede, a detachable carriage-body, and thus forming a vehicle, capable of being arranged either as a carriage or velocipede for children, substantially as set forth.

2. Making said vehicle, when used as a velocipede, adaptable to children having different lengths of legs, by shortening or lengthening the brace *b*, substantially as described.

3. The combination of the removable handle *g* with the seat *f*, carriage-body *n*, and running gear, all substantially as described and shown, for the purposes specified.

96,397.—JOHN D. CONNER, Bloomington, Ill.—*Washing-Machine.*—November 2, 1869.

Claim.—1. The wheel E, with the buckets F, and perforated cylinder H, in combination with the flue K, when arranged and operated substantially as described.

2. The reservoir L, with the door C and valve V, in combination with flues K and I and perforated cylinder H, when arranged as herein described.

3. The combination and arrangement of the wheel E, valves K and I, perforated cylinder H, and secondary bottom B, substantially as described.

96,398.—HENRY H. COVERT, New York, N. Y. —*Hatchway-Guard.*—November 2, 1869.

Claim.—1. The folding hatchway-guard E or F, arranged in combination with the floor and wall, for adjustment in front of the hatchway, or for folding up against the wall, substantially as specified.

2. The combination of the vertically-sliding spring-rails H H^1 H^2, hinged floor T, and dogs M, when arranged in the floors for guarding the hatchway, substantially as specified.

3. The combination, with the folding rails E or F, of the vertically-sliding spring-rails H H^1 H^2, substantially as specified.

96,399.—Michael C. Cox, Bennettsville, S. C.—*Plow.*—November 2, 1869.

Claim.—The convertible plow, harrow, guano and seed sower and planter, having frame E. block G, plows and harrows, Figs. 3, 4, 5, 6, 7, 8, and 9, funnel C, and box D, with bolts, openings, and straps, as described, constructed and arranged substantially as specified.

96,400.—William Dawes, Kingston Grove, Leeds, England.—*Cut-Off-Valve Gear.*—November 2, 1869; patented in England, January 5, 1869.

Claim.—The "governable" expansion movement or "gear," whereon the traveling cut-off plate or plates or valves are actuated or influenced (worked) by the use of the "ogee"-wedge or wedges and rollers, with the bell-crank or right-angled levers, either inside or outside the steam-chest.

96,401.—Adolph Delkescamp, Brooklyn, E. D., N. Y., assignor to James D. Bacon, for one-third, and John North, for one-third.—*Machine for Making Eyelets.*—November 2, 1869.

Claim.—1. The combination, in an eyelet-machine, of a stationary die, a corresponding punch, for cutting out the planchets, an intermittingly-sliding die, and a forming-punch, corresponding thereto, for roughly shaping the eyelet, a stationary die, and a forming-punch, corresponding thereto, for completing the form of the eyelet, and a device for cutting off the closed end of the eyelet, the combination being and operating substantially as described.

2. The combination of the several dies specified in the foregoing clause, with mechanism for transferring the planchet to the first forming-die, and mechanism for transferring the partly-formed eyelet from said first forming-die to the last or finishing-die, the combination being and operating substantially as described.

3. The combination of the former *b*, with the preparatory cupping-die *u*, and seeondary cupping-die *e*, in the intermittently-reciprocating bar J, substantially as described.

4. The discharger *t* and incline W, in combination with the sliding bar J, and die *e*, formed therein, essentially as herein set forth.

5. The sliding die *e* and stationary die *s*, in combination with the driver K and removing-device T, substantially as described.

6. The sliding die *e*, discharger *t*, and die *s*, in combination with the removing-device T and knife M, substantially as described.

7. The combination of the dischargers *t* and *q*, dies *e* and *s*, punch *c*, removing-device T and cutter M, substantially as described.

96,402.—William B. Deuel, Ithaca, N. Y.—*Grinder for Harvester-Cutters.*—November 2, 1869.

Claim.—1. The arrangement of the arm D, formed of the horizontal part D, provided with slot L, and the two clasping perpendicular parts D″ and D‴, and set-screw E, in combination with the sides F′ and F″, of a common grindstone, for the purpose of holding a harvester-knife holder to any one of the corners of the stone, for the grinding of the said knives, substantially as set forth.

2. The combination of the holder H and its hooks I′ and I″, stud J, and its bolt, with its set-screw K on the lower end thereof, with the slotted arm D, substantially as set forth.

3. The combination of the holder H and hooks I′ I″, stud J, bolt and set-screw K, adjustable by the slot L in the arm D, the arm D clasping, by the set-screw E, the sides F′ F″, arranged substantially as and for the purpose set forth.

96,403.—Charles E. De Valin, Baltimore, Md.—*Machine for Threading Bolts.*—November 2, 1869.

Claim.—1. The combination of the die-box D, and its recessed ring *e*, flange or collar *d*, plate *c*, and sliding carrier-bar *b*, with the springs *i i*, and cutting-dies *a a*, all constructed as described, and operating substantially in the manner and for the purposes herein set forth.

2. The combination of the main shaft A and collars *g g*, with the yoke F, screw G, half nut *h*, and pins or arms *o o*, all constructed as described, and operating substantially in the manner and for the purposes herein set forth.

3. In combination with the yoke F and half nut *h*, the bent levers *l l*, constructed as described, and operating substantially in the manner and for the purposes herein set forth.

4. In combination with the bent levers *l l*, the springs *u u*, secured to the rear main-shaft bearing B^2, substantially as and for the purposes herein set forth.

5. The guide *k*, constructed as described, of two parallel bars, secured to a side-plate that runs parallel with the main shaft, substantially as and for the purposes herein set forth.

6. In combination with the guide *k*, the spring *m*, operating upon the rear bar of said guide, substantially in the manner and for the purposes herein set forth.

7. In combination with the guide *k*, the projection or flange *n*, and spring *p*, constructed as described, and operating substantially in the manner and for the purposes herein set forth.

8. The arrangement of the gear-wheels H, J, K, and L, arbor or oscillating plate I, screw-stud *r*, nut *s*, and washer *t*, all constructed as described, and operating substantially as and for the purposes herein set forth.

9. In combination with the main shaft A and die-box D, the oscillating tumbler-stop R, and adjustable stop S, constructed as described, and operating substantially in the manner and for the purposes herein set forth.

10. The face-plate V, constructed as described, with the openings *w w*, dovetailed recesses *y y*, rim *x*, and circular plate W, all substantially as and for the purposes herein set forth.

11. In combination with the face-plate V, the dovetailed dies *z z*, and radial set-screws *a′ b′*, all constructed as described, and operating substantially in the manner and for the purposes herein set forth.

12. The combination and arrangement of the face-plate shaft T, ratchet-wheels A′ D′, pallets *c′ h′ k′*, springs *d′ g′ i′ l′*, bar *e′*, and stirrup-strap *f′*, all constructed as described, and operating substantially in the manner and for the purposes herein set forth.

13. The feeding-bar *o′*, constructed as described, with its rear end beveled, and provided on its upper side with an adjustable bar, *p′*, and operated by means of the arm *n′*, on the yoke F, substantially in the manner and for the purposes herein set forth.

96,404.—Virgil Dresser, Leavenworth, Kans.—*Propelling Small Boats.*—November 2, 1869.

Claim.—1. The combination of a lever, D, fulcrumed at its center, weighted at each end, and vibrating upon an elevated shaft, E, with reacting springs *g*, one or more pawls, *b c*, and one or more ratchet-wheels, *a*, each of said parts being arranged upon a boat, in the manner described.

2. The arrangement, upon the vibrating-lever D, of the spring *e e*, in the position shown, and for the purpose set forth.

96,405.—William Dripps, Coatesville, Pa.—*Process of Restoring and Preserving Decaying Railroad-Ties.*—November 2, 1869.

Claim.—The process, herein described, of restoring and preserving partially-decayed railroad-ties or sills to a valuable condition, substantially as described.

96,406.—Wilfred P. Dugdale, Goshen, Ind.—*Shaft-Coupling.*—November 2, 1869; antedated October 30, 1869.

Claim.—The universal coupling-joints, consisting of the blocks A, mortised or recessed as described, and the enlarged ends B, of the shafts, fitted thereto, all substantially as specified.

96,407.—Ben. F. Dunklee, Concord, N. H. assignor to A. S. Gear, New Haven, Conn.—*Step for Vertical Spindle.*—November 2, 1869.

Claim.—1. The combination of the two chambers D and C, constructed together in one and the same piece, with the step B, arranged in one of the said

chambers, and with the passages *a c d*, all operating as and for the purpose set forth.

2. In combination with the above, the plug F, as and for the purpose specified.

96,408.—JOHN H. EDWARD, Polo, Ill.—*Lifting-Jack.*—November 2, 1869; antedated October 22, 1869.

Claim.—1. The standard A, having a concave serrated surface, in combination with the reciprocating adjustable lifting-bar B, having a convex serrated surface, and the shifting diagonal supporting-link *d*, substantially as shown and described.

2. The combination of the slips *g g'* with the standard A, and of the hooks *b b'*, with the reciprocating bar B, in the manner shown and described.

96,409.—ALONZO FARRAR, Boston, Mass.—*Process of Producing Carbon Pigments.*—November 2, 1869.

Claim.—A pigment made from the spent acids of oil-refineries, common tar, coal-tar, carbon-oil, and all hydrocarbons, by a process substantially as herein shown and described.

96,410.—SAMUEL B. FAY, New York, N. Y.—*Tag.*—November 2, 1869.

Claim.—The perforated plate B, made of metal, or other suitable material, as a substitute for the ordinary metal eyelet in the manufacture of tags, &c., substantially as herein set forth.

96,411.—THOMAS FLINN, Birmingham, Mich.—*Self-Supporting Fence.*—November 2, 1869.

Claim.—The combination of the base A, posts B, keys *b'*, bars C, and cap D, all constructed and arranged substantially as shown and described.

96,412.—FRANCIS FLYNN, Woonsocket, R. I.—*Soles of Rubber Boots and Shoes.*—November 2, 1869.

Claim.—Attaching oak-tanned leather soles to soles of rubber boots and shoes, substantially in the manner described, and then causing them to adhere to rubber boots and shoes by the ordinary means of vulcanization.

96,413.—L. P. FOLLETT, Clifton Springs, N. Y.—*Washing-Machine.*—November 2, 1869.

Claim.—The combination and arrangement of the box A, rails C C, slats D D, curved blocks H H, frame or carriage E, rollers G G, slats I I, and bar J, all constructed as described, and operating substantially as herein set forth.

96,414.—CHARLES H. FOSTER, San Francisco, Cal.—*Butt-Hinge.*—November 2, 1869.

Claim.—The application, in an ordinary iron butt, of the brass bushing in the socket D, and brass pintle C, of the hinge, to prevent the socket from rusting and adhering to the pintle of the hinge.

96,415.—PETER J. FRANK, Ashford, N. Y.—*Instrument for Conveying Medicine to Diseased Parts.*—November 2, 1869.

Claim.—The combination of the tube A, scraper D, revolving cover E, and rod G, when arranged substantially as specified.

96,416.—JOSEPH FRANKLIN, Springfield, Ohio, assignor to himself and JOSEPH WHITELEY, same place.—*Ax.*—November 2, 1869.

Claim.—The within-described ax, which combines, in its construction, the peculiarities set forth, and substantially as shown in the drawings.

96,417.—RALPH L. FRASER, Westernville, N. Y.—*Snap-Hook.*—November 2, 1869.

Claim.—A snap-hook, consisting of the hook A, spring *f*, tongue D, elongated body B, and the recessed back for receiving the strap, so as to form a flushed joint between the back and strap, the whole constructed substantially as described.

96,418.—RALPH L. FRASER, Westernville, N. Y.—*Snap-Hook.*—November 2, 1869.

Claim.—The rotating sleeve C, formed with arm *c*, and encircling the cylindrical shank B, in combination with said shank and the hook A, cast therewith, and the retaining-spring *i*, when the parts are constructed and adapted to operate together, substantially as described.

96,419.—D'ALEMBERT T. GALE, Poughkeepsie, N. Y.—*Mechanical Movement.*—November 2, 1869.

Claim.—1. The two ratchet-wheels K L, two pawls O P, and cross-bar N, arranged and operating in connection with the shafts E J M, substantially as herein shown and described, and for the purpose set forth.

2. The combination of adjustable weights S T, with the pawls O P, that play upon the ratchet-wheels K L, substantially as herein shown and described, and for the purpose set forth.

96,420.—JEROME B. GARDNER, New York, N. Y.—*Base-Burning Cooking-Range.*—November 2, 1869.

Claim.—1. The arrangement of the grate A within the water-case B, forming the walls of the lower portion of the within-described range, substantially as specified.

2. The combination of the fuel-supply pipe C, the grate A, and the water-case B, essentially as shown and described.

3. The combination, with the water-case B, of the boiler F, and fuel-feed pipe C, let into or arranged to run through the latter.

4. The arrangement, within the boilers F and G, fitted with pipes to keep up a free circulation, of the ovens J J, in combination with draught-flues *k k*, essentially as shown and described.

5. The combination, in a base-burning range, of the water-case B, the grate A, arranged therein, the steam and hot-water boilers F G, and the ovens J J, substantially as specified.

96,421.—CHARLES T. GILMOR, Baltimore, Md.—*Tobacco-Prize.*—November 2, 1869.

Claim.—1. The combination, with the horizontal plunger K, of the lever L, having a fixed fulcrum in line with the transverse center of the stem of said plunger, the perforations *k k*, and pins P P, employed and operating substantially as described, for the purpose set forth.

2. The provision, in the stem of the plunger K, operated by the lever L, as described, of two or more longitudinal rows or series of the perforations *k* on each side of its transverse center, at different distances therefrom, as described, for the purpose set forth.

3. In combination with the lever L, employed and operating substantially as described, the support F, and ground-wheel M, substantially as and for the purposes set forth.

96,422.—CHARLES T. GILMOR, Baltimore, Md.—*Tobacco-Press.*—November 2, 1869.

Claim.—1. The combination, with the plunger or follower B and lever C, of the racks *r*, constructed with teeth of decreasing length from their inner to their outer ends, pull-pawls *p p*, attached to the lever, on the respective sides of its fulcrum, and springs *s s*, for pressing the pawls into mesh, being so arranged as to engage with them only at the moment they are to be thrown, as herein set forth.

2. The racks *r*, constructed separately from the plunger B, of increasing thickness from their inner to their outer ends, and applied and secured by diagonal bolts or rods 5, substantially as shown and described, for the purposes set forth.

96,423.—HARRY EDMOND GOTLEB, New York, N. Y., assignor to HENRY WINSLOW.—*Rendering Animal Fat.*—November 2, 1869.

Claim.—The use of the compound (chlorosulphuric) acid, substantially in the manner and for the purposes as above set forth, the neutralization of said acids, in the manner as above set forth, by the use of an alkaline earth, or some compound of those substances.

96,424.—WILLIAM M. GREENWOOD and BENOIT ROUX, Cincinnati, Ohio, assignors to M. GREENWOOD AND COMPANY, same place.—*Metallic Frame for Music-Stand.*—November 2, 1869.

Claim.—The arrangement of hooks C C', mortises D D', sockets E, and lugged housings G H of casters I, as set forth.

96,425.—Philip M. Gundlack, Belleville, Ill.—*Horse Hay-Rake.*—November 2, 1869.

Claim.—1. The thimbles *a*, constructed and applied to the rake-head, and having combined with them the draught eye-pieces *b*, substantially as described.

2. The adjustable tooth-carrying spring *s*, brace J, screw J′, rake-handle F, and grooved collar G, constructed and operating substantially as described.

96,426.—Fayette Hardenbergh, Providence, R. I.—*Tool-Post.*—November 2, 1869.

Claim.—A tool-post, A, B, constructed substantially as described, and combined with interchangeable tool-holding blocks C, as specified.

96,427.—Dennis Harrigan, Somerville, assignor to John H. Wiggins, Boston, Mass.—*Oil-Cup for Movable Bearings.*—November 2, 1869.

Claim.—The combination, with the discharge-tube of an oil-cup, such as described, of a disk fitting over the mouth of the same, and provided with an orifice for entrance of oil to the tube, and a valve for opening or closing said orifice, constructed and arranged in the disk as herein shown and set forth.

96,428.—David Harrison, Fayette, Miss.—*Railway Supply-Apparatus.*—November 2, 1869.

Claim.—1. The suspended pivoted bucket C, for supplying a moving train with water, fuel, &c., substantially as herein shown and described.

2. The posts A, cross-bars B, suspended pivoted buckets C, trip-arms E, projection F, provided with a rubber block, and hopper I, with each other and with the engine G and tender H of a moving train, substantially as herein shown and described, and for the purpose set forth.

96,429.—Charles W. Hermance, Schuylerville, N. Y.—*Cooking-Stove.*—November 2, 1869.

Claim.—1. Attaching a water-reservoir upon the front of a high-hearth cooking-stove or range, and providing the same with an outer chamber or flue, substantially as specified.

2. In combination with a water-tank or reservoir, placed upon the front of a high-hearth cooking-stove, with the exterior chamber E, an interposed chamber between said reservoir and the front of the oven, substantially as set forth.

3. In combination with the fire-box B, chamber H, and reservoir C, the employment of one or more vertical chambers I I′ on one or both sides of the fire-box and ash-pit, which communicate with the fire-box, and convey hot air to the chambers E and G, for heating the reservoir, substantially as set forth.

4. In combination with the reservoir C and its chamber E, the oven-bottom flue G, communicating with the flue or chamber E, substantially as specified.

5. The arrangement on each side of the vertical flue on the rear of the oven A, of one or more vertically-hinged doors S S, opening into the air, for the purpose of tempering the heat in the said oven, substantially as set forth.

6. The combination, in a high-hearth stove, of the fire-box B, chamber H, water-reservoir C, chamber E, chamber G, and oven A, with the various communicating-flues and parts, all constructed and arranged to operate substantially as described.

96,430.—Edward Hewett, St. Leonard's-on-Sea, England.—*Chimney-Cowl.*—November 2, 1869.

Claim.—1. A chimney-cowl, provided with an air-tube and smoke-pipe, whose outlets are nearly in the same vertical plane, as shown and described.

2. A chimney-cowl, provided with the tube I, to preserve it in its exact vertical position, as set forth.

3. A smoke-tube, provided with a base, attached to the chimney by two intermediate beveled flanges, J J, to make a tight joint, as set forth.

96,431.—Canceled.

96,432.—David O. Holman, Adams, N. Y.—*Turbine Water-Wheel.*—November 2, 1869.

Claim.—1. The bucket H, for turbine water-wheels, herein described, having a thick serpentine base and thin outer edge, and constructed with the conical-shaped curve, as specified.

2. The flaring or bell-shaped body G, in combination with the curved bucket H, as described, so arranged as to dispense with a lower shrouding, as specified.

96,433.—Lawrence Holms, Paterson, N. J.—*Wooden Pavement.*—November 2, 1869.

Claim.—1. Wooden paving-blocks, formed with overlapping portions *a a′*, and shoulders *b b′*, when so cut and adapted to each other as to form longitudinal or transverse channels *c c′* or both, to be filled with concrete or cement, substantially as herein described.

2. A pavement constructed of wooden blocks, having overlapping portions at the ends and sides, with channels, either longitudinal or transverse, or both, between them, which are filled with cement, said blocks resting on a layer of semi-elastic cement, laid over a concrete substratum or foundation, substantially as herein described,

96,434.—Gilbert L. Hudson, Romeo, Mich.—*Carriage-Seat.*—November 2, 1869.

Claim.—In combination with a seat for vehicles, cars, &c., the hinged bars B B, back C, springs D D, arm-pieces E E, and bars F F, or their equivalents, all constructed as described, and arranged to operate substantially in the manner and for the purposes herein set forth.

96,435.—George W. Hunter, Versailles, Ind.—*Fence.*—November 2, 1869.

Claim.—The arrangement, in a worm-fence, of the rails C, D′, E, and F, in the manner shown, and for the purpose described.

96,436.—John H. Hunter, Versailles, Ind.—*Gate.*—November 2, 1869.

Claim.—The combination and arrangement of levers E E′, C, *a*, bars D D′, bolt *b*, and gate B, arranged to operate as herein described and shown.

96,437.—Theodore Jarvis, New York, N. Y.—*Salve.*—November 2, 1869.

Claim.—A salve composed of the ingredients, in the proportions and for the purpose set forth.

96,438.—Elijah K. Jenner, Healdsburg, Cal.—*Method of Uniting Artificial Teeth on Rubber Bases to Metallic Plates.*—November 2, 1869.

Claim.—The combination of a limited vulcanite base, B, holding the teeth and gum-work, with two metallic plates, *a* and *a′*, substantially as shown and described.

96,439.—Charles Jordan.—East Bridgewater, Mass.—*Hulling-Machine.*—November 2, 1869.

Claim.—1. The combination of the yielding pads and bars *i i h* with the vertically-reciprocating hulling-plate E, eccentric pin, *d*, and arms *e e′*, when said parts are constructed and arranged as described.

2. The reversible hulling-plate, shown in Fig. 4, when constructed in the manner and for the purpose set forth.

3. The square steel bars *g g*, set into the bed of plate E, and placed one above the other, in combination with vertically-reciprocating plate E, when constructed and arranged substantially as set forth.

4. The reciprocating frame G, provided with adjustable cap *g′*, in combination with the yielding pads and bars *i i h*, eccentric *d*, and arms *e e′*, when said parts are constructed and arranged as shown and described.

96,440.—Roswell Judson and John P. Schenck, Jr., Matteawan, N. Y.—*Tin Can.*—November, 2, 1869.

Claim.—The arrangement under the downward-projecting circumferential flange, of the cap B, and, upon the upper surface of the can-top A, of the wire D, all as shown and described.

96,441.—Wesley L. Jukes, New York, N. Y., assignor to himself, Frederick McLewee, Prentice H. Putnam, and Bronson Murray, same place.—*Gas-Burner.*—November 2, 1869.

Claim.—1. In a revolving gas-burner, forming a gas-tight joint between the revolving tube *a* and

the fixed tube *d*, by the use of a ring attached or fitting closely to the tube *d*, and so nearly touching the inner or outer side of the tube *a* as to secure the adhesion thereto of so much liquid as will fill the space between the ring and tube or tubes, or its equivalents.

2. The use of the lip *g* attached to the tube *d*, or its equivalent, as and for the purposes described.

3. In a revolving gas-burner, in combination with the ring *f* or *k*, extending the tube *a* beyond the arms *b b* in any desired form, as and for the purposes hereinbefore described.

96,442.—WILLIAM G. KELLY, Oneida, N. Y.—*Case and Sample-Card for Spooled Silk, &c.*—November 2, 1869.

Claim.—A show-box for spooled silk, provided with ease A B, handle E, transverse partitions, anti-rolling separators D, and tray C, each of said parts being constructed and arranged, with respect to the others, in the manner described.

96,443.—LEWIS A. KIMBERLY, New Haven, Conn.—*Stilt.*—November 2, 1869.

Claim.—As a new article of manufacture, the stilt, having an adjustable step, made in the form and operated in the manner substantially as herein shown and described.

96,444.—SAMUEL M. KING, Lancaster, Pa.—*Shingle-Machine.*—November 2, 1869.

Claim.—The arrangement of a shingle-machine, provided with two beds M B, in a line with each other, made separately adjustable between the side rails C, when the bed B is supported on springs E, or their equivalent, and carries the planer I and riving-knife K, as shown, together with the spring-tongue or holder G suspended, and all operating jointly, substantially in the manner and for the purpose specified.

96,445.—HORACE W. KNIGHT, Seneca Falls, N. Y.—*Copy-Holder for Printers.*—November 2, 1869.

Claim.—The use of joints and set-screws *i* and *e*, to hold the frame on which the copy rests in different elevated positions, and the slots *c* and *d*, to allow the frame to fit on the partitions of the case, the rudder-band *a*, and the raised notch *f*, substantially as described, and for the purposes specified.

96,446.—F. F. LAHM, Chicago, Ill.—*Spring-Bed Bottom.*—November 2, 1869.

Claim.—1. In combination with a bed or couch-bottom, the springs E and F, confined together and to the rails of the bottom by adjustable bands, as shown and described.

2. The combination of the rails D C and slats G with the springs E F, arranged and operating substantially as described and for the purposes set forth.

96,447.—ALEXANDER N. LAPIERRE, New York, N. Y.—*Screw-Cap for Can.*—November 2, 1869.

Claim.—1. The vent-pipe D, provided in a can, A, for the entrance and discharge of air, and to be closed by the flange *e* of the screw-cap, substantially as herein shown and described.

2. The screw-cap C, when made of a sheet-metal tube, containing the flange *e* and washer *f*, and of the solid metal head *d*, substantially as and for the purpose herein shown and described.

96,448.—WILLIAM LAWYER, Macomb, N. Y.—*Machine for Making Hoops.*—November 2, 1869.

Claim.—The combination of a bed, C, adjustable bar D, a racking-lever, E, and an actuating-lever, F, all arranged and co-operating in the manner specified, to rack hoops.

96,449.—BENJAMIN F. LEET, Dayton, Nevada.—*Compound Wheel and Axle.*—November 2, 1869.

Claim.—The combination, with the axle B and wheel A, permanently connected thereto, of the loose wheel C, and stem, collar F, and sleeve H, the stem D or wheel being either provided with friction-rollers or not, all substantially as specified.

96,450.—JOSEPH F. LETTELLIER and ADOLPH LEITELT, Grand Rapids, Mich.—*Sawing-Machine.*—November 2, 1869.

Claim.—1. In combination with a machine constructed substantially as herein described, a dial-wheel for determining the position of the saw or saws upon their shaft, and the width of the strip to be cut from the board or plank.

2. The combination and arrangement of the dial-wheel E^4 with the gear-wheel E^1, rack F^1, sliding frame F^3, and arm F^2, for moving the saws upon the shaft, substantially as and for the purpose set forth.

3. The within-described arrangement of the saws upon their mandrel, it being such that two strips may be cut from a board or plank at one and the same time, one of which will be of a fixed width and the other of any desired width, the latter being dependent upon the position of the movable saw with reference to the fixed saw.

96,451.—D. M. LOCKRIDGE, Otto, N. Y.—*Clamp for Butter-Firkins.*—November 2, 1869.

Claim.—A screw-clamp, C, with packing-block or blocks D, for closing the inspection-hole or holes B, substantially as herein shown and described.

96,452.—HENRY S. LOPER, New Haven, Conn., assignor to himself and HENRY S. PARSONS, same place.—*Shoe for Cripples.*—November 2, 1869.

Claim.—A shoe for cripples, when constructed of a cork sole or ball, and connected with the heel by an elastic shank, C, substantially as specified.

96,453.—JOHN LYLE, Newark, N. J.—*Leather-Punch.*—November 2, 1869.

Claim.—The combination with the jaws A B, of the hub D and thumb-screw E, when the said hub is provided with the punches and the projections F, the latter being arranged, relatively to the jaw B, substantially as specified.

96,454.—MYRON H. MATSON, Horseheads, N. Y.—*Water-Wheel.*—November 2, 1869.

Claim.—The combination of the cap A, curb C, consisting of a number of tiers, between which the chutes E are hinged at one end, and the wheel C, all constructed to operate substantially as set forth.

96,455.—J. MATTISON, Oswego, N. Y.—*Packing-Auger and Spiral Conveyer.*—November 2, 1869.

Claim.—1. An auger for packing fibrous materials in suitable cases or packages, provided with a series of wedge-shaped blades, formed and disposed thereon, substantially as herein set forth.

2. The combination of a spirally-disposed projecting flange, with the spirally-inclined blade of a packing-auger, substantially as and for the purpose herein set forth.

96,456.—G. MAYER, Sullivan, Ill.—*Truss.*—November 2, 1869.

Claim.—The arrangement of waistband A, front straps D, back straps G, pad straps E, and detachable strap I, all constructed and shaped with respect o each other, in the manner described.

96,457.—JOHN C. MCCARTHY, New York, N. Y.—*Horse-Power Engine for Extinguishing Fires.*—November 2, 1869.

Claim.—1. The combination of the endless apron, the crank-shaft and piston, and the pump, all being arranged upon the truck A, as and for the purpose specified.

2. A carriage-frame, provided with the folding plate F, to turn down, and form a pathway for the horse to the endless apron, in the manner set forth.

96,458.—JOSEPH C. MCCORMICK, Smicksburg, Pa., assignor to himself and GEORGE STITELER, same place.—*Machine for Making Chair-Seats.*—November 2, 1869.

Claim.—1. The bit, constructed in the form shown in Fig. 3, having its cutting-edge scalloped out on the left side, so as to leave a sharp, curved point, *a a*, the rivet-hole *r*, and transverse slot *s*, near the widened end of the bit, and opposite the cutting-point, substantially as described.

2. The rotating disk *c*, having the cam-shaped projections *m* m^1 m^2 m^3, with their left edges beveled off, in combination with the bit above claimed, substantially as described.

3. In connection with the cutter-head C, having the bits M, the fixed head or rest E, having the steps *e e e e*, substantially as and for the purposes described.

96,459.—JOHN C. MELOY, Hastings, Minn.—*Bag-Tie.*—November 2, 1869; antedated October 23, 1869.

Claim.—The oblong box *a*, slotted and beveled, as shown and described, and provided with the pivoted serrated tongue *b* and cord *y*, all constructed and operated as and for the purposes set forth.

96,460.—SAMUEL P. MERVINE, Jr., Philadelphia, Pa., assignor to himself and W. W. LOWER, Washington, D. C.—*Rectum-Supporter.*—November 2, 1869.

Claim.—1. The adjustable or rocking carriage A, formed with perforations *a a* through it, in combination with a table or support, B, constructed or arranged to establish an air-space or passage between them, essentially as and for the purposes herein set forth.

2. The arrangement of the straps D D D D with the main or body-band E and table B, provided with angularly-arranged loop-wires C C, substantially as shown and described.

96,461.—LORAN MINER, San Francisco, Cal.—*Carpet Beating Machine.*—November 2, 1869.

Claim.—1. The series of elastic whips C, attached to the arms E, and operated by the cams J, together with the springs K and the elastic cushion S, substantially as and for the purposes herein described.

2. A carpet-beating machine, constructed with a series of whips, having a motion from side to side transversely to the direct action of the whips, substantially as herein described.

3. The device, consisting of the guides *c c*, sliding bar L, bent lever M, connecting-rod N, and crank O, giving a transverse motion to the whips, substantially as herein described.

4. The device, consisting of the shaft F, with the curved groove or notch *a*, and the pin *b*, passing through the arm, allowing motion in every direction without displacement, substantially as herein described.

96,462.—BENJAMIN J. MOORE, Dresbach, Minn.—*Hay-Loader.*—November 2, 1869.

Claim.—1. The combination, on the three-wheeled truck, constructed as described, of the elevator D, rake E, crane, and a hay-fork G, substantially as described.

2. The elevator D, suspended on the swinging arms S of the transverse shaft T, and the toothed wheels U, all arranged for adjustment substantially as specified.

3. The rake-teeth pivoted to the shaft I, spring wires M, slotted bars L L, when combined and arranged together and with the swinging supporting-arms N, all as specified.

4. The frame A, swiveled on the axle of the wheels B, the driving-wheel C, and detachable platform A′, all arranged as specified.

96,463.—GEORGE F. MORSE, Portland, Me.—*Steam-Engine Puppet-Valve.*—November 2, 1869.

Claim.—The double-puppet throttle-valve, as described, having the valve of smaller area to operate first, and the valve of larger area to operate subsequently, substantially in the manner described.

96,464.—CHARLES W. MOSELEY, Onondaga, N. Y.—*Implement for Destroying Quack-Grass.*—November 2, 1869.

Claim.—The steel cutter A and C, in connection with a frame B *d*, substantially as herein set forth, and for the purpose specified.

96,465.—GEORGE M. MOWBRAY, Titusville, Pa.—*Compound for Priming Electric Fuses.*—November 2, 1869.

Claim.—The manufacture or preparation of a compound, which I denominate "Mowbray's safety-priming for electric fuses," of the ingredients, in the proportions substantially as described, and for the purposes set forth.

96,466.—BERNARD H. MUEHLE, Buffalo, N. Y., assignor to himself and NICHOLAS JONES, same place.—*Velocipede.*—November 2, 1869; antedated October 30, 1869.

Claim.—The arrangement of the main frame C, seat-standards, frame E, spring K, and steering-apparatus, seat D, and spring F, substantially as and for the purpose described.

96,467.—D. MURILLESS, Holyoke, Mass.—*Lathe-Bath and Sponge-Holder for Dentists' Use.*—November 2, 1869.

Claim.—The water-trough A, supported so as to be adjustable beneath the corundum wheel, and having ears *a a*, in combination with the sponge-holders H H H^1 H^2, stems E, and set-screws *s*, the whole constructed and arranged substantially as setforth.

96,468.—H. K. NELSON, Penn Yan, N. Y.—*Plant-Protector.*—November 2, 1869.

Claim.—The arrangement and combination of the hinged cap or ventilator *v*, hoops or frame *a b*, transparent or translucent covering *c*, standard *s*, and wire socket *f*, substantially as and for the purposes set forth.

96,469.—GEORGE NOCK, Monmouth, N. J., assignor to himself and ZADOC STREET, Salem, Ohio.—*Mold for Welding Steel to Iron.*—November 2, 1869.

Claim.—1. The mold, herein described, provided with screws D D, or their equivalent, for pressing the iron slab against the face of the mold, or against the steel itself, all substantially as set forth.

2. The devices, herein described, whereby compound iron and steel slabs, for railway rails and other uses, are produced, by confining the iron within the mold, and welding the steel to it, in the act of casting, with screws D D, or their equivalent, for applying pressure to the iron, as set forth.

96,470.—E. D. NORTON, Cuba, N. Y.—*Door Spring.*—November 2, 1869.

Claim.—The removable and reversible spring D, formed of coiled wire, placed upon the standard C, and connected to the spring F by the link E, all as and for the purpose set forth.

96,471.—F. I. NORTON, Fremont, Ohio.—*Apparatus for Drying Lumber.*—November 2, 1869.

Claim.—1. The lumber drying apparatus, consisting of the kiln A, which has the pipe B, with the branches *a b*, or either, and in which the swinging plates or doors are arranged to form and close chambers *e*, substantially as and for the purpose herein shown and described.

2. The sponge-plugs C, applied to the perforations in the cover F of a lumber-drying apparatus, substantially as described, for the purpose specified.

3. The plates D, for closing the steam-chambers *e*, when provided or connected with strings, or their equivalents, so that they can be opened or closed from the outside, substantially as herein shown and described.

96,472.—PETER OSTERSPEY, Mechernich, Prussia, assignor to ADOLPHUS MEIER AND COMPANY, Saint Louis, Mo.—*Apparatus for the Discharge and Preparation of Granular Ore and Coal, and Similar Materials.*—November 2, 1869.

Claim.—1. The gate-box K and its gate K^1, the latter arranged with ∧-recesses, and adjusted by a rod *k*^{1}, and hand-wheel, or similar device, substantially as set forth.

2. The arrangement of the hydraulic separator or jigger with several wells, each of which has its sieve and gate-box and adjustable gate in connection with each other, so as to separate the ore, coal, or other matter into granules of varying fineness, substantially as set forth.

96,473.—H. PACKER and G. W. PACKER, Sandwich, Ill.—*Wash-Boiler.*—November 2, 1869.

Claim.—The combination and arrangement of the bottom A, having notches *a a* and pieces *b b*, center tube B, perforated tube or cylinder C, and rack D, all constructed as described, as and for the purposes herein set forth.

96,474.—James A. Park, Lansing, Mich., assignor to himself and William Woodhouse.—*Horse Hay-Fork.*—November 2, 1869.

Claim.—1. The combination, in a hay-fork, of a fixed prong, A, rigidly attached to the cross-bars B B^1, a swinging prong, A^1, which is pivoted to said cross-bars and to the locking-frame, and a lever for unlocking the swinging prong, all constructed and operating substantially as and for the purpose set forth.

2. The combination of the cross-bars B B^1, the swinging-prong A^1, corner irons B^2, frame C, lever C^1, and rope or chain C^4, substantially as and for the purpose set forth.

3. The combination and arrangement of the corner-irons B^2, and cross-bars B B^1, substantially as and for the purpose set forth.

4. The arrangement of the frame C, lever C^1, and spring C^2, with reference to the swinging prong A^1, it being such that when the hoisting rope is made to draw on the fork, the parts are thereby locked to each other, but not to the cross-bars, substantially as and for the purpose specified.

5. The frame C, constructed substantially as and for the purpose set forth.

6. In combination with the frame C and cross-bars B B^1, the stop C^4, substantially as and for the purpose set forth.

96,475.—A. N. Parkhurst, Knoxville, Ill.—*Pump.*—November 2, 1869.

Claim.—The baked-clay chamber B, having its upper end united to the stock A by clamps *b*, provided with open jaws *i i*, to receive the bolts, and its lower end, or base, united to the collar C, having its lower interior edge tapering, and provided on its outer edge with the annulet *m*, when the said collar is arranged and driven on the stock D, so that the main connection of the pump may be made at the point of location of valve *g* thereon, substantially in the manner and for the purpose as shown and described.

96,476.—Daniel Pease, Floyd, N. Y.—*Smut-Mill.*—November 2, 1869.

Claim.—1. As an improvement in smut-mills, forming the spaces *b*, Fig. 1, between the metal pieces A, which compose the cylinder, by making the required projections, *c c*, Fig. 4, for forming said spaces B all on one side of said pieces A, substantially as shown.

2. Constructing the pieces A, with eyes *b* C, Fig. 8, on each end thereof, for the reception of the vertical rods or bolts D D, Fig. 2, when said parts are arranged as herein shown and described.

96,477.—Calvin Peck, Marshall, Ill.—*Mode of Purifying Rancid Butter.*—November 2, 1869.

Claim.—Treating rancid butter by the particular process herein described.

96,478.—James H. Perkins, Omaha, Nebraska.—*Cut-Off for Pipes.*—November 2, 1869.

Claim.—The sections A and B, obliquely shaped at their contiguous ends, and so arranged, one within the other, as to form an opening for the chute D, which is hinged to the part A by the link E, all constructed and arranged as specified, whereby said chute will, when open, impinge at its inner end on the inner surface of the pipe A, or curved end *a* of pipe B, and lap over the pipe B when closed, as herein shown and described, for the purpose indicated.

96,479.—Charles Peters, Trenton, N. J.—*Melting and Decarbonizing Iron.*—November 2, 1869.

Claim.—1. Melting iron at or near the top of the stack or cupola, down through which the blast, with the products of combustion, is forced, substantially as described.

2. Dropping the melted iron from the melting-bed, through the blast and heated products of combustion in the stack or cupola, substantially as described.

3. Dropping the melted iron on to a cone or hard substance, for bursting the globules, substantially as described.

4. Furnishing the melted iron, when in the finely-divided state, (caused by the bursting of the globules,) with oxygen, by means of a blast through pipes or tuyeres, substantially as and for the purposes described.

5. The combination and arrangement of the fire-chamber B, melting-bed D, stack or cupola A, and cone J, substantially as and for the purposes described.

6. The exit-flue H, near the bottom of a melting-stack or cupola, substantially as shown.

96,480.—James N. Phelps, Brooklyn, assignor to himself and Joseph Bayley, New York, N. Y.—*Printing-Press.*—November 2, 1869.

Claim.—1. The construction of distributing-rollers *d d* with spiral surfaces, substantially as and for the purpose herein set forth.

2. The combination of the hinged type-bed B, the reciprocating impression-roller C, and the detached reciprocating frame P, furnished with inclined planes K K, the whole operating substantially as and for the purpose herein specified.

96,481.—William Price, Cincinnati, Ohio.—*Dumping-Car for Grading.*—November 2, 1869.

Claim.—1. A single car-body, dumping on either side of the truck which supports it, as herein described.

2. Placing the supporting and dumping-device on the outside ends of the car-body, as and for the purpose herein specified.

3. The cam-trunnions D D, as constructed, in combination with the supporting-frames B B, car-body C, and truck A, all arranged to operate substantially as herein set forth.

96,482.—Era Rose, Vernon, Ind.—*Device for Removing Dust from Thrashing-Machines.*—November 2, 1869.

Claim.—The attachment to thrashing-machines herein described, when constructed and operating as set forth, that is to say, having the small pipe B *b b'*, the large pipe C, the fan E, and the partial-discharge pipe D, with damper *d'* and screen *d*, all arranged and operating in connection with each other, as and for the purposes specified.

96,483.—Isaac M. Ross, Petersburgh, Ind.—*Apparatus for Turning the Leaves of Music.*—November 2, 1869.

Claim.—1. The concave slide B, provided with a zig zag groove, for the purpose of operating the rollers C C, substantially as herein set forth.

2. In combination with the concave slide B, the rollers C C, having arms D D and projections *i i*, all constructed as described, and operating within the frame A, substantially as and for the purposes herein set forth.

3. The combination of the frame A, grooved concave slide B, rollers C C, arms D D, frame E, having a notched groove, and the slide F, all constructed and connected as described, and operating substantially in the manner and for the purposes herein set forth.

96,484.—Benoit Roux, Cincinnati, Ohio, assignor to M. Greenwood and Company, same place.—*Shovel and Tongs-Stand.*—November 2, 1869.

Claim.—As a new article of manufacture, the shovel and tongs-stand herein described, having its cast base A B *b*, and cast stem C, connected by a wrought-iron screw, D, cast in the stem, and a nut, E *e e*, beneath the base, all as shown and described, for the purpose set forth.

96,485.—George D. Sanford, Peekskill, N. Y.—*Coal-Stove.*—November 2, 1869; antedated May 2, 1869.

Claim.—The construction and arrangement of notches and hooks on the adjustable frame and body of a stove, substantially as and for the purpose described.

96,486.—Charles C. Savery, Philadelphia, Pa.—*Water-Cooler and Refrigerator.*—November 2, 1869.

Claim.—1. The construction of the stationary com-

bined water-cooler and refrigerator, having the air-chamber A, of iron, enameled on the interior surface, and its bottom *d* inclined from the door, in its front side backward, and the water-tank B, of iron, enameled both on the interior and under surface, and secured upon the top of the air-chamber as herein specified.

2. In combination with the foregoing, the semicircular or equivalent opening *c*, in the inclined top *a* of the air-chamber, beneath the bottom of the water-tank, for the purpose set forth.

97,487.—CHARLES C. SAVERY, Philadelphia, Pa., assignor to BARROWS, SAVERY AND COMPANY, same place. — *Bread and Cake Receptacle.* — November 2, 1869.

Claim.—The general construction of the bread and cake receptacle, with iron body A and cover C, both enameled on the interior surface, and the wooden base B attached to the body A, all substantially as herein specified.

96,488. — A. W. SCHARIT, Saint Louis, Mo., L. A. HUDSON, Syracuse, N. Y.,, and DARIUS LYMAN, Parkman, Ohio. — *Electro-Magnetic Gas-Lighting Apparatus.*—November 2, 1869.

Claim.—1. A gas-lighting and extinguishing apparatus, combining in its construction a series of gear-wheels, to be driven by a spring or weight, a cup or other vessel containing pyrophorous material, a cam for elevating such cup or vessel, a match-rod for inserting the match into the pyrophorous material, and afterward bringing it in contact with the gas-jet, an elastic chambered valve for controlling the flow of gas to the burner, and a wheel, having a cam-shaped or serrated surface, for controlling the movements of such valve, all arranged to operate substantially as and for the purpose set forth.

2. In combination with the elements of the preceding clause, the armature of an electro-magnet, for the purpose of releasing such parts from the control of the spring or weight, and thus allowing the gas to be shut off from the burner, substantially in the manner set forth.

3. The described construction of the elastic chambered valve, substantially as and for the purpose set forth.

96,489.—PAUL SCHUMACHER, New York, N. Y. —*Ice-Cream Freezer.*—November 2, 1869.

Claim.—The arrangement of the receiving-vessels E E, in a suspended position about the shaft C and above the bottom of the chamber A, so as to rotate in and agitate the cooling-liquid, all as shown and described.

96,490. — H. E. SHAFFER, Rochester, N. Y. — *Fruit-Jar.*—November 2, 1869.

Claim.—The construction of the top of the jar with the two exterior shoulders *f m* and raised flange *h*, and of the cover with the vertical flange *d* and deep-stepped groove *g*, having the threaded shoulder *k*, the whole so arranged that the packing-ring is inclosed on the sides by the flanges *d h*, and at the top and bottom by the shoulders *k m*, being thereby perfectly embedded in the glass, and removed from outside friction with the clamping-ring, as well as inside contact with the contents of the jar, as herein set forth.

96,491. — SAMUEL SHEPHERD, Nashua, N. H.— *Paper-Collar Machine.*—November 2, 1869.

Claim.—1. The arrangement of the rolls C C′, for feeding the collar-strip, the rolls L L′, for feeding the patch-strip transversely to the collar-strip, and the punches *k k′*, for cutting out the patches, substantially as herein specified.

2. The combination, with the patching-devices, of feeding-devices operating to feed the patched strips intermittently, substantially as and for the purpose herein described.

3. The combination, with the rising and falling feed or pressure-roll C′, of the clamp H, operating intermittently on the collar-strip, substantially as and for the purpose herein specified.

4. The combination, with the rising and falling feed or pressure-roll C′, of the cam or cams W W^1 W^2 W^3, adjustable substantially as and for the purpose herein set forth.

5. The combination of the feed-rolls L L′, and clamping-rolls I I′, for feeding the patch-strip, the punch-stock Q, with its punches *k k* and their relative dies, the collar-strip feed-rolls C C′, and the clamp H, the whole operating together substantially as and for the purpose herein described.

96,492.—H. A. SHIPP, London, England, assignor to himself and ABNER A. GRIFFING, New York.— *Machine for Punching Metals.*—November 2, 1869.

Claim.—1. The combination and arrangement of the block A, the lever B, and arm I, the punch O and the screw-threaded bolt F, the lever B being operated by the right-and-left screws *g h*, connecting said levers to the arm, and the whole operating as explained.

2. The combination, with the stationary arm and movable jaw or lever, of the right-and-left hand screw connecting the same, and the swivel-nuts, arranged in said arm and lever, to receive the ends of the screw, as shown and set forth.

3. In a hand punching-machine, constructed as above described, the employment of a loose punch, substantially as explained.

4. The combination of the screw-threaded bolt F with the movable jaw or lever to which it is connected, and the stationary arm and the screw-rod by which said lever is actuated to produce the endwise movement of the bolt, as shown and set forth.

96,493. — JOSEPH SIMPSON, Newark, Ohio. — *Door-Spring.*—November 2, 1869.

Claim.—1. In combination with the tube A and spring B, the movable screw E, provided with a tenon on its outer end, as and for the purposes set forth.

2. The combination of the hinge-piece D, grooved arm C, tube A, spring B, tenoned screw E, and knob F, all constructed and operated as and for the purposes set forth.

96,494. — JAMES J. SMITH and SAMUEL WOOD, Cleveland, Ohio. — *Draught-Regulator.*—November 2, 1869.

Claim.—1. The use of mercury in an open column, substantially as and for the purposes described.

2. The construction and arrangement of the mercury-chamber L, at the base of an open column, substantially as described, and for the purposes specified.

3. The arrangement of the mercurial tube and the devices co-operative therewith, in the manner described, and for the purposes set forth.

96,495.—MARTIN LUTHER SMITH, Battle Creek Mich.—*Ladder.*—November 2, 1869.

Claim.—The construction of the platform C, with its forked legs G, pins M, post R, and hook S, when arranged as herein described and for the purposes set forth.

96,496. — JOHN SNOW, Grand Rapids, Mich. — *Catarrh Remedy.*—November 2, 1869.

Claim.—The composition of a powder, for the cure of catarrh, bronchitis, and other like affections, from the ingredients named above, compounded and prepared substantially as set forth.

96,497.— ASA SNYDER, Richmond, Va.— *Cooking-Stove.*—November 2, 1869.

Claim.—In combination with the hollow-walled fire-chamber and hollow grate herein described, the separation-plate *c*, arranged and operating substantially as described.

96,498.—FRANK J. STEINHAUSER and HENRY M. SHREINER, Lancaster, Pa.—*Railroad-Car Heater.* —November 2, 1869.

Claim.—1. The arrangement of the ash-funnel C D, with its valve F and weighted rod G, guides H H, in combination with the tank B *b b′*, in the manner and for the purpose specified.

2. The arrangement of the disk A, in combination with the tubes or pipes L M, with their hinged valves *l*, constructed substantially in the manner and for the purpose set forth.

3. The combined arrangement of the tank B, disk A, spouts or pipes L M, ash-funnel C D, and valve F, in connection with a stove adapted thereto, operating substantially in the manner and for the purpose specified.

96,499.—William M. Stevenson, Sharon, Pa.—*Balance Slide-Valve.*—November 2, 1869.

Claim.—The arrangement and combination of the two chambers B B, their packing-grooves E E, packings *h*, and openings *c d*, with the balance-valve, having the chamber *s* open at top and bottom, and the grooves F and their packings *f*, the whole being substantially as described.

96,500.—Zadok Street, Salem, Ohio.—*Cattle-Car.*—November 2, 1869.

Claim.—1. A cattle-car, with removable transverse partitions or gates E, hinged adjustably to the car-side, constructed with open spaces e^2, and downwardly-projecting bars e^3, and adapted to operate substantially as and for the purposes set forth.

2. In combination with the gates E, the yoke-bars G, for fastening the animal, as explained.

96,501.—Overton J. Styner and John Egan, La Fayette, Ind.—*Railroad-Car Ventilator.*—November 2, 1869.

Claim.—1. The deflectors I I′, so arranged as to be thrown into and out of action by the movement of the car, or to be held in an inoperative position, substantially as described.

2. In combination with the deflectors I I′, the hinge D E F *f f′* G, substantially as described.

96,502.—Edwin Swasey, Milford, Mass.—*Wheel.*—November 2, 1869.

Claim.—1. The peculiar joint at the two abutting ends of portions of the felly, the same consisting of the overlapping clasp *g*, inclosing the ends of the felly, as explained, and the spoke B, with its washer *d* and tenon *e*, the whole being combined and arranged in manner and for the purpose as herein shown and explained.

2. A carriage-wheel, composed of the hollow spokes and fellies jointed together, as specified in the preceding clause, in combination with the metallic hub provided with flanges *a*, rib *b*, and lubricating-chamber *c*, as and for the purposes herein shown and described.

96,503.—James M. Taft, Arcadia, Wis.—*Harvester-Cutter.*—November 2, 1869.

Claim.—1. The cutting-blades B, constructed as described, and pivoted on the detachable pins, having a square body and journals at each end, said pin being held in place by the bar F and plate D, all substantially as herein set forth.

2. The block *d*, pivoted to the reciprocating bar C, and having the dovetail recess, for the reception of the end of the cutting-blade, as herein described.

96,504.—Alfred D. Tate, Peekskill, N. Y.—*Car-Seat.*—November 2, 1869.

Claim.—1. The construction and arrangement of a seat or stool, in the manner and for the purpose herein specified.

2. The combination of the supporting-post *a*, guiding-bar or brace *c*, and hinged bar *d*, with the seat or stool, in the manner and for the purpose herein described.

96,505.—O. H. Taylor, Brooklyn, N. Y.—*Bit-Stock.*—November 2, 1869; antedated October 23, 1869.

Claim.—The socket D D, with opening G and lip C, when all the parts are constructed as described, and for the purposes specified.

96,506.—J. Thayer, Palmyra, Wis.—*Butter-Package.*—November 2, 1869.

Claim.—The combination of a removable wooden butter-receptacle, having a series of apartments, with two surrounding metallic chests, each constructed as described.

96,507.—Levi Till, Sandusky, Ohio, assignor to himself, B. W. Wells, and J. C. Butler, same place.—*Window.*—November 2, 1869.

Claim.—The combination of the pocket *a* with sashes hung upon slides, in the manner and for the purpose specified.

96,508.—Joseph C. Tone and Henry A. Clum, Rochester, N. Y., assignors to Theobald W. Tone, same place.—*Hand-Stamp.*—November 2, 1869.

Claim.—1. The combination, in a hand-stamp, of two type-wheels, one within the other, the outer having fixed lettering or numbering on its periphery, and the inner having movable types, which, when forced out, form, in conjunction with the outer, a complete indication of date, substantially as described.

2. The arrangement, with the jointed slide *f*, of the hinged knob *k*, substantially as described.

3. The arrangement, with the knob *k′*, and shaft E, of the movable pin *n*, operating in the manner and for the purpose specified.

4. The combination, with the stamp-rod H, of the adjusting-cylinder K, whereby the stroke of said rod is changed, substantially as described.

5. The combination of the dry ribbon M with the inked ribbon P, operating in the manner and for the purpose specified.

96,509.—James S. Totten, Lebanon, Ohio.—*Culinary Boiler.*—November 2, 1869.

Claim.—The vessel C, constructed as described, in combination with a tank, B, substantially as described.

96,510.—Adam Towberman and John Keys, Washington, Ill.—*Corn and Fertilizer Dropper.*—November 2, 1869.

Claim.—1. The dropper-wheels E and F, with holes *k k k k*, of different sizes, and slots O O O, in combination with pins *p p*, constructed and arranged substantially as described.

2. The slide D, with pins *p p*, in combination with the slots O O O, of dropper-wheels E and F, and valves, constructed and operating substantially as described.

3. In a corn and fertilizer dropping machine, the wheels E and F, boxes A and B, and shanks C, of runners K K, so constructed as to require only one box for discharging the corn and fertilizer, the box having a simple division in the center thereof, substantially as described.

4. The combination of the stirrers in boxes A A with the dropper-wheels E and F, constructed substantially as described.

96,511.—Ambrose Tower, New York, N. Y.—*Clothes-Wringer.*—November 2, 1869.

Claim.—A combined washer and wringer, having board A, wringer D, springs E, set-screws H, guards *u*, hooks *c*, and hand-rest S, constructed and arranged substantially as specified.

96,512.—Ambrose Tower, New York, N. Y.—*Wash-Board and Wringer-Frame.*—November 2, 1869.

Claim.—The wringer-frames H, and blocks *c* and *s′*, when constructed as herein described, and combined with a wash board, substantially as specified.

96,513.—Edward A. Uehling, Richwood, Wis.—*Land-Roller.*—November 2, 1869.

Claim.—1. The devices employed for supporting the weight of the driver, and causing it to bear equally upon the inner ends, of the rollers D and D, consisting of the standard F, supporting the seat E, and pivoted at its lower end to the equalizer-bar G, resting upon the boxes *c′ c′*, substantially as herein shown and described.

2. The within-described land-roller, containing the rollers D D and H, journaled within frames composed of the strips A and A, cross-bars B and B, standards C, strip I, cross-bars K and K, strip L, bar N, braces O and O, and brace P, and, in combination therewith, the seat E, standard F, and equalizer-bar G, all constructed and arranged substantially as and for the purpose specified.

96,514.—Manuel Van Slyke and D. W. Wood, Rome, N. Y.—*Car-Coupling.*—November 2, 1869.

Claim.—The combination of the double catch I, with the bar J and lever G, whereby the coupling-hook D may be held in an elevated position, or its undue elevation by combined weight of said bar and lever be prevented, all constructed as hereinbefore shown and described.

96,515.—HEINRICH VOELTER, Heidenheim, Wurtemberg.—*Wood-Pulping Machine.*—November 2, 1869.

Claim.—In wood-pulping machines, the use of assorting-sieves with oblong meshes, constructed as herein shown and described.

96,516.—BENJAMIN D. WALLACE, Boston, Mass.—*Broom and Brush Holder.*—November 2, 1869.

Claim.—The arrangement of the clamps *b* and *h*, spring *c*, projection *e*, in combination with frame A and screw *k*, as shown and described.

96,517.—ELISHA WIARD WALTON and ANDREW JACKSON BROWN, Stockton, Cal., assignors to MATTESON AND WILLIAMSON, same place.—*Hay-Fork.*—November 2, 1869.

Claim.—Fastening the teeth to the head by the band or clip B, provided with a socket C, and a score in the head A for the shank of the tooth D, so arranged that the shank prevents the clip from turning on the head A, substantially as shown and described.

96,518.—CYRUS WATERMAN, Providence, R. I.—*Steam Culinary Vessel.*—November 2, 1869.

Claim.—The arrangement and combination of the steam-chamber A, provided with the downward-projecting flange B, and partially-perforated bottom, with the close-covered inner vessel D, when all the parts are constructed so as to operate as described.

96,519.—WILLIAM WEAVER, Nashua, N. H.—*Faucet.*—November 2, 1869.

Claim.—The upward-acting lifter C, with valve *b*, slot *e*, and notch *i*, in combination with the latching-pin *o*, tube B, and stem A, all substantially as herein shown and described.

96,520.—JOHN WEEKS, Buffalo, N. Y., assignor to himself and BUFFALO AND NIAGARA SCALE-WORKS.—*Weighing-Scale.*—November 2, 1869.

Claim.—As an improvement in grain-scales, the diagonal arrangement or "spread" above and below the main beam B of the series of beams C D E, the beams B C D designating both weight and measure, but of different capacities, and the beam E being the unit-beam thereof, all beams having a common fulcrum, and by the diagonal arrangement exposing their faces simultaneously to view from a common stand-point, as and for the purpose set forth.

96,521.—JAY WHEELOCK, San Francisco, Cal.—*Bale-Tie Lock.*—November 2, 1869.

Claim.—The bale-tie lock, composed of the slide M, with its interior flange or shoulder L, in combination with the band or strap having the folded end A, and double-lapped and curved end B, when said parts are constructed, arranged, and applied together, in the manner and for the purpose herein shown and described.

96,522.—J. A. WHITMAN, Auburn, Me.—*Water-Wheel Governor.*—November 2, 1869.

Claim.—1. The combination, with the vibrating or reciprocating sleeve or yoke, the driving-shaft of a governor, and a ratchet-wheel, arranged to move the gate, of a vibrating pawl-arm, a double-acting pawl, and a crank, or other device on the said driving-shaft for imparting vibrating motion to the pawl-arm, when the governor-sleeve or yoke is arranged for changing the pawl upon the said ratchet-wheel for working it in opposite directions, all substantially as specified.

2. The combination, with the sleeve X of a governor, of the pendent wings T, crank-shafts S, and suitable connecting-rods M, all substantially as specified.

96,523.—HENRY WHITTEMORE, New York, N. Y.—*Ornamental Covering for Floors, Walls, &c.*—November 2, 1869.

Claim.—Marquetry floor and wall covering, constructed by cutting and fitting thin pieces of wood, and gluing them to a back of canvas or other suitable material, substantially as set forth.

96,524.—FREDERICK WILCOX, Waterbury, assignor to H. B. WILCOX, Portland, Conn.—*Process of Refining the Waste from German Silver and other Metals.*—November 2, 1869; antedated October 29, 1869.

Claim.—The process, herein described, for decarbonizing the wastes of German silver and similar metals.

96,525.—FREDERICK WILCOX, Waterbury, assignor to H. B. WILCOX, Portland, Conn.—*Process of Utilizing the Waste Formed in Cleaning Copper and Brass Goods.*—November 2, 1869; antedated October 29, 1869.

Claim.—The process, herein described, of utilizing the waste formed from cleaning copper and brass.

96,526.—WILLIAM W. WILLIS, Chicago, Ill.—*Passenger-Register for Street-Cars.*—November 2, 1869; antedated October 30, 1869.

Claim.—1. The spring-pinion *a b d*, as and for the purpose set forth.

2. The combination of the spring-pinion *a b d*, wheels T H, hands *f*, ratchet and pawl I, shafts E, G, gate L, and spring Z, as described.

96,527.—A. WILMOT, Cleveland, Ohio.—*Oiler-Holder for Sewing-Machine.*—November 2, 1869.

Claim.—As an article of manufacture, the herein-described oiler-holder, consisting of the rest A, lug C, and their connection B, combined with the clasp for holding the oiler therein, substantially as set forth.

96,528.—MARK L. WINN, San Francisco, Cal.—*Shampooing-Apparatus.*—November 2, 1869.

Claim.—The above-described shampooing-apparatus, consisting of the rim A, standards D, and trough B, substantially as set forth.

96,529.—JUDSON WOLFE and WILSON WOLFE, Harveyville, Pa.—*Sleigh-Brake.*—November 2, 1869.

Claim.—The combination of the buttons *b*, bar D, rods F F, curved bars G G, pivoted and connected together, bar E with loop *a*, and sliding tongue C, all substantially as specified.

96,530.—GEORGE F. WOOLSTON, Marshalltown, Iowa.—*Ribbon-Case.*—November 2, 1869.

Claim.—The spools B, with the pulleys C, the adjustable driving-pulley E, on the shaft F, and the band D, in combination with the case A, constructed, arranged, and operating as and for the purposes described.

96,531.—HENRY C. WORK, Philadelphia, Pa.—*Knitting-Machine.*—November 2, 1869.

Claim.—1. The combination of the hooks *a* and pins *b*, when connected as described, so that both are operated by the same cam, and so that each pin operates upon the loop of yarn on the hook next to that one to which the said pin is connected, substantially as specified.

2. The arrangement, in the crank-handle, of a yarn-guide, substantially as specified.

96,532.—JOHN A. FULLER, Rockford, Ill.—*Fire-Kindler.*—November 2, 1869.

Claim.—1. The cup A, cast as described, in one piece, with the socket B, and provided with flange *a*, rim *b*, and standard D, all substantially as and for the purposes herein set forth.

2. In combination with the cup A, constructed as herein described, the wire sieve *e* and perforated cover *d*, substantially as and for the purposes herein set forth.

96,533.—ALBERT H. SHIPMAN, Arcadia, N. Y.—*Extension-Table Slide.*—November 2, 1869.

Claim.—1. The metallic slides C, made thicker at one side than at the other, and provided with tongues *a*, shoulders *c*, and notches or recesses *f*, in combina-

tion with bars A B, having grooves *b* and pins *g*, as herein described, for the purpose specified.

2. The bars A B, separated and held apart by means of a common round-headed pin, *i*, for the double purpose of presenting a convex bearing-point for the adjacent bar, and admitting adjustment, as described.

96,534.—Samuel Anderson and Thomas J. Folan, Stapleton, N. Y.—*Mode of Securing Type in Forms.*—November 9, 1869.

Claim.—Securing type in the forms by plaster of Paris, or other similar substance, cast while in a plastic state around the same, and solidified therein, substantially as specified.

96,535.—John Annear and W. J. Gordon, Philadelphia, Pa.—*Double-Acting Press for "Blanking" and "Forming up" Sheet-Metal.*—November 9, 1869.

Claim.—1. The combination of the levers C and D, and the plunger E and F, substantially as and for the purpose hereinbefore set forth and described.

2. The dies *n'* and *n''*, constructed and arranged together, so as to operate in combination with the respective plungers E and F, substantially as and for the purposes hereinbefore set forth.

3. The combination of the stripping-blocks 6 6 and lower die *n''*, substantially as and for the purpose hereinbefore set forth.

4. The combination of the adjusting-screw I with the levers C and D and plungers E and F, substantially as and for the purpose hereinbefore set forth.

96,536.—Albert Armitage, Phelps Township, and John H. Olmsted, Arcadia, N. Y.—*Portable Fence.*—November 9, 1869.

Claim.—1. The posts A or B, provided with the grooved or notched top, and with the cleats G, in combination with the rails C and D, or their equivalents, shown in Fig. 3, substantially as and for the purpose specified.

2. The rounded ends of the rails C, substantially as shown, and for the purpose set forth.

96,537.—Joseph H. Baddeley, Greensborough, Pa.—*Apparatus for Shaping Earthenware.*—November 9, 1869.

Claim.—1. The combination, with a molding-jar, of a scraper, E, and clefted tool C D, all as shown and described.

2. The clefted tool C, in combination with notched bar F, oscillating post G, dog I, and slotted post G, all arranged as set forth.

96,538.—Charles W. Bailey, Boston, Mass.—*Detachable Boot and Shoe Heel.*—November 9, 1869.

Claim.—1. The detachable heel, made of wood, with the grain of the wood presented endwise to the wearing-surface, and providing with the connecting-devices, and otherwise constructed as herein described, as a new manufacture.

2. The combination of the exterior plate C, which is attached to the sole, and the interior plate D, which is attached to the heel, and fits closely into said exterior plate, so that both are in the same plane, and the latches or catches E, for confining the two plates together in said plane, in a direction perpendicular to it, substantially as described.

3. In the construction of detachable heels, as described, the making of the recesses in the heel to receive the connecting-devices by indenting the wood, instead of cutting it out, substantially as described.

96,539.—John Bannihr, Hempstead N. Y.—*Gas-Heater.*—November 9, 1869.

Claim.—A portable stove, combining the metallic chimney G, with holes in their sides, and isinglass shutters, the double-walled oven J, and frame-work A B, oil-reservoir D, and burners E, each of said essential elements being constructed and arranged, with respect to the others in the manner described.

96,540.—Henry Benett, Linden, Cal.—*Ditching-Machine.*—November 9, 1869.

Claim.—1. The spading-drum A, constructed substantially as specified, and provided with the followers D, and combined with the scraper and guide G, and the eccentric rings F, all substantially as described.

2. The combination, with the spading-drum, of the chute H, elevators I K, and spout N, substantially as specified.

3. The arrangement of the spading-drum, elevator-frame, and front axle and wheels, all substantially as specified.

96,541.—Samuel Bonser, Dover, N.H.—*Steam-Trap.*—November 9, 1869.

Claim.—The arrangement of the tubes E F, and the tubular spindle A, in combination with the cylinder G, triangular pins A and B, and the rods D, substantially as and for the purposes described.

96,542.—Marcus S. Borthwick, Montana, Iowa.—*Railway-Car Brake.*—November 9, 1869.

Claim.—1. The combination, with the brakes A, levers B and C, and rods E' and E, of the jointed winding-shaft G H' and sliding friction-wheel I, substantially as specified.

2. The combination, with the wheel I and its shaft, of the convex-headed slide K, concave-faced lever N, and rods O, substantially as specified.

3. The combination, with the slide K and wheel I, of the spring P, substantially as specified.

96,543.—William Boyrer, New York, N. Y.—*Organ-Stop Handle.*—November 9, 1869.

Claim.—An organ-stop handle, provided with an oblique surface, for displaying the notice applied to the same, as set forth.

96,544.—Edward Brady, Philadelphia, Pa.—*Fastening for Buttons.*—November 9, 1869.

Claim.—The swiveled bar B, constructed with stops *b*, in combination with a suitable button, A, substantially as and for the purposes set forth.

96,545.—Thomas H. Brady, New Britain, Conn.—*Faucet-Connection.*—November 9, 1869.

Claim.—The conducting-tube B, when provided with shoulder or collar *b* and a squared tenon, *c*, or its equivalent, in combination with the thimble-nut C, barrel A, and recess *a*, the whole combined and arranged so as to prevent the rotation of the tube B, substantially as described.

96,546.—James Campbell, Harrison, Ohio, assignor to himself and William Campbell, same place.—*Seed-Planter.*—November 9, 1869.

Claim.—1. The gear-disk D, forming the center or hub of the ground or drive wheel, and separable therefrom, as shown and described, for the purpose set forth.

2. The rearward extension *s* of the lid or top S of the seed-hopper, for the purpose of protecting certain operative parts of the seeding-mechanism, and the upper end of the seed-spout, as set forth.

3. The pivoted gravitating forwarder or drop-finger M *m m' m'' m'''*, constructed, and having its pivot arranged relatively to the seed-slide, as represented and described, for the purpose set forth.

4. The reversible gauge-plate K *k k'*, as and for the purpose described.

96,547.—George W. Carpenter, Butler, Ind.—*Water-Elevator.*—November 9, 1869.

Claim.—1. Attaching the crank *c* to the shaft B, in such a manner as that the crank may be operated as a lever to shift the shaft endwise, substantially as described.

2. The combination of the shaft B, provided with its collar *e*, with the blade *h*, rod *h'*, and bar *h''*, as and for the purpose described.

96,548.—Jefferson Chase, Orange, Mass.—*Chair.*—November 9, 1869.

Claim.—The combination of the chair-seat with the curved bar *c* to which it is hinged, the bar *f*, which serves as a support and stop for the seat in its horizontal and inclined positions, and the spring *i*, connected with the front of the bar *f* and seat as specified, said parts being constructed and arranged as shown and set forth.

96,549.—H. W. Clapp, Northampton, Mass.—*Hoeing-Machine.*—November 9, 1869.

Claim.—1. The combination, on a truck, of two or more hoes or spades, E E, arranged for operation by motion derived from the wheels of the truck, as herein shown and described.

2. The combination, with a pair of spades or hoes, operating as described, of a guard or shield, Q, moving and adjustable vertically, as described.

3. The combination, with the spades or hoes, arranged for operation as described, of the vibrating cultivators V V, as specified.

4. The combination, with the spades or hoes, of the cultivators V V and V^1 V^2, as specified.

5. The combination, with the spades or hoes E E, of the chains M, rollers N, levers O, and spring-catches P, as specified.

6. The combination of the spades or hoes, cultivators V V, V^1 V^2, and H^1, all as specified.

96,550.—Samuel Clark, New York, N. Y.—*Kite.*—November 9, 1869.

Claim.—1. So attaching a kite to its check-line *e*, that the kite will present different angles to the currents of wind, according to the force of the wind, substantially as described.

2. A spring, *d*, or its equivalent, interposed between the check-line *e* and the kite A, in combination with a line, *f*, or its equivalent, substantially as described.

3. The combination of the line B with a kite, which is constructed substantially as described.

96,551.—Thomas J. Coulston, Springville, assignor to E. S. Shamtz and Joseph Johnson, Royer's Ford, Pa.—*Hinge for a Door or Window Frame of a Stove.*—November 9, 1869.

Claim.—A hinge, *a' b'*, constructed, applied, and operating substantially in the manner and for the purpose described.

96,552.—Patrick H. Coyle, Newark, N. J.—*Boiler-Tube Cleaner.*—November 9, 1869.

Claim.—1. A tube-cleaner having short sectional scrapers, each secured upon a bowed spring, and held to place by it only, and in such manner that the heads may be adjusted nearer to each other, to increase the bulge of the springs, without obstruction from the scrapers, substantially as shown and described.

2. The combination, with the springs and scrapers, of the disks G, the stationary head C, or its equivalent, and an adjustable head, E.

96,553.—Ezekiel K. Davis, New York, N. Y., assignor to Duckworth & Sons, Pittsfield, Mass.—*Jacquard-Mechanism for Looms.*—November 9, 1869.

Claim.—1. The T-levers, in combination with the suspension-board and trap-boards, when arranged and constructed so as to produce the mode of operation hereinbefore described.

2. In combination with the card-prism and its reciprocating mechanism, the bent arm *p* and the T-lever, arranged and constructed to operate in the manner described.

96,554.—William Edward Davis, Jersey City, N. J.—*Electro-Magnet.*—November 9, 1869.

Claim.—An electro-magnet, which has the wire wound in alternate layers upon the spools or cores, so that it will pass back and forth between them, substantially as and for the purposes herein shown and described.

96,555.—Edwin Dayton, Meriden, Conn.—*Lateral or Diverging Connection for Cement Water-Pipes.*—November 9, 1869.

Claim.—The box or shell A, provided with one or more branch collars, C, extending therefrom at any required angle, for jointing cement water-pipes, in the manner and for the purpose as herein specified.

96,556.—James Dempster and Henry Holcroft, Media, Pa.—*Carding-Machine.*—November 9, 1869.

Claim.—1. The conducting-roller *h*, in combination with the feed-rollers 5 and 6, as described, for the above purpose.

2. The tumblers *g g*, in combination with the cylinder E, as described, for the above purpose.

96,557.—T. S. E. Dixon, Janesville, Wis., assignor to himself and William H. Payne, same place.—*Street-Car Starter.*—November 9, 1869.

Claim.—1. The curved arm or segmental wheel F and weighted pawl H, in combination with a ratchet-wheel attached to the axle or wheels of the vehicle, substantially as and for the purpose set forth.

2. The pivoted draught-bar I, formed with an arm, *i'*, when used in connection with the arm or segmental wheel F, and pivoted weighted pawl H, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the pivoted and weighted lever-catch L with the draught-bar I, and the frame of the car, substantially as herein shown and described, and for the purpose set forth.

96,558.—Johnson Dodge, New Orleans, La.—*Coffee-Pot.*—November 9, 1869.

Claim.—A steam coffee-maker, provided with an outer chamber for holding water, a perforated cup, or filter for holding the ground coffee, and an inner chamber or receptacle for the liquid coffee, when constructed and operating substantially as shown and described.

96,559.—William Donoghue and Frederick L. Charlton, Philadelphia, Pa.—*Hose-Bridge.*—November 9, 1869.

Claim.—The sides A B, having the hose-openings K, transverse tie-rods C D E, having the tenon-ends *c*, the mortises *d*, on the sides A B, and the movable adjustable floor F G H, carried by the transverse tie-rods C D E, the whole combined and arranged substantially as shown and described.

96,560.—David Dorman, Wheatland Furnace, Pa., assignor to himself and Thomas Johnston.—*Balance Slide-Valve.*—November 9, 1869.

Claim.—The arrangement of a series of packing-strips between the upper and lower portions of a quadrangular divisional slide-valve, said strips being of such construction and shape as will admit of a passage or steam-way underneath the same, and being so relatively arranged that they will form a perfect joint with each other, substantially as described and set forth.

96,561.—Joseph G. Downer, Auburn, N. Y.—*Fence.*—November 9, 1869.

Claim.—The elongated screw-bolt *d*, in combination with a fence or panel thereof, constructed substantially as described, and operating as and for the purpose specified.

96,562.—Robert I. Draughon, Claiborne, Ala.—*Cotton-Cultivator.*—November 9, 1869.

Claim.—1. The combination, with the frame A and wheels C, of the oscillating frame F, the two sets of rotary cutters S, adjusting-shaft M, arms K L, connecting-rods H I, and adjusting-catches, substantially as specified.

2. The combination, with the frame A and wheels C, of the oscillating frame G, rotary cutters W, arranged to work across the rows, the adjusting-shaft N, arms and connecting-rods, substantially as specified.

3. The combination, on one frame, A, and wheel C, of the two sets of cutters S, and the one set W, when arranged on oscillating or adjustable supports, and to act upon both sides of the row, and transversely thereof, substantially as specified.

96,563.—Charles Drew, Newark, N. J.—*Harness-Pad.*—November 9, 1869.

Claim.—Uniting the binding D to the lining C, by stitching it simultaneously with the stitching of the lining to the top, and by the same operation, substantially as specified.

96,564.—James Duckworth, Pittsfield, Mass., assignor to Duckworth & Sons, same place.—*Loom for Weaving Tape, &c.*—November 9, 1869.

Claim.—1. In combination with filling-thread carrier, the comb-beater for beating up the filling-threads, having the mode of operation substantially as herein described.

2. In combination with the belt-shipper, the thread-protector and the levers and cams which con-

stitute the mechanism for releasing the belt-shipper, to stop the loom, substantially as described.

96,565. — CLEVELAND F. DUNDERDALE, New York, N. Y.—*Apparatus for Generating and Carbureting Gases.*—November 9, 1869.

Claim. — The sloping or funnel-shaped bottom, with drain-conduit and cock, as shown at A, B, and D, when used in a gas-generator, constructed substantially as described, and operating as and for the purposes set forth.

96,566. — FRANCIS W. EBERMAN, West Salem, Ill.—*Envelope*—November 9, 1869.

Claim.—Securing the flap C, and an intervening strip, A or A′, to the part B, so that the edge of the flap and the said strips will be unattached for the distance of a space sufficient to be taken hold of for tearing the envelope open, whether the said strips be a part of the flap or separate strips pasted thereto, or to the part B, all substantially as specified.

96,567.—THOMAS A. EDISON, New York, N. Y., assignor to SAMUEL S. LAWS, same place.—*Printing-Telegraph Apparatus.*—November 9, 1869.

Claim.—1. The stationary pins *e f g h*, in combination with the clicks *b c*, actuated by the armature-levers E F, and acting on the ratchet D, substantially as and for the purpose described.

2. The combination of a separate electro-magnet with the unison-lever L, substantially as set forth.

96,568. — JACOB EDSON, Boston, Mass.—*Capstan.*—November 9, 1869.

Claim.—1. The capstan-pawl *o*, as made with the lip *p*, arranged to relieve the center-pin from strain as described, such lip being for other purposes, as explained.

2. The arrangement of the plug *t* and the lines *q*, with the pawls *o* and the capstan-head E.

3. The combination, as well as the arrangement, of the journal *l* with the capstan-head E, the pinion *k*, and the rotary gear-frame or spider D, arranged within the capstan, as set forth.

4. The arrangement of the auxiliary pawl or pawls *h* and the ratchet *i*, with the spindle C, the rotary spider D and its gears, the capstan-head and its pinion and pawl or pawls, and the capstan-barrel and its internal gear.

96,569.—SAMUEL ENSIGN, New Franklin, Ohio.—*Bridge.*—November 9, 1869.

Claim.—1. The combination, with two exterior and two interior bars *a a* and *b b*, shaped as described, of the shouldered bolts C, secured by the nuts *d*, all as set forth.

2. The improved bridge above described, each of its parts being shaped, fitted, and arranged in structure with respect to the others, as shown and described.

96,570.—LEVI FERGUSON, Lowell, Mass.—*Loom for Weaving Pile-Fabrics.*—November 9, 1869.

Claim.—1. The combination and arrangement of the double slotted bent lever D, with the lay and the loom-frame, and with the shuttle box, pivoted at its outer end to the lay; the said lever being applied to the shuttle-box, the lay, and the frame of the loom, substantially in manner and so as to enable it to operate therewith, and effect the movements of the shuttle-box, as explained.

2. The arrangement of the stationary guard *o′*, with the wire-stall H, as described, and with the hooked arm of the driver K, arranged in and to operate with the carrier as explained.

3. The carrier I, in combination with the hooked arm L, having a projection thereon that moves within the carrier, and prevents the hook from rising out of engagement with the wire-head, while the latter may be in movement within the said carrier.

4. The combination of the slide-rod *k′* and the "compound joint," as set forth, or their mechanical equivalent or equivalents, with the driver K, and the carrier I, to operate as set forth, and with a wagstaff *i′*, pivoted to, and so as to be actuated by a rock-shaft, *h′*, as described; the purpose of such slide-rod and compound joint being to so connect the driver with the wagstaff as to allow the driver to move within the carrier, and to be moved by it and such wagstaff, substantially in manner as specified.

96,571. — LEONARD ASA FLEMING, New York, N. Y.—*Ear of Wooden Buckets.*—November 9, 1869; antedated November 1, 1869.

Claim.—Attaching the bail to wooden vessels by means of disks *b*, expanded within recesses in the wood, substantially as and for the purpose shown and described.

96,572.—JOHN FOX, New York, N. Y.—*Manufacturing Shovels.*—November 9, 1869.

Claim. — 1. The combination of the corrugated female die E with the correspondingly corrugated male drop die D, operating together as and for the purpose specified.

2. An improved fire-shovel, A, corrugated at the back or point of strain, in the manner shown and described.

96,573. — J. G. FREDENBURH and WILLIAM V. ANDREWS, Newcastle, Cal.—*Water-Wheel.*—November 9, 1869.

Claim. — 1. The buckets A, provided with the spiral concave faces B, and combined with the rim, substantially as specified.

2. The buckets, having faces formed as described, provided with flanges C, and secured to the rim, substantially as specified.

96,574. — JOHN FRYMIRE, Orangeville, Pa.—*Fly-Net.*—November 9, 1869.

Claim. — A fly-net, composed of cylindrical ribs, and threads secured thereto by a half stitch through apertures at right angles to each other, or nearly so, in the manner substantially as shown and described.

96,575.—CONRAD FURST, Chicago, Ill.—*Colter for Plows.*—November 9, 1869.

Claim.—1. The arm, or pendant B, having a curved or angular back, and a cylinder or bearing, C, on the side thereof, in combination with a bent fork, E H, substantially as and for the purposes specified.

2. The combination and arrangement of the adjustable clamp F G, with the beam A, arm B, when provided with a curved or angular back, and a side bearing C, stop *a b*, bent wheel-fork E, and wheel D, all constructed and operating substantially as specified.

96,576.—HORATIO GALE, Albion, Mich.—*Horse Hay-Rake.*—November 9, 1869.

Claim. — The lever L, having the stirrup *i*, and pivoted to the standard E, as shown, when provided with the hand-lever L′, adjustable by means of the disks *d d*, and when adjustably connected, by means of the pivoted perforated links *b b*, with the arm F attached to the rake-head, all being constructed and arranged substantially as herein described, whereby the rake-teeth are held down, either by the pressure of the foot, at *i*, or by carrying the links *b* out of line with the lever L, as set forth.

96,577. — MERRITT GALLY, Rye, assignor to ALLEN CARPENTER, Rochester, N. Y. — *Printing-Press.*—November 9, 1869.

Claim. — 1. The plate C, used either as bed or platen of a printing-press, when said plate is supported upon a rocker or rockers and rocker-seat or rocker-seats, or their equivalents, whether said rocker-seat or rocker seats are made fixed or adjustable, substantially as herein set forth.

2. The arms D and D″, in combination with stop *g*, or their equivalents, forming a slipping-toggle, substantially as herein set forth.

3. The pulley K, strap, cord, or chain M, and flanged slip-gear I J, combined and constructed as herein described, and for the purpose herein set forth.

96,578. — MERRITT GALLY, Rye, assignor to ALLEN CARPENTER, Rochester, N. Y. — *Printing-Press.*—November 9, 1869.

Claim.—1. A platen for a printing-press having two opposite faces A A′, in combination with rack

and pinion R W, and clutch N^5, substantially as herein described, and for the purpose herein set forth.

2. The yoke-shaped rod and spring S, journal-box *t*, and nuts *n n'*, in connection with the body of a roller-carriage, when combined and constructed as herein described, and for the purpose herein set forth.

96,579. — MERRITT GALLY, Rye, assignor to ALLEN CARPENTER, Rochester, N. Y. — *Printing-Press.*—November 9, 1869.

Claim. — 1. The plate A, used either as a bed or platen of a printing-press, in combination with the friction-roller or rollers, or equivalent, studs, stops, or lugs P', flange V, or its equivalent, and curved support or rocker R, substantially as herein described and for the purpose herein set forth.

2. The spring C, in combination with a toothed rocker-seat or plain rocker-seat and rack, combined substantially as herein described, and for the purpose herein set forth.

3. The supporting frame-work G, or combined frame-work and bed G B, when the sides of said frame-work or combined frame-work and bed are depressed for letting in the cranks or crank-wheels F, substantially as herein described, and for the purpose herein set forth.

4. The levers T T, when said levers are pivoted behind the cranks or crank-wheels F F, in the line with said cranks, and so curved as to allow full sweep of cranks F F without contact of said cranks and levers, substantially as herein described, and for the purpose herein set forth.

5. The levers T, in combination with the slotted fulcra S, substantially as herein described, and for the purpose herein set forth.

6. The levers H and H', and weight W, combined and arranged substantially as herein described, and for the purpose herein set forth.

7. The method herein described for perfectly balancing or varying the counterpoise of plate A, used either as bed or platen of a printing-press, avoiding the necessity of the use of counterweight, springs, or the application of force, for the purposes specified, substantially as herein set forth.

8. A changeable ink-fountain, with changeable linings, shells, or tanks, for different kinds or colors of ink, whether constructed in the precise manner herein described, or in any other manner to produce the same result.

9. The combination of rod and springs *t t*, nuts or stops *m m'*, griper-bar S^2, with lever d^4, and swivel-eye *m''*, substantially as herein described, and for the purpose herein set forth.

10. The draw-bars D, with slots C^5 in combination with crank-pins d^5, substantially as and for the purpose set forth.

96,580. — O. H. GARDNER, Fulton, N. Y. — *Vise.* — November 9, 1869; antedated November 1, 1869.

Claim.—1. The offset *c*, formed on the rear shank b^1, for the purpose of carrying its lower end perpendicularly in line with the center of the upper plate D, substantially as herein shown and described.

2. The offset *e*, formed on the shank *g'* of the front jaw, to carry the ball H perpendicularly in line with the face of the jaw, substantially as and for the purpose herein shown and described.

3. Making the aperture *h* through the shank *g'* of the front jaw of tapering form, for the purpose of giving greater freedom of motion to the said jaw, as set forth.

4. The prolonged hub *i*, formed on the shank of the front jaw, for the purpose and in the manner substantially as herein shown and described.

5. The rib *d*, formed on the rear shank b^1, to work in or against the plate E, substantially as and for the purpose herein shown and described.

96,581. — JOSEPH GAWLER, Washington, D. C.—*Head-Brace for Coffins.*—November 9, 1869.

Claim. — The within described head-brace to square-headed wooden burial-cases.

96,582. — AMBROSE GIRAUDAT, New York, N. Y. — *Machine for Branching Artificial Flowers.* — November 9, 1869.

Claim. — 1. The tube D, guiding the wire and inner thread *t*, and supporting the rotary spool or spools, by which the outer thread is applied to the stem of an artificial flower, substantially as herein shown and described.

2. The rotary frame H, arranged on the guide-tube D, to support the covering-spool or spools, substantially as herein shown and described.

3. The frame J, arranged to receive two or more spools L, and to be locked to the rotary frame H, in the manner set forth.

4. The wire *n*, arranged on the frame J, to lock the spools L thereto, and to lock the said frame J to the rotary frame H, substantially as herein shown and described.

5. The spring *o* and screw *p*, in combination with the frame H, to regulate the tension of the covering-thread, substantially as herein shown and described.

6. The rotary spools for applying the covering-thread, arranged in combination with the wire *s* for the stem, which is fed along without being turned.

7. The belt G and clamp P, arranged in combination with each other, substantially as and for the purpose herein shown and described.

8. A machine for branching artificial flowers, arranged substantially in the manner herein shown and described, and to operate as set forth.

96,583. — HENRY GROSS, Middletown, Pa. — *Manure-Hook or Drag.* — November 9, 1869; antedated October 26, 1869.

Claim.—The compound lever B C and spring *d*, when the same are arranged and work in combination with the tine-shaft E, substantially as described, as and for the purpose specified.

96,584. — J. M. HALE, Georgia Plains, Vt. — *Butter-Tub.*—November 9, 1869; antedated November 1, 1869.

Claim. — The couplings B, constructed as described, having hooks or key-seats *e*, and keys *i*, or their equivalents, for the purpose of locking the sections of a butter-tub together, in combination with the said sections, substantially in the manner and for the purpose set forth.

96,585. — J. M. HALE, Georgia Plains, Vt. — *Pipe-Coupling.*—November 9, 1869.

Claim.—The coupling A, provided with a tubular projection, B, and division-plate C, or their equivalents, substantially as and for the purposes herein set forth.

96,586.—JAMES A. HAMRICK, Parnassus, Va.—*Corn-Planter.*—November 9, 1869.

Claim.—1. The construction of axle A, with a vertically-perforated and horizontally-slotted beam upon one side, substantially as and for the purposes described.

2. Slides *a* a^2, cam-plates E F, levers E' F', and springs *c*, combined and operating substantially as described.

3. The levers E' F', applied to their respective cams, E F, and to the axle A, substantially as described.

4. Segmental runners P, applied to the machine, and constructed substantially as described.

5. The segmental slides *s*, applied to runners P, and operated by lugs *d*, on wheel C, acting through the medium of arms *s*, shaft D, and stirrup *d'*, substantially as described.

6. The rolling weights *k*, applied to rear extensions of the teeth R, substantially as and for the purposes described.

7. The combination, in a seeding-machine, of the sides *a* a^2, and *s*, arranged and operating as set forth.

96,587.—E S. HARRIS, Philadelphia, Pa.—*Manufacture of Artificial, and Preservation of Natural Flowers.*—November 9, 1869.

Claim.—The process herein described, of preserving the substance of natural flowers, by the application of rice-paper.

96,588. — DAVID HATHAWAY, Troy, N. Y. — *Stove-Grate.*—November 9, 1869.

Claim.—1. The grooved arms, substantially as and for the purpose specified.

2. The compound lever, constructed and acting as set forth.

3. The connection and operation of the sliding bars by means of the compound lever, in combination with the grooved arms, as set forth in the specification.

96,589.—R. H. HAWKINS, Akron, Ohio, assignor to himself and THOMAS H. DODGE, Worcester, Mass.—*Sled.*—November 9, 1869.

Claim.—1. The combination of the metallic knees and their cylindrical tops or projections *f*, with the grooved beams A B, (with or without their metallic lining-pieces *n*,) and the clasps or other binding-devices, for holding together said knees and beams, substantially as shown and described.

2. The construction of the metallic knee with a projection to enter a corresponding recess in the beam, or with a recess to receive a corresponding projection on the beam, and with a mortise to receive the tenon of the rave *b*, as and for the purposes described.

3. The combination of the beams and the runners with the metallic knees, connected with and held to said parts, substantially in the manner shown and set forth.

4. The herein-described combination, with the mortised metallic knees, of the tenoned raves *b*, constructed substantially as shown and specified.

5. The combination of metal clasps or bands with the knee and beam, to secure the union of the knee and beam in an independent runner-sled, as shown and described.

96,590.—AUGUST HITSCHERICH, Milwaukee, Wis.—*Beer-Cooler.*—November 9, 1869.

Claim.—1. Tub A, water-tanks B C and D E, with their connection G, water-pipes M, N, and O, substantially as described.

2. Water-tanks B C and D E, connections G, and handles and openings I and K, substantially as described.

96,591.—JOHN HOPE, Providence, R. I., assignor to HOPE AND COMPANY, same place.—*Diamond-Holders for Engraving Printers' Rollers.*—November 9, 1869.

Claim.—In combination with a curved and slotted diamond-holder, the curved weight, fitted thereto, and connected with the diamond-stem G, substantially as shown and described.

96,592.—FRANKLIN HOYT, Montpelier, Vt.—*Water-Wheel.*—November 9, 1869.

Claim.—1. The wheel A, constructed substantially as described, with laterally and vertically curved buckets *a*, and the band *a''*, in combination with the bottom plate *b* of the casing B, as and for the purpose specified.

2. The grates D D, in combination with the chutes *f f*, pivoted links *c' c'*, and ring C, the whole arranged and operating substantially as and for the purpose described.

96,593.—JAMES B. HUNTER, Ashley, Ill.—*Gang-Plow.*—November 9, 1869.

Claim.—1. The slotted plates F and draught rod G, in combination with the plow-beams D E, substantially as herein shown and described, and for the purpose set forth.

2. The adjustable frame C c^1 c^2, in combination with the axle B, plow-beam D, and tongue M, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the bent crank-lever L with the frame C and plow-beam D, substantially as herein shown and described, and for the purpose set forth.

4. The combination of the draught-rod O with the tongue M, double-tree N, and plow-beam D, substantially in the manner herein set forth and described.

96,594.—WILLIAM H. IVENS and WILLIAM E. BROOKE, Trenton, N. J.—*Punching and Shearing Machine.*—November 9, 1869.

Claim.—The combination of the shafts B, having eccentric wrists *d*, sliding boxes *e*, with the heads J, eccentric gears D E, and driving shaft G, substantially as set forth.

96,595.—JOHN JOBSON, Derby, England.—*Explosive Projectile.*—November 9, 1869.

Claim.—A projectile, formed of a base, *a*, concentric rings *b c*, stud-ring *d*, cup *n*, packing *m l*, the rings e^1 f^1, e^2 f^2, e^3 f^3, e^4 f^4, e^5 e^6, the chambered piece *g*, and plug g^1, all constructed and arranged, with respect to one another, in the manner described.

96,596.—NELSON JOHNSON, Jasper, N. Y.—*Saw-Swage.*—November 9, 1869.

Claim.—1. In combination with the stock A and sliding swage-pin B, the adjustable rest C, adapted to bear upon the edge of the saw, substantially as described, and rendering unnecessary a foundation upon the hub or mandrel.

2. The swage-pin B, extending longitudinally through the stock, for the purpose of adapting it to receive the blow direct, substantially as described.

3. A swage-pin, B, having a point, b^3, composed of a plurality of bevel-surfaces of the same or different angles, substantially as described, for the purposes set forth.

4. A swage-pin, extending longitudinally through the stock, so as to be acted on direct by the blow of the hammer, when tapered so as to prevent its movement in the stock, substantially as represented and described.

96,597.—J. A. KEMMIS, New Orleans, La.—*Pencil-Case.*—November 9, 1869.

Claim.—The improved pencil and rubber holder, having the spring-clamping holders C, rings E D, spring-hooks F, and screw-cap B, all arranged substantially as herein specified.

96,598.—J. GARDNER KENYON, Ferndale, Cal.—*Fountain-Pen.*—November 9, 1869.

Claim.—1. In combination with the ink-case A, the cavity *g*, by means of which a receptacle is provided for the sediment deposited by the ink, and a narrow edge formed around the stem, as a seat for the valve *b*, substantially as described.

2. In combination with the stem C, carrying the valve *b*, the arrangement of the rubber spring *d*, attached to the removable cone B, and regulated by the adjustable screw-nut *e*, substantially as specified.

96,599.—GEORGE V. LEICESTER, Boston, Mass.—*Toilet-Bedstead.*—November 9, 1869.

Claim.—1. The combination and arrangement of the two lifter-arms G H, their shafts I K, and the spiral springs applied thereto.

2. The combination and arrangement of the bureau B, its extension E, the ears C C, the case D, the bed-frame A, and the lifter-arms, their spring *h l*, and the shafts I K, the whole being substantially as described.

3. The combination of the spring tension-regulating mechanism, viz, the capstan-head, ratchet, and retaining-pawl, with the springs and their shafts, with the arms G H, combined with the bed-frame and the case, connected with a bureau, as set forth.

96,600.—JOHN LIPPINCOTT, Pittsburgh, Pa.—*Metal-Rolling Apparatus.*—November 9, 1869.

Claim.—Constructing rolls, for metal-rolling mills, hollow, and adapting, to said hollow rolls, tubes, or other appliances, by which a stream of water may be constantly kept flowing through them, substantially as described, for the purpose set forth.

96,601.—H. LOMBARD, San Francisco, Cal.—*Rotary Steam-Valve.*—November 9, 1869.

Claim.—The combination of the seat B, valve A, and auxiliary valve G, when provided with ports and passages, and arranged for operation, substantially as specified.

96,602.—CHARLES B. MACLAY, Delavan, Ill.—*Corn-Harvester.*—November 9, 1869.

Claim.—1. The combination of the guides K K', revolving troughs *a a a a*, (armed with cutting-edge,) and cover *b*.

2. The combination of revolving troughs *a a a a*, apron *o*, and husking-rolls *m m'*.

3. The apron *o* and husking-rolls *m m'*, in combination with revolving troughs *a a a a*, cover *b*, and guides K K'.

4. The construction and arrangement of guides K, K', revolving troughs *a a a a*, cover *b*, frame *p*, apron *o*, rollers *m m'*, and elevator *f*.

96,603.—JAMES MAHONY, Newport, R. I.—*Paddle-Wheel.*—November 9, 1869.

Claim.—The specific arrangement herein set forth; that is, placing them obliquely in half lengths, arranged so that the half lengths alternate in position, while each half length sets with the plane of its face passing through or near the axis of the shaft, all substantially as and for the purposes herein set forth.

96,604.—C. J. MILLER, Jr., Richmond, Ky.—*Churn.*—November 9, 1869.

Claim.—The fluted churn, in combination with the double-winged dasher, whose wings revolve in contrary directions, substantially as herein shown and described.

96,605.—JOHN C. MILLIGAN, Brooklyn, N. Y.—*Biscuit-Pan.*—November 9, 1869.

Claim.—Biscuit-pans united in clusters, by lapping and riveting the flanges, and either provided with the stiffening-wires or bars at the edges, or not, substantially as specified.

96,606.—ROBERT MORRIS, Salem, Ind.—*Harvester.*—November 9, 1869.

Claim.—1. The driving-wheel B, toothed rim G, wheel E, with toothed hub F, shaft D, and crank-shaft A, all combined and arranged substantially as specified.

2. The combination of the tilter K and weighted arm X with a hood, L, and guard M, all constructed and arranged as and for the purpose specified.

96,607.—JAMES O. MORSE, Englewood, N. J., and GARDNER D. HISCOX, Brooklyn, N. Y.—*Steam-Radiator.*—November 9, 1869.

Claim.—1. The diaphragm *a*, forming a separate compartment, at one side or end of the base.

2. The use of a separate compartment, formed at one end or side of the base, whether by means of the diaphragm or otherwise, and communicating with the innermost of the pairs of tubes composing the radiator, by means of a series of tubes proceeding from it, in which tubes said inner tubes are inserted, substantially as described.

3. The small openings *g*, for the passage of the drip from the first to the second chamber.

96,608.—M. MURPHY, Charlotte, N. C.—*Governor for Steam and other Enginery.*—November 9, 1869.

Claim.—1. The arrangement of the sliding spool B, connected to the weighted arms, the wheels D C G, worm H, and toothed sector I, all substantially as specified.

2. The combination of the sleeve B, of a governor carrying the wheels D C, and connected to the weighted arms, as specified, and the wheel G, when arranged for adjustment relatively to the said wheels C D, substantially as specified.

96,609.—HARRISON OGBORN, Richmond, Ind.—*Straw-Cutter.*—November 9, 1869.

Claim.—1. The described mode of attaching two knives to the radial arms of the balance-wheel of a straw-cutter, in combination with the devices for adjusting the knives to the face-plate J, as herein set forth.

2. The combination of the pin G, holes *c c*, and slotted hole X, for the purpose of retaining the balance-wheel in any desired position upon the shaft, or of permitting of the adjustment of the knives, as described.

3. The adjustable spring Z, in combination with the pressure-board R, when arranged as described, for the purpose of holding the straw and fodder compactly, as described.

4. The combination of the spring-bar Q, when made adjustable, as described, hooked rod P, and roller V, as and for the purposes described.

96,610.—ANSON W. PAYNE, Maine, N. Y.—*Whiffletree.*—November 9, 1869.

Claim.—The combination of the hook C, swivel *d*, plate B, the whiffle-tree A, all constructed as herein set forth.

96,611.—WILLIAM H. PERRY, Ripley, Ohio.—*Thrashing-Machine.*—November 9, 1869.

Claim.—1. The upper shoe A of a grain-thrashing machine, when provided with the inclined bottom *a*, the inclined screen B, the side-delivery spout *b*, and the discharge-opening *c*, arranged as described, for the purpose specified.

2. In combination with the above, the cover C, substantially as described, for the purpose specified.

96,612.—GEORGE B. PHILLIPS, Poughkeepsie, N. Y., assignor to A. M. CORNELL AND COMPANY, same place.—*Rock-Drilling Machine.*—November 9, 1869.

Claim.—1. The combination and arrangement of the segment-gear P, rack R, carriage G, lifter H, and wedge I, for raising and dropping the drill, substantially as described.

2. In combination with the devices above claimed, the springs V V and yoke W, for forcing down the drill-bar, substantially as described.

3. The combination and arrangement of the collar *a*, with its spring *e* and arm *c*, latch *i*, and spring *b*, arranged to operate substantially as described, for the purpose set forth.

96,613.—S. MONTGOMERY PIKE, Cincinnati, Ohio.—*Heat-Radiator.*—November 9, 1869; antedated October 23, 1869.

Claim.—The radiator, consisting of pipe *a* and flanges, the arrangement of said flanges in the position and angles herein shown and described.

96,614.—WILLIAM R. POOL, Havanna, Ala.—*Plow.*—November 9, 1869.

Claim.—1. The combination, with the mold-boards B, either provided with plates C, or projections formed by notches D, and the stocks A of the yoke E, clamping-plate F, and set-screws, when arranged substantially as specified.

2. The combination of the same, when the stock A is provided with the socketed plate for the set-screws and the notched plate H, and the mold-boards are provided with projections I, substantially as specified.

96,615.—NELSON READ, Jewett City, Conn.—*Mode of Transmitting Motion.*—November 9, 1869.

Claim.—The combination of a lever, F, swiveled to a block, I, with a grooved and fixed guide, H, the two disks D E, and the link G, as and for the purpose specified.

96,616.—SAMUEL REED, Rising Sun, Md.—*Window-Sash Fastening.*—November 9, 1869.

Claim.—1. The combination of the catch F, slotted plate D, and shooting or sliding bolt E, substantially as set forth.

2. The arrangement of the bearing-guards J at the upper end of sash B, and lower end of sash C, to prevent their lateral displacement in sliding up and down, all as set forth.

96,617.—JOHN E. REGAN, Chicago, Ill.—*Boiler-Tube Cleaner.*—November 9, 1869.

Claim.—1. Cleaning two or more flues of a steam-boiler or generator simultaneously, by discharging steam, directly from the boiler, into one end of the flues, by the means set forth, substantially as herein shown and described.

2. The frame-work of tubes, consisting of the parallel pipes E, nozzles F, and pipe C, in combination with a steam-boiler or generator and its flues B, substantially as herein shown and described.

96,618.—CLAUDE RENARD, MICHEL PERRET, and JULES CÉSAR VOITURET, Mâcon, France.—*Tap-Cock.*—November 9, 1869.

Claim.—The combination and arrangement of the disks and washers within the chamber of the cock, so that on the chamber filling with liquid, the pressure of this liquid pushes the disks against the wash-

ers, closing the chamber, top and bottom, and forming a perfectly water-tight cock, substantially as described.

96,619.—James Rice, Prairie Creek, Ind.—*Hand-Spinning Machine.*—November 9, 1869.

Claim.—The arrangement of case A, driving-wheel E, vertical axis F, hand-crank G, the intermediate shaft and pulley and spindle I, with the adjustable stand B C and pin D, all constructed as described.

96,620.—Emry Rooks, Trenton, Tenn.—*Axle-Skein.*—November 9, 1869.

Claim.—The skein A, provided with an orifice having a straight lower side, for the support of a cast-iron axle, and combined with the collar E, likewise having a straight lower side, in continuation with that of the orifice of the skein A, and also having its upper side inclined upward and outward, to fit it for the reception of the tapering end of the wooden bed-piece, in the manner set forth.

96,621.—Erastus B. Sample and John Sparks, Brooklyn, N. Y.—*Making Toy-Torpedoes.*—November 9, 1869.

Claim.—The metal-foil covering, and the mode of combining the fulminating-powder with the plaster of Paris, substantially as described, thereby producing a safe, reliable, and cheap hand toy-torpedo.

96,622.—A. A. Scank, Nyack, N. Y.—*Steering-Apparatus.*—November 9, 1869.

Claim.—1. The herein-described arrangement, with the hulls of vessels driven by single-screw propellers, of two rudders in advance of the propellers, one under each quarter, substantially as specified.

2. The arrangement of the rudder-posts B and braces C D with the hull, substantially as specified.

96,623.—Eilert O. Schartau, Philadelphia, Pa.—*Gas-Heater.*—November 9, 1869.

Claim.—1. The tubular coffee or tea pot, with hot-air chambers.

2. The combination of this kettle with the lower half of the jointed glass chimney for lamps and gas-burners, and also of the holder or receptacle for tea or ground coffee, which is attached to the said kettle in the manner and for the purpose herein set forth and specified.

96,624.—George A. Seaver, New York, N. Y.—*Latch.*—November 9, 1869.

Claim.—1. The follower, made for the reception of the spindle, with a recess, substantially as described, one part of which fits the spindle, and the other permits the spindle to turn freely therein.

2. The combination of a latch with the sliding follower, so that the latch may be reversed without removing the spindle.

3. The combination of a sliding follower with the mechanism of a lock, operated by the key, in such manner that the turning of the key connects or detaches the spindle and the latch, as may be required.

96,625.—Thomas J. Secor and Charles E. Shumway, Phelps, N. Y.—*Weeding-Hook.*—November 9, 1869; antedated October 26, 1869.

Claim.—The herein-described weeding-hook, having its points arranged in lines forming two sides of a triangle, as specified.

96,626.—Franklin Skinner, Cleveland, Ohio.—*Oil-Can.*—November 9, 1869.

Claim.—The cap B, provided with a recess, C, tube D, and wick E, as arranged, in combination with an oil-up or can, F, in the manner substantially as and for the purpose set forth.

96,627.—Thomas J. Sloan, Bronxville, N. Y.—*Door-Knob.*—November 9, 1869; antedated October 30, 1869.

Claim.—The shank *e*, with the serrated fins *d d*, in combination with the vitrified knob *a*, cavity *b*, and dowels *c c*, substantially as and for the purposes set forth.

96,628.—Jasper Snell and John M. Crosland, Pottsville, Pa.—*Railway-Rail Splice.*—November 9, 1869.

Claim.—The railway-rail clutch or splice, formed by the angular channel-bar plate A and the side-plates B B, constructed and applied as set forth.

96,629.—H. S. Stewart, Yreka, Cal.—*Endless-Chain Water-Wheel.*—November 9, 1869.

Claim.—1. A chain for power water-wheels, composed of plain links D, and inclined links C, the latter holding the buckets off from frictional contact from the former, as shown and described.

2. The chain, composed of links C D, in combination with polygon-shaped shafts F G, each side of said polygons corresponding in width to the length of one of said links, as and for the purpose specified.

3. The arrangement of the buckets B upon the inclined faces of the links C, in the manner set forth, so that when the links C D are aligned, one bucket will be within another, as described.

96,630.—Jacob Stroop, Joliet, Ill.—*Grain-Cleaner.*—November 9, 1869.

Claim.—1. The lining or facing the burrs, shown in Figs. 2, 3, 4, and 5, with metal plates, having triangular teeth or projections, constructed, operating, and arranged substantially as described.

2. The annular partitions 8 8 on the burr P, operating and arranged as and for the purposes set forth.

96,631.—Isaac H. Sutton, Coon Rapids, Iowa.—*Wind-Wheel.*—November 9, 1869.

Claim.—The combination, with a wind-wheel, of a gate, B, arms C, vane D, cord, and weight, when arranged substantially as specified.

96,632.—Charles L. Thiery, Boston, Mass.—*Manufacture of Watch-Cases.*—November 9, 1869.

Claim.—The manufacture of watch-cases, in the manner shown and described.

96,633.—Alois Thoma, New York, N. Y.—*Process and Apparatus for Converting Cast Iron into Steel.*—November 9, 1869.

Claim.—1. The arrangement of the swinging plate *l*, between the converting-chamber B and adjacent part of shaft A, as and for the purpose specified.

2. The combination of the generators C, heated-air channels *e*, water-chamber *g*, and channel *b*, with the mixing-channel *d*, whereby a combined gas is produced, by which the pig-iron may be converted into steel, as set forth.

3. The arrangement, in converting-chamber B, of the protecting-bars *p p*, to break the fall of metal, as it slides from incline *q*, after the removal of bars *n n*.

4. The arrangement, with respect to each other, of the metal-feeding shaft E, inclined channel *m*, and converting-chamber B, as described, the first to feed the crude iron by gravity, the second to decrease its pressure, and the third to contain the converting-gases.

5. The arrangement of the air-heating case D′, in the outer wall of the chamber *i*, for the purpose set forth.

6. The method, above described, of converting crude pig-iron into steel, by conveying, through separate channels intensely-heated carbonic oxide, highly rarefied air, and superheated steam, into a common mixing-channel, from whence the combination of gases is transmitted to the converting-chamber.

96,634.—William S. Thomas, Carbon Cliff, Ill.—*Enamel or Glaze for Pottery, Brick, Tiles, &c.*—November 9, 1869.

Claim.—1. An enamel, or glaze composed of cryolite, felspar, flint, and kaoline, made substantially as herein specified.

2. An enamel composed of cryolite, flint, oxide of lead, felspar, kaoline, and enamel-sand, made substantially as herein specified.

96,635.—Robert William Thomson, Edinburgh, Great Britain.—*Wheel for Self-Moving Carriages.*—November 9, 1869; patented in England, April 21, 1868.

Claim.—The constructing of the wheels of self-moving carriages with rubber tires, substantially in

the manner and for the purposes hereinbefore described.

96,636.—George N. Tibbles, Hudson City, N. J.—*Traction-Engine.*—November 9, 1869.

Claim.—1. The combination of drive-wheel O and traveler Q, with connecting-rods E E, operating as described, to give motion in either direction.

2. The combination of the lever Y, pulley Z, and shaft which rotates it, with band X, all arranged as described, to shift the rods E E′ to a forward or backward motion, or to disconnect them altogether.

3. A traction-engine, constructed, arranged, and operating in the manner and for the purpose substantially as herein shown and described.

4. In combination with slotted lever, the rack, pinion, detent, and hand-lever G, to change the fulcrum H, in the manner specified.

5. The combination, with the piston of a steam-cylinder, of an actuating-lever, D, moving upon a fulcrum readily adjustable by the driver, in the manner specified, whereby the power may be easily increased or diminished, without changing the pressure of steam.

96,637.—David Todd, Detroit, Mich.—*Signal-Lantern.*—November 9, 1869.

Claim.—1. The slide D, constructed as set forth.

2. The cone B, in combination with the slide D, arranged and operating as set forth.

3. The latch E, in combination with the slide D.

4. The frame K, operating as set forth.

5. The platform I, provided with a slot, as set forth.

6. The reservoir F, provided with the aperture F′, as set forth.

96,638.—S. D. Tripp, Lynn, Mass.—*Machine for Shaping Boot and Shoe Soles.*—November 9, 1869.

Claim.—1. The combination, with a last, arranged to oscillate as described, of a former, oscillating in unison therewith, and against the face thereof, and provided with a longitudinal convexity, fitting the hollow of the last when oscillating thereon, and concavities at the ends, fitted to work upon the heel and toe of the said last, substantially as specified.

2. The combination of the same, when the former is concaved transversely, and arranged to oscillate on its longitudinal axis, and the face of the last is made convex, to correspond therewith, substantially as specified.

3. The elastic washers L L, arranged on the rods F F, between the cross-head G and binding-nuts M M, to operate in conjunction with the rocker K and former I, as shown and described.

4. The combination of the rocker B and last A, substantially as specified.

96,639.—S. D. Tripp, Lynn, Mass.—*Device for Molding Soles of Boots and Shoes.*—November 9, 1869.

Claim.—1. The combination of the actuating-levers E F and stationary bed B, each having upon its end-faces corresponding cams, with a rotating traveler, G, each of said parts being shaped and arranged, with respect to the other, in the manner specified.

2. In combination with the lever B F, bed B, and traveler G, the elbow-lever H K, strap L, spring O, and bar N, all arranged, as described, to form a train of mechanism through which foot-power can be applied, as set forth.

96,640.—S. F. Van Choate, Boston, Mass.—*Distilling Alcoholic Liquors.*—November 9, 1869.

Claim.—The application of practically pure oxygen-gas to alcoholic vapors, for the purpose specified.

96,641.—Silvanus Frederick Van Choate, Boston, Mass.—*Cable and Testing-Post for Subterrancan Telegraphs.*—November 9, 1869.

Claim.—1. A conducting-cable for telegraphic purposes, in which a layer of clean, dry, fibrous material is interposed between the conducting-wire and the insulating-coating, in the manner and for the purposes set forth.

2. The construction of the testing-boxes for telegraph-purposes, whereby access of moisture is prevented, substantially as hereinbefore described.

3. In the construction of testing-boxes of telegraph-wires, affixing suitable characters for designating individual wires as well as the boxes themselves, substantially as before described.

4. The combination, with telegraph-conductors, of ground-wires, located at the test-boxes of the same, substantially as and for the purposes specified.

5. The combination, with subterranean telegraphic conductors and test-boxes, of ground-wires, substantially as and for the purposes specified.

96,642.—William Vine, Norwalk, Conn.—*Knife-Cleaner.*—November 9, 1869.

Claim.—1. The disk B, provided with serrated or corrugated ribs C, when used in connection with the wedges F, for fastening the leathers to the ribs, constructed and arranged to operate as herein described, for the purpose specified.

2. In combination with the above, the adjustable and removable fulcrum-blocks D H, and leather bearing G, constructed as herein described, for the purpose specified.

96,643.—Hiram L. Wanzer, Lanesville, Conn.—*Crank for Harvesters.*—November 9, 1869.

Claim.—1. In combination with a crank-pin, C, which has an eccentric projection, the set-screw *d*, arranged to lock the pin in any desired position, substantially as herein shown and described.

2. The pitman-wheel A of a harvester, when notched for receiving the set-screw *d*, substantially as herein shown and described.

96,644.—Otis Ward, Sunderland, Vt.—*Window-Frame.*—November 9, 1869.

Claim.—The combination and arrangment of the adjustable plate F, provided with one or more clamp-screws, as described, with the sashes, the window-frame, and the adjustable guides D D.

96,645.—William Westlake, Chicago, Ill.—*Lamp-Burner.*—November 9, 1869.

Claim.—1. The application of a pin or hook to a lamp-burner or collar, substantially as and for the purpose mentioned.

2. The hook or pin *a*, in combination with the socket or catch *d*, when applied to lamp-burners, substantially as specified.

96,646.—James B. Westwick, Galena, Ill.—*Mangle.*—November 9, 1869.

Claim.—1. The combination of the table D, rollers C, driving-shaft O, wheels P, racks E, pressing and mangling roller F, sliding bearing G, levers H L, connecting-rods K, and weights N, when all arranged substantially as specified.

2. The combination, with the driving-shafts O and T, of the disk R, toothed rack Q, guide X, pinion S, and sliding bearing U, all substantially as specified.

3. The combination, with the frame A, and the subject-matter of the second claim, of the slotted plate V, supported on the bolts W, substantially as specified.

96,647.—E. L. Yancy, Batavia, N. Y.—*Hay-Elevator.*—November 9, 1869.

Claim.—The combination and arrangement of the slides *b*, hinges F, bar E, and rope C, substantially as and for the purpose set forth.

96,648.—McClintock Young, Frederick, Md.—*Crank-Axle for Velocipedes.*—November 9, 1869.

Claim.—A velocipede-axle, formed of two pieces, A A, fastened together by a socket-joint and lock-pin, *d*, as shown in Fig. 1 of drawing.

96,649.—John Adams, Rochester, N. Y.—*Apparatus for Carbonizing Peat.*—November 9, 1869.

Claim.—The carbonization of peat, by means of the apparatus, consisting of the furnaces A A, retorts B B, and boiler C, said parts being provided with pipes *f g g h h*, connected by swing-pipe D, the whole arranged as described, and operating in the manner and for the purpose specified.

96,650.—Robert A. Adams, New York, N. Y.—*Compound Veneer and Ornamental Covering for Articles.*—November 9, 1869.

Claim.—The elastic veneers, composed of glue,

or analogous material, made and ornamented substantially in the manner herein set forth.

96,651.—P. A. ALTMAEIR, Harrisburgh, Pa.—*Sash-Lock.*—November 9, 1869.

Claim.—The sash-fastener or holder, composed of the pivoted bolt E, and the pivoted two-pronged tumbler, so arranged that no direct pressure can push back the bolt until the pronged tumbler is rotated.

96,652.—P. A. ALTMAEIR, Harrisburgh, Pa.—*Fishing-Reel.*—November 9, 1869.

Claim.—1. The combination of the catch *m n o* with the holders *s s'* and revolver F A F', when made to operate as herein described and set forth.

2. The holders *s s'*, so arranged that the reel can be inserted in a continuous line with the rod, as described.

96,653.—WILLISTON I. ALVORD, Bridgeport, Conn.—*Centering-Tool.*—November 9, 1869.

Claim.—The combination of the frame D, jaws E, F, and G, sliding circle or disk B, cylinder A, and center C, when they are constructed and arranged substantially as herein described and set forth.

96,654.—A. C. ANDREWS, New Haven, Conn., assignor to THE WATER-PROOF SOLE COMPANY, same place.—*India-Rubber Packing.*—November 9, 1869.

Claim.—Gaskets of India rubber, or any of its allied gums, molded and supported by embedding therein one or more rings or lines of metal, or other suitable material, substantially as herein set forth.

96,655.—RUSSELL B. ANDREWS, Poland, Me.—*Composition-Panel for Doors.*—November 9, 1869.

Claim.—An improved panel for doors, made of paper or junk-board, substantially as herein described.

96,656.—SIMEON ATHA, West Liberty, Ohio.—*Carriage-Wheel.*—November 9, 1869.

Claim.—A wheel-hub, consisting of two sets of boxes, C D E F, not contiguous to each other, and secured substantially as and for the purposes set forth.

96,657.—ALBERT M. BACON, Boston, Mass.—*Motive-Power.*—November 9, 1869.

Claim.—A series of wires, arranged either singly or in groups, and connected by suitable gearing, substantially as and for the purpose set forth.

96,658.—VOLNEY BARKER, Otisfield, Me.—*Green-Corn Sheller.*—November 9, 1869.

Claim.—1. The adjustable knives *l*, in their connection with arms H, in combination with the springs and cutters S, when arranged within the disk G, substantially as shown and described.

2. The green-corn cutting-machine, as described, having frame A, crank D, driving-wheels B and C, and knives *l* and N, arms H, and springs S, in combination with the devices for holding the cob A', *c*, and *d*, arranged in holder E, as specified.

96,659.—A. T. BARNES and N. M. BARNES, Tiffin, Ohio, assignors to themselves and TIFFIN AGRICULTURAL WORKS, same place.—*Wood-Turning Lathe.*—November 9, 1869.

Claim.—1. The steadying-rest herein described, consisting of the standard D and divided movable ring M, as and for the purpose specified.

2. The movable ring M made in two parts, *m* and *m'*, fastened together by the key *o* and lug *n*, substantially as described.

3. The combination, with the removable ring M, of the annular segment P and set-screws Q, as and for the purpose specified.

4. The described arrangement of the spindles C C', slides I, plates G, steadying-rests D M, and bed-plate A, as and for the purpose specified.

96,660.—SAMUEL D. BATES, Lewisburgh, Pa.—*Harvester.*—November 9, 1869.

Claim.—In combination with a front-cut hinged-bar harvester, a lateral-curved rear brace, suspended by a chain from the main frame, for supporting the platform, substantially as described.

96,661.—FREDERICK BECK, New York, N. Y.—*Process for Coloring Muslin, Paper, &c.*—November 9, 1869.

Claim.—1. The within-described process for coloring muslin, paper, and other materials, by first coating them with a compound of glue, chalk, and soap, and then drawing them through a solution of alum or other suitable agent, substantially as set forth.

2. A water-proof coating for paper, muslin, and other materials, produced by first applying thereto a mixture of glue, chalk, and soap, and then drawing it through a solution of alum or other suitable sulphate, substantially as described.

96,662.—WILLIAM BEERS, Milan, Ohio.—*Wagon-Seat.*—November 9, 1869.

Claim.—The adjustable-seat spring-holder C, herein described, having middle tenon *l*, rear tenon *n*, and front or key-tenon *k*, each projecting from a bearing-plate or shoulder, *z*, in combination with a row of slanting mortises, B B, arranged in the top of a wagon-box, as specified.

96,663.—M. J. BENDALL, New York, N. Y.—*Caloric Street-Roller.*—November 9, 1869.

Claim.—The arrangement of a fire-grate in the interior of a street-roller, substantially as and for the purpose set forth.

96,664.—NEWTON BENEDICT, Washington, D. C.—*Lamp.*—November 9, 1869.

Claim.—1. The sliding clamp *a b c*, forming, for the wick, a slitted cap or covering, attached and operating in the manner and for the purposes hereinbefore set forth.

2. The construction, in the wick-passage, of the press-gauge *f d g*, substantially as and for the purpose hereinbefore set forth.

96,665.—A. BENNETT, New York, N. Y.—*Corset-Spring.*—November 9, 1869.

Claim.—The lapping or bending the ends of the outer steels over the ends of the inner steels, or *vice versa*, for the purpose herein described.

96,666.—A. L. BOGART, New York, N. Y.—*Gas-Range.*—November 9, 1869.

Claim.—1. The within-described range, provided with the ovens E and I, the warming-closet L, the burner F provided with the mixing-chamber G, and the upward burners, M, O, P, and R, (or either, separately,) all constructed and arranged to operate substantially as and for the purpose specified.

2. The employment of the openings and slide, *l* and *l'*, respectively, within and upon the partition D, substantially as and for the purpose described.

3. In combination with the ovens E and I, and closet L, connected by means of the openings *l* and slide *l'*, the downward burner F, (either with or without the central opening *f*,) provided with the mixing-chamber G, substantially as herein described, and for the purpose specified.

96,667.—WILLIAM H. BOTT, York, Pa.—*Corn-Plow.*—November 9, 1869.

Claim.—1. The curved standard O, when constructed with the lateral spread, and with the series of holes *o o o* on each side, and employed in connection with the guides N N, and beam A, substantially as and for the purposes set forth.

2. The arrangement of the two wheels R R, and curved standards S S, in connection with the cross-beam B, longitudinal beam A, drag-bars I I, plows G G, cross-bar H, and handles E E, substantially as and for the purposes described.

96,668.—D. BURBANK, Lexington, Ky.—*Bee-House.*—November 9, 1869.

Claim.—1. A bee-house, having its sides lined with a water-proof material, its floor or bottom double, with an opening and slide to admit air for ventilation, and with its top or roof removable, and provided with a chamber and with a ventilator, all constructed and arranged substantially as herein described.

2. In combination with a bee-house thus constructed, the hives G and strips H, with the devices for ventilation, and entrance for the bees, all constructed and arranged substantially as herein described.

96,669.—Levi L. Burdon, Providence, R. I.—*Jewelry-Box.*—November 9, 1869.

Claim.—The jewelry-box herein described, consisting of the body A, the partition D, and the covers B and C, arranged as shown.

96,670.—Upson Bushnell, Cleveland, Ohio.—*Coupling for Vehicles.*—November 9, 1869; antedated October 27, 1869.

Claim.—1. The bevel-shaped joint B E, constructed as described, so as to give the head-block and axle a bearing upon the joint with its center and king-bolt outside of said axle and head-block, substantially as herein set forth.

2. The manner of oiling the joint B E, by having an enlargement or chamber in the lower portion of the upper section, and grooves in the top of the lower section, substantially as herein set forth.

3. The combination and arrangement of the axle A, joint B E, cap-plates C I, head-block G, springs H H, screw king-bolt D, nut J, and brace K, all constructed as described, substantially as and for the purposes herein set forth.

96,671.—John Butterworth and James Butterworth, Trenton, N. J.—*Carding-Engine.*—November 9, 1869.

Claim.—The arrangement, with and between a ring-clothed doffer and condensing-rollers, of a series of toothed sliver-dividing disks, or their equivalents, having their teeth pointing in an opposite direction to the travel of the material, and revolving in the direction of the travel of the material, but at a slower speed, so as to separate the material into slivers, and press the diverging fibers toward the respective strands entering between the condensing-rollers, as described.

96,672.—James Campbell, Founders' Court, London, England.—*Floating Dock.*—November 9, 1869.

Claim.—1. In combination with the deck of a tray or pontoon for supporting a vessel shored thereon, the lower transverse ribs, supporting the deck, and dividing the hull into several water-tight compartments, and the upper transverse water-tight bulkheads, above the deck, substantially as described.

2. A tray or pontoon, as distinguished from a floating dock, for carrying vessels, with their cargoes, over shoals, with cutwaters to facilitate the towing thereof, substantially as described.

3. A floating dock, with only two sets of water-chambers transversely, one set on each side of a longitudinal center partition, thus dispensing with the upper or load-chambers and the lower or air-chambers described in my said former patent, the same being constructed substantially as herein described.

4. As an improvement upon the belt described in my said former patent, to facilitate the repairing of docks or trays, the large end tanks, with one or more transverse water-tight bulkheads in each, substantially as described.

5. The combination and arrangement of reservoir P, pipes Q, gauge S, and air-pump T, substantially as and for the purpose herein set forth.

96,673.—W. E. Carlile, New York, N. Y.—*Inkstand.*—November 9, 1869.

Claim.—The combination of weighing-devices with the cover and rack of an inkstand, substantially as described and for the purposes set forth.

96,674.—Edward Colson, Fort Wayne, Ind.—*Saw-Teeth.*—November 9, 1869.

Claim.—A saw-tooth, having two downward-projecting tongues, secured to a saw-blade, having an upward-projecting tongue, by a rivet, when there is a space left entirely around the tongue *b*, as and for the purposes set forth.

96,675.—George W. Cretors and Enos Hoover, Clinton County, Ind.—*Weather-Strip.*—November 9, 1869.

Claim.—The combination and arrangement of the arm *c*, lever *b*, and slide *a*, with its inclined head, when applied to strips A B, substantially as and for the purpose set forth.

96,676.—George Crompton, Worcester, Mass.—*Shuttle for Looms.*—November 9, 1869.

Claim.—The combination of a locking-device, substantially as described, with an expansive split spindle and spindle-head, for the purpose set forth.

96,677.—George Crompton, Worcester, Mass.—*Shuttle for Looms.*—November 9, 1869.

Claim.—1. The combination of the notched spindle, the bar-lever, and its spring, constructed substantially as described, so that the spindle cannot be raised without manipulating the bar-lever.

2. The combination of the bar-lever, its pressure-spring, the notched spindle, bobbin-head, catch, and spring, all constructed and operating as described.

96,678.—R. M. Dalbey, Springfield, Ohio.—*Sash-Holder.*—November 9, 1869.

Claim.—In the above-described construction of fastener, fastening the dog into its face-plate by means of the hook *d*, passing through the opening on the plate, and dispensing with trunnions and journals, substantially as herein set forth.

96,679.—Daniel F. Dietrich, Noblesville, Ind.—*Slaw or Cabbage Cutter.*—November 9, 1869.

Claim.—The combination and arrangement of the frame A with hopper B, cylinder C, gudgeon D, crank E, adjustable knives I I, screw *b b*, and gauges G G, all constructed and operating in the manner and for the purposes herein set forth.

96,680.—H. B. Durfee, Decatur, Ill.—*Plow.*—November 9, 1869.

Claim.—In combination with the standard and beam of a plow, the bolts *d g*, and slotted plates *e i*, so arranged in connection therewith that the beam may be adjusted on the plow, as and for the purpose herein described and represented.

96,681.—Thomas A. Edison, New York, N. Y.—*Automatic Electrical Switch for Telegraph-Apparatus.*—November 9, 1869.

Claim.—1. An electro-mechanical switch, constructed substantially as described, in combination with two or more electro-magnets, placed in two or more distinct branches, 15 and 16, of the circuit containing said switch, all connected and operated substantially as described.

2. The springs *d d'*, in combination with the vibrating armature, and the points *c c'* for maintaining the continuity of the same circuit, substantially as set forth.

96,682.—Jacob Edson, Boston, Mass.—*Hose-Pipe.*—November 9, 1869.

Claim.—1. The handles *c c*, joined together at *c''*, and to the ring *b* at *c' c' c''*, in combination with the ring *d*, for the purpose set forth.

2. The rings *k* and *m*, one or more, with sharp edges, and larger spaces beyond, in the body of the pipe, for the purpose of cutting the jet of water sharp and clean, as set forth.

96,683.—Theodor G. Eiswald, Providence, R. I.—*Sad-Iron.*—November 9, 1869.

Claim.—The improved sad-iron herein described, consisting of the hollow iron body, filled with slag, sand, or other similar substance, and provided with a polished shoe, composed of a non-corrosive metal, possessing the requisite heat-conducting qualities, constructed as described, for the purposes specified.

96,684.—George D. Emerson, Calumet, Mich.—*Device for Bending Railroad-Rails.*—November 9, 1869.

Claim.—1. The employment of the eccentric roller B and lever C, in combination with the connecting-links or arms *f f*, press-bars *g l*, and screw-sleeve *m*, or equivalents, substantially as herein set forth.

2. The main triangular frame A, the same having the hooked bearings or jaws *a a*, and the internal or secondary stiffening-frame *b*, in combination with

the press-bar and devices for operating the same, substantially as described.

96,685.—JOHN L. FITZPATRICK, Waterbury, Conn.—*Corset-Steel.*—November 9, 1869.

Claim.— In corset-springs, combining, with each principal spring, two auxiliary springs, C D, the extreme end of each rigidly secured to the principal spring, the other ends of the said auxiliary springs meeting near the center of the principal spring, and slotted, and secured in position on the principal spring, substantially as set forth.

96,686.—JULIUS FOX, Albion, Mich.—*Spring-Bed Bottom.*—November 9, 1869.

Claim.—A spring-bed bottom, consisting of the cross-bars A, side-bars B, and springs *a*, with the slats C, held in place by the cords *c* and *c* applied thereto, and all arranged as herein described.

96,687.—EDWARD P. FURLONG, Portland, Me.—*Paper Bosom.*—November 9, 1869.

Claim.—The paper bosom, constructed and capable of being folded for transportation, as herein described.

96,688.—GILMAN B. GARLAND, Gardiner, Me.—*Composition for Manufacture of School-Slates.*—November 9, 1869.

Claim.—Applying the within-described composition for slating, in the manner and about in the proportions herein specified, for the purposes set forth.

96,689.—BENENDIKT GEIGER and HERMAN WOCHER, Philadelphia, Pa, assignors to themselves and JOHN JOSEPH CHARLES SMITH, same place.—*Fastening for Buttons.*—November 9, 1869; antedated November 4, 1869.

Claim.—As a new article of manufacture, the button-fastening B C, consisting of a hollow washer and a locking-pin or key, constructed as herein described, and adapted for use with common shank-buttons.

96,690.—WILLIAM F. GILBERT, Birmingham, Conn.—*Martingale-Ring.*—November 9, 1869.

Claim.—Martingale-rings, as an article of manufacture, the body of which is formed from wood or other material, inclosed by a sheet-metal ring, substantially as set forth.

96,691.—FREDERICK GLESSNER, Cincinnati, Ohio, assignor to himself and JOHN STANTON, same place.—*Photography.*—November 9, 1869.

Claim.—1. The sky-plate B, made as described, with the light parts of clouds, or such other light objects as the artist wishes to produce above the horizon, painted on it, the rest of that part used for producing the sky being left clear.

2. The shade C, or its equivalent, when used for photographic or other actinic printing of graded skies, either with or without a sky-plate, as above explained.

3. The perforated and movable shade D, when used as described, to impart the desired shade or depth of tone to certain parts of the picture.

4. The shade E, for printing by diffused light, when used with or without sky-plates.

96,692.—THOMAS HALL, Brooklyn, N. Y.—*Bobbin-Winder for Sewing-Machine.*—November 9, 1869.

Claim.—The combination of the roller A, winder-wheel B, hanger E, pressure-spring G, and lifting-rod, all arranged for operation, in connection with the driving-wheel C, substantially as set forth.

96,693.—MILTON A. HAMILTON, Detroit, Mich.—*Churn-Dasher.*—November 9, 1869.

Claim.—The series of disks A A A A, made concave on their lower side, and convex on their upper side, when two or more are connected at their centers to the stem B, placed a short distance apart, and perforated by the holes *a a*, substantially as shown and for the purpose specified.

96,694.—JESSE HAMME, York, Pa.—*Pushing-Jack for Railroads.*—November 9, 1869.

Claim.—1. The detachable lever F, in combination with the sliding bar D and pivoted bar C, substantially as shown and described.

2. The sliding bar D, in combination with the pivoted bars C and B and clamp A, substantially as shown and described.

96,695.—GEORGE HAVELL, Newark, N. J.—*Machine for Bending Bag-Frames.*—November 9, 1869; antedated November 1, 1869.

Claim.—1. A machine for bending bag-frames, so constructed that the metal forming the side of the frame is held or passed between two plates or in a groove, while it is being bent, substantially as herein set forth.

2. The "former," constructed as described, of a center, I, having wings I′ I′ pivoted or hinged to its outer ends, when the said "former" is grooved, or made of two plates, leaving a space along the front edge for the insertion of the metal forming the frame, substantially as herein set forth.

3. The combination of the carriage E, bed H, and "former" I′ I′, with a mechanism for causing the blank to bend, or constructed and arranged to operate substantially as herein set forth.

4. The cogged and flanged rollers *e e*, in combination with the cogged bed H, substantially as and for the purposes herein set forth.

96,696.—CHARLES HEDGES and CHARLES S. STRAYER, Bloomington, Ill.—*Washing-Machine.*—November 9, 1860.

Claim.—1. The cylinder B provided with buckets C C, open from the outside, and with inside zigzag buckets D D, as and for the purposes herein set forth.

2. In combination with a wash-boiler, the cylinder B, having the buckets C C and D D, as and for the purposes herein set forth.

96,697.—NOAH F. HERSH, Round Hill, Pa.—*Sawing-Machine.*—November 9, 1869.

Claim.—The frame A, double crank-shaft D, fly-wheels F F, pitmen E E, saw-beams B B, saws C C, guide-pins *b b*, rack *d*, pivoted bar G, and lever H, all being constructed and arranged to operate in the manner and for the purpose set forth.

96,698.—JOHN HEUERMANN, Davenport, Iowa.—*Fire-Escape.*—November 9, 1869.

Claim.—1. The brace C, constructed as described, of parts $c\ c^1\ c^2\ c^3$, as and for the purpose set forth.

2. The arrangement of the wheel I, pulleys, equalizer J, and levers h^2, as and for the purpose described.

3. The spring-roller bar *o*, when constructed and arranged as described, for the purpose set forth.

4. The machine described, consisting essentially of the frame A, body B, mast E, extensions E′, system of levers h^2, car G, wheel I, and equalizer J, when combined and operated as described, for the purpose set forth.

96,699.—S. D. HICKS, New London, Wis., assignor to himself and J. C. WILCOX, same place.—*Upset, Punch, Shears, and Saw-Gumming Device.*—November 9, 1869.

Claim.—1. The arrangement, on one portable bed A, of the upsetting, punching, shearing, and saw-gumming devices, substantially in the manner herein described.

2. The arrangement of the hand-lever R, relatively to the projection Q′, of the movable shear, for operation, substantially as specified.

3. The combination of the hand-lever R, movable shear Q, sliding gumming-punch, and the gumming-die W, all substantially as specified.

96,700.—LEONARD D. HOWARD, Saint Johnsbury, Vt.—*Tool for Opening Boxes.*—November 9, 1869.

Claim.—The implement herein described, having chisel A, with its shoulder *c*, and claw B, constructed substantially as and for the purposes specified.

96,701.—JOSHUA HOWLAND, Ashland, Ohio.—*Sash-Holder.*—November 9, 1869.

Claim.—1. The slotted plate E, in combination with the spiral spring d^2 and bolt d^1, substantially as described.

2. The spiral springs D, in combination with the

adjustable brackets *d*, as and for the purpose set forth.

96,702.—G. P. JOHNSON, Webster's Grove, Mo.—*Book-Holder.*—November 9, 1869.

Claim.—1. In combination with the book-holder proper, herein described, the arrangement of the jointed arm D, brace *c*, bar *e*, spring *d*, and set-screw F, as and for the purpose specified.

2. The arrangement, herein shown and described, of the thumb-screw *h*, the book-holder proper, the guide-bar H, the spring K, and handle P, as and for the purposes set forth.

96,703.—EDWARD P. JONES, Shell Mound, Miss.—*Detaching Horses from Carriages.*—November 9, 1869.

Claim.—The combination of the whiffletree A, cleats *c c*, levers B B, and strap C, when constructed and operating substantially as shown and described.

96,704.—PATRICK KELLY, Dayton, Ohio.—*Machine for Supplying Air to Carbureters.*—November 9, 1869.

Claim.—1. A machine for operating air-pumps, and for other purposes, constructed and operated substantially in the manner herein set forth.

2. The combination of a driving-mechanism with the clutch E, sheave F, catch F′, slide G with arm G′, lever I and disk H, all arranged to operate substantially in the manner set forth.

96,705.—HENRY JAMES HOGG KING, Glasgow, Great Britain.—*Pressure-Gauge.*—November 9, 1869.

Claim.—1. The application to spring pressure-gauges of a hook, or equivalent device, connected with the spring, upon which a given weight may be hung, for testing, at any time, the accuracy of the spring, substantially as described.

2. In combination with a testing-device, as set forth, the application of a three-way cock to the entrance-tube of the pressure-gauge, arranged to open the same to the atmosphere, as and for the purpose herein described.

96,706.—PETER W. KNISKERN, Fort Smith, Ark., assignor to himself and JOSIAH S. TILTON, Springfield, Mo.—*Spring-Bed Bottom.*—November 9, 1869.

Claim.—The spring-bed bottom, consisting of the spring-bars C and transverse end bars D, supported upon the frame A B B by means of the crossed end springs F, resting with their free ends upon the boards B′, and the springs E resting with their inner ends upon the central board B′, all arranged as described, for the purpose specified.

96,707.—J. H. KRAMER and ALOIS BURGER, New York, N. Y.—*Street-Lamp.*—November 9, 1869.

Claim.—1. A street-lamp, composed of three frames A, B, and C, which are fastened together by screw-rods *a b*, substantially as shown and described.

2. The arrangement of a central bolt, *f*, passing through the cap D, in combination with the top frame C, as set forth.

96,708.—GUSTAV LAUTENSCHLAGER, Cincinnati, Ohio, assignor to himself and ALEXANDER S. PATERSON, same place.—*Rocking-Horse.*—November 9, 1869; antedated October 29, 1869.

Claim.—The progressive rocking-horse, made and operating substantially as herein set forth and described.

96,709.—WILLIAM A. LIGHTHALL, New York, N. Y.—*Apparatus for Warming and Cooling Apartments.*—November 9, 1869.

Claim.—The combined heater and refrigerator for heating or cooling rooms, constructed, operated, and applied as and for the purpose herein set forth.

96,710.—ALBERT LOTZ, Franklin, Tenn.—*Fire-Ladder.*—November 9, 1869.

Claim.—1. The carriage A B C, provided with reel E and frame G, substantially as and for the purposes herein set forth, in combination with bag M.

2. The combination and arrangement of the pole K with pulleys and endless rope, hook *d*, and ladder L, all substantially as and for the purposes herein set forth.

3. The bag M, made in sections, and provided with hooks *e e*, substantially as and for the purpose herein set forth.

4. In combination with the sectional bag M, the stand H, substantially as and for the purposes herein set forth.

96,711.—CHARLES H. LOW, Cleveland, Ohio.—*Ash-Pan.*—November 9, 1869.

Claim.—An ash-pan, constructed with flaring sides, when two opposite sides are furnished with tapering projections B and adjustable handles C, in the manner and for the purpose substantially as described.

96,712.—GEORGE W. LOWRY, Lavansville, Pa.—*Bee-Hive.*—November 9, 1869.

Claim.—1. The top *p*, hinged at *q*, to the front edge of the stationary front *a b′*, in combination with the swinging sides *c e*, and the removable cover *r*, inclosing the boxes *s t*, but allowing easy access to the same and to the frames *m*, from above, as set forth.

2. The pins *o o*, and hook 14, combined with the hinged frames *m m*, for retaining said frames in position, as specified.

96,713.—JUCIUS LYON, New York, N. Y.—*Sewing-Machine.*—November 9, 1869.

Claim.—The combination of the eccentric-rod D, or its equivalent, the ball-and-socket joint G S, the shuttle-lever E, link H, and adjustable arm I, with the vertical rock-shaft J of the shuttle-carrier, substantially as shown and described.

96,714.—JOHN G. MAIER and C. W. SCHAEFFER, Baltimore, Md.—*Machine for Cutting off the Ends of Cigars.*—November 9, 1869; antedated October 29, 1869.

Claim.—The device herein described, consisting essentially of the block A, chambered, as shown at B, C C, the casting D, also chambered, as shown at *c* c^1 c^2 c^3 c^4, and provided with the lateral openings *o o*, the vertical blade *m*, stem G, spring F, and handle E, all constructed and operating in connection with each other, as and for the purposes set forth.

96,715.—CYRUS MARSH, 2d, Natchez, Miss.—*Cracker-Machine.*—November 9, 1869.

Claim.—The triangular followers *k* k^1, &c., with their connecting-rods *d* d^1, &c., bars *e*, &c., and operating-cams *h h′*, &c., arranged for the purpose of removing the scrap between the cutters, disposed as shown, and constructed and operating substantially as described.

96,716.—ROBERT MCCLARY, Crestline, Ohio.—*Pad-Saddle.*—November 9, 1869.

Claim.—1. The strap B, when the same is so arranged and secured between the skirt and lining as to afford a suitable bearing for the girth-billet or strap C, and stirrup-strap D to be attached, substantially as described.

2. The bearing-straps B E, when the same are secured within a pad-saddle, the whole being so arranged as to operate substantially as described, as and for the purpose specified.

96,717.—BERNARD H. MENKE, Cincinnati, Ohio.—*Pattern for Stove-Castings.*—November 9, 1869.

Claim.—1. The stove-bottom with projection A and recess B, in combination with the dovetail piece D, constructed and arranged substantially as described.

2. The piece D, composed of two duffs, permanently attached to each other, as and for the purpose described.

3. The stove-bottom, with projection A′, in combination with the duffs D, constructed and arranged substantially as described.

96,718.—RUFUS N. MERIAM, Worcester, Mass—*Belt-Tightener.*—November 9, 1869.

Claim.—The connection of the lever H, carrying the tightening-pulley G, with the frame A′, carrying

the movable arbor, substantially as herein described, whereby the adjustment of the movable arbor is made to effect a corresponding adjustment of the tightening-pulley.

96,719.—CYRUS MILNER, Des Moines, Iowa.—*Fence.*—November 9, 1869.

Claim.—1. The fence-butt or foundation A, made of burned clay or equivalent material, with an orifice at each end, and a projection, *a*, in its center, substantially as shown and described.

2. A burned-clay, or equivalent foundation for a fence, whether placed on the surface of the earth or provided with a prolongation which is inserted into the earth, and with a suitable device for stationing the fence-panel upon, all substantially as herein shown and described.

3. In combination with a burned-clay or equivalent foundation for a fence-post, securing the panels by means of braces which pass through the foundation, and are connected by suitable mechanism to the ends of the fence-panels, substantially for the purposes specified.

4. A fence-panel, B, composed of a series of bars *c'*, and uprights *c*, which project beneath the under surface of the lower longitudinal bar *c'*, and over an upward projection *a*, upon a suitable foundation, substantially for the purposes set forth.

5. Clamping the upper surface of a fence-panel, B, under a cross-bar, *e*, at each end of the panel, when said bar is held close upon the surface by device or devices which extend to or under the earth, substantially as herein specified.

6. Bracing the fence-panel B by the bars *d*, whether made in one or two pieces, from the upper surface of the fence to a burned-clay or equivalent foundation A, substantially as set forth.

7. The combination of a burned-clay or equivalent foundation A, with projection *a*, and a single or double brace, *d*, which passes through the ends of the block A, substantially as set forth.

8. The arrangement, under the fence-panel B, composed of the horizontal bars *c'* and upright bars *c*, of the block A, with a central projection *a*, and secured by the braces *d d*, substantially for the purposes set forth.

96,720.—JOSEPH L. PARRY, Philadelphia, Pa., assignor to himself and SAMUEL ZANE; assignors to themselves and EBENEZER H. BAILEY, same place.—*Anti-Friction Box.*—November 9, 1869.

Claim.—An anti-friction box containing a series of rollers, constructed, adapted, and proportioned in respect to an axle or shaft, and cylinder or box, substantially as set forth.

96,721.—C. C. PARSONS, New York, N. Y.—*Process for Purifying Pyroligneous and Acetic Acids.*—November 9, 1869; antedated October 27, 1869.

Claim.—1. Purifying the vapors of either acetic or pyroligneous acid, by passing them through a mass composed of small pieces of some suitable neutral substance kept wet with suitable purifying-solutions, substantially in the manner and for the purpose as herein described.

2. Using the above-described process in combination with that invented and patented by me on February 23, 1869, No. 87,193.

96,722.—EDWARD PAYNE and J. D. CLEGHORN, Chicago, Ill.—*Railway Cattle-Car.*—November 9, 1869.

Claim.—1. The employment, in connection with a trough or troughs, located upon the exterior of the car, of sliding slat-frames, combined with the stationary slats of the car, for operation substantially as herein described and shown.

2. Providing a cattle or stock car, with a series of independent slings for relieving the cattle of a portion of their weight, said slings being connected with windlasses, or equivalent elevating-apparatus, arranged in the upper part of the car, substantially as herein shown and specified.

96,723.—ELIAB PERKINS, Fond du Lac, Wis.—*Window-Shutter.*—November 9, 1869.

Claim.—The reflector B, applied to a metallic shutter, substantially as and for the purpose herein described.

96,724.—ALFRED EDDY PIERCE, Gilroy, Cal.—*Excavator.*—November 9, 1869.

Claim.—1. The tipping-buckets V, in combination with the outside ring U, on which they hinge, and the inside ring U', on which they rest, these rings being secured, by straps, or otherwise, to the radiating arms, for the purposes as set forth, and substantially as herein described.

2. The combination of the rods X, attached to the back of the buckets, the bell-crank Y, with the projecting stem *z* and the adjustable revolving disk or wheel Z, for the purposes as set forth, and constructed and arranged substantially as herein described.

3. The spring-beam M, to which the carriage-wheels O are attached, in combination with the screw R, for the purpose as set forth, and arranged substantially as described.

4. The shape given the mold-board of the plow, with its guiding side-flanges, for the purposes as set forth, and constructed substantially as herein described.

96,725.—HENRY F. POND, Franklin, Mass.—*Dish-Drainer.*—November 9, 1869.

Claim.—The above-described device for supporting dishes, knives, and spoons, while draining, such device consisting of the inclosing frame *a* and bars *b b*, when supported upon the feet *c c*, and provided with the trough *d*, in manner and for the purpose as herein explained.

96,726.—CHARLES RAGGIO, Memphis, Tenn.—*Faucet-Attachment or Cask-Stopper.*—November 9, 1869.

Claim.—The screw-plug S, provided at its inner end with a valve, *d*, and at its outer end with an elastic packing-ring, *i*, so that the same may be used in connection with an ordinary smooth faucet, *e*, as set forth.

96,727.—WILLIAM H. RAND, Brooklyn, N. Y.—*Elevated Railway.*—November 9, 1869.

Claim.—1. The column A, constructed with the two tubular piles *a a*, united at *i i* and at *a'*, all in one casting, substantially as and for the purposes set forth.

2. In connection with said column A, having the recesses *m m* in its top, separated by the ridge *n*, the arrangement of the stringers M M, packing *o o*, rails R R, and eccentric-headed pins *r r*, all constructed and adapted to each other, in the manner and for the purposes specified.

3. In an elevated railway, the employment of curved cross-ties *a' a'*, connecting the tops of the piles *a a*, and also connecting the stringers at suitable distances, substantially as and for the purposes set forth.

4. In connection with the railway, substantially as described herein, the employment of cars or trucks constructed with the deep body, as shown at T, and the side flanges *v v*, the rail R being inclosed between the parts T and *v* when the car is in position, substantially as and for the purposes set forth.

96,728.—ASA R. REYNOLDS, Auburn, N. Y.—*Machine for Rolling Plane-Irons.*—November 9, 1869.

Claim.—The arrangement, relative to the rolls, of the supporting-table *a*, gauge *b*, connecting-rod *c*, lever *d*, and catch-bar *f*, as and for the purpose described.

96,729.—FRANK RHIND, Brooklyn, N. Y.—*Rotary Steam-Engine.*—November 9, 1869; antedated November 3, 1869.

Claim.—The arrangement of the valve H, with reference to the inlet-passages K K^1 K^2, piston D, and abutments E E^1 E^2, substantially as shown and described.

96,730.—JOHN RICH, Painesville, Ohio.—*Lathe-Chuck.*—November 9, 1869.

Claim.—1. The construction of a chuck, composed of two plates, A and B, the plate A sliding on

the plate B, and secured by the bolts D D, springs E E, and bevel washers F F; said chuck, while revolving, finds its own center, and operates as above described.

2. The combination and arrangement of the plates A and B, attached to stem G, jaws C, bolts D D, springs E E, beveled washers F F, and nuts H H, the whole combined and arranged for the purpose as described.

96,731.—GEORGE RICHARDS, Richland Center, Wis.—*Wagon-Standard.*—November 9, 1869; antedated October 30, 1869.

Claim.—1. The bolster A, provided at its ends with a metal cap, B, constructed as described, and beveled as shown, substantially as and for the purposes herein set forth.

2. In combination with the bolster A and metal cap B, the plate C, provided with a horizontal extension at its upper edge, and with a circular projection, *a*, on its inner side, through which the screw *b* passes, all substantially as shown and described.

3. Securing the stake D to the horizontal extension of the plate C, by means of a dovetail, screw, and nut, substantially as shown and described.

4. The arrangement of the cap B, pivoted plate C, and spring-bolt *e*, with thumb-piece *i*, substantially as and for the purposes herein set forth.

96,732.—JASPER N. ROBBINS, Goshen, Ohio.—*Car-Coupling.*—November 9, 1869.

Claim.—The draw-head A, pad B, and holder C, when combined as and for the purpose described.

96,733.—RICHARD B. ROBBINS, Adrian, Mich.—*Sulky-Cultivator.*—November 9, 1869.

Claim.—1. The arrangement, herein shown and described, of the parts R and R′, I, N N′, J, and H, and the bolts *r*′, as and for the purposes specified.

2. The shifting-device *e*, used in connection with the chains *c* and *c*′, rollers *t* and *t*′, slides *p* and *p*′, for the purposes set forth and described.

3. The foot-rest *o* and *o*′, in connection with the slides *p* and *p*′, in the manner set forth and described.

4. The stirrups *a* and *a*′, in connection with the guiding-rods *h* and *h*′, chains *i* and *i*′, rollers *v* and *v*′, constructed in the manner set forth and described.

5. The arrangement, herein shown and described, of the rocking double-tree K, chains *d* and *d*′, rollers *v* and *v*′, single-trees P and P′, and the ways *y*, as and for the purposes specified.

96,734.—WILLIAM D. ROBINSON, Buffalo, N. Y.—*Apparatus for Raising Sunken Vessels.*—November 9, 1869.

Claim.—The arrangement, as a whole, consisting of the air-tight deck *d d e*, the cable-compartments F F, and the longitudinal partition E, the whole operating in the manner and for the purpose specified.

96,735.—S. FRANKLIN SCHOONMAKER, New York, N. Y.—*Submarine Rock-Drilling Machine.*—November 9, 1869; antedated November 3, 1869.

Claim.—1. In submarine apparatus, supporting a rotary rock-drill, fitted with diamond cutting-edges, upon or within a tube, open or otherwise, one end of which rests upon or near the rock to be drilled, while the other extends above the surface of the water, in manner as and for the purpose specified.

2. A tube or hollow cylinder, when forming a base or support for a steam or other motor engine, the two being combined in a fixed relation to each other, and forming parts of a submarine rock-drilling machine, substantially as and for the purpose specified.

3. The combination of the engine, hollow cylinder, and a rotary drill, when related to each other, and operating in manner and effect substantially as shown.

4. Providing the lower end of the said hollow cylinder with adjusting-screws, in effect, as and for the purpose herein explained.

5. In apparatus for submarine operations, a tripod or multipod, whose legs, inclining inward and upward toward each other, have each independent means of adjustment, vertically, in substance as shown.

6. In submarine rock-drilling apparatus, adjustable legs, when having anchors or weights attached at or near their lower extremities, substantially as and for the purpose specified.

96,736.—HENRY SHAW, Cincinnati, Ohio.—*Grinding or Hulling Plate for Grinding or Hulling Mills.*—November 9, 1869.

Claim.—An improvement in the grinding or hulling plates for grinding or hulling mills, consisting in the dress composed of the projections and recesses shown and described, when arranged as shown and described.

96,737.—OLNEY L. SMITH, Providence, R. I.—*Shield for Arms of Railway-Car Seats.*—November 9, 1869.

Claim.—As combined with the arm-cushion D of a car-seat, a shield, *m* or its equivalent, as described, for the purpose specified.

96,738.—JAMES SPENCE, Newcastle-upon-Tyne, Great Britain, assignor to JOHN CHALMERS, New York City.—*Composition for Preventing Radiation and Conduction of Heat.*—November 9, 1869.

Claim.—The composition herein described, composed of the ingredients or elements set forth, or the equivalents thereof, upon the principle, in the manner, and for the purposes herein set forth.

96,739.—SPENCER SPRINGSTEAD, Westchester, N. Y.—*Hoe.*—November 9, 1869.

Claim.—A hoe whose teeth are parallel to each other, with spaces C terminating angularly, the sides of the teeth and the angular terminations being made sharp, as and for the purpose described.

96,740.—SPENCER SPRINGSTEAD, Westchester, N. Y.—*Weeding-Implement.*—November 9, 1869.

Claim.—1. My improved propelling weeder, having a tapering blade A, with lateral teeth on each edge F, made and arranged substantially as described.

2. The front tooth C, in combination with the lateral teeth F, substantially as described.

96,741.—JOSEPH A. TALPEY, Somerville, Mass.—*Hay-Tedder.*—November 9, 1869.

Claim.—1. A machine for tedding hay, and other purposes, as specified, in which a series of teeth or forks is arranged to revolve around one or more centers, substantially in the manner herein shown and described, so that, when in operation, they, although not actuated by the wheels upon which the machine runs, shall move continuously in the same direction with, but at a slower rate than said wheels, as and for the purposes set forth.

2. The combination, substantially as herein shown and described, in a hay-tedder, of a series of teeth or forks, mounted upon an endless belt, which moves around two rollers or axes, the forward roller being mounted on or making part of the axle on which the wheels of the machine are mounted.

3. The combination of the endless fork-belt with the two rollers around which it moves, when the rearmost roller is supported in a frame hinged or arranged in an equivalent manner, so as to be capable of an oscillatory movement around the axis of the other roller, substantially as and for the purposes specified.

4. The combination, substantially as described, of the endless fork-belt and the two rollers around which it moves, the one roller being capable of an oscillatory up-and-down motion upon the axis of the other, as specified, with means for elevating or lowering said oscillatory roller, and thus determining the position of the teeth, and their distance from the ground.

5. The combination of the tedder-teeth and the axis or axes about which they revolve with the carriage and a ratchet and pawl, or their mechanical equivalents, mounted upon the wheels and axle respectively, under the arrangement described, so that as soon as the teeth begin to take up hay, or meet with resistance, they will be held to their work by

the engagement of the ratchet and pawl, and allowed to fall to the rear slowly, and to turn and drop the hay as the machine moves forward.

96,742.—JOHN TIDMARSH, Twickenham, England.—*Apparatus for Clipping Horses and other Animals.*—November 9, 1869; patented in England, December 2, 1868.

Claim.—The employment, in apparatus for clipping or shearing horses and other animals, of combs, segmental in shape, having teeth whose central lines are parallel to one another and to the line in which the instrument is moved forward when in action, in combination with a plate, (to which a to-and-fro motion is imparted,) also segmental in shape, and carrying cutting-blades or teeth, which do not radiate from a common center, but have, when at rest, their central lines parallel to those of the teeth, all substantially as hereinbefore described, and illustrated in the accompanying drawings.

96,743.—CHARLES TRUESDALE, Cincinnati, Ohio, assignor to himself and WILLIAM RESOR AND COMPANY, same place.—*Stove-Grate.*—November 9, 1869.

Claim.—1. In the described combination with the shaking-grate E, the concavities *d''*, on the front bars, for the purpose set forth.

2. The described combination of shaking-grate E and concavities *d''* and *c*.

3. The devices *f* and K, or their equivalents, for restricting the oscillation of a shaking or dumping grate, substantially as set forth.

4. A grate-bottom, adapted to be tilted in the planes of its bars, and about an axis parallel with the grate-front, said bars being unconnected at their front extremities, and having contiguous thereto, and in the same plane, a series of pendent front bars, whose lower extremities are likewise disconnected from each other.

5. In combination, or for use with a tilting grate-bottom, the convertible handle and lifter J *j j'*.

96,744.—J. L. TUSTEN, Winona, assignor to Mrs. E. S. TUSTEN, Carrollton, Miss.—*Animal-Trap.*—November 9, 1869.

Claim.—The combination, in a case, A, having two compartments, of the door D, crank E, jointed arms F G, weighted arm N, rod M, platform I, door S, link T, and catch-bar U, constructed and arranged to operate as herein described.

96,745.—JAMES TWAMLEY, New York, N. Y.—*Whip-Socket.*—November 9, 1869.

Claim.—The whip-socket, composed of the lower socket, or holder, and the upper locking-clasp or retainer, the whole arranged and operating substantially in the manner and for the purposes described.

96,746.—A. VAN GUYSLING, West Albany, N. Y.—*Mechanical Movement.*—November 9, 1869.

Claim.—1. The oscillating lever A, constructed as described, with beveled end, and a slot through the same, substantially as and for the purposes herein set forth.

2. The three-cornered block *a*, provided with springs *b b*, substantially as and for the purposes herein set forth.

3. The combination of the lever A, block *a*, springs *b b*, pin *e*, and cylinder D, all constructed as described, and for the purposes set forth.

4. The combination and arrangement of the oscillating lever A, with the block *a*, springs *b b*, and pin *e*, the cylinder D, and shaft B, all constructed as described, and operating substantially in the manner and for the purposes herein set forth.

96,747.—JOSEPH E. WATTS, Lawrence, Mass.—*Valve-Protector.*—November 9, 1869.

Claim.—A "valve-protector," so called, consisting of the chamber or case *a*, and the foraminous or gauze diaphragm or screen *c*, the case being provided with inlet and outlet pipes or passages for attachment, and with a "blow-off" cock, for cleaning the diaphragm of all foreign substances which may collect thereupon, and the whole being in manner and for the purpose as explained.

96,748.—WILLIAM N. WEEDEN, Boston, Mass., assignor to GEORGE MERRITT, New York City.—*Pencil-Sharpener.*—November 9, 1869.

Claim.—1. In combination with the point-receiving socket or socket-piece *a*, the hinged blade *d*, constructed and applied thereto, so as to serve as a sharpener when closed and as an eraser when open.

2. A pencil-sharpener, having such a hinged sharpening and erasing blade, and a rubber, *i*, applied to its shank or handle *h*, all substantially as shown and described.

96,749.—DAVID G. WHITMORE, Bridgewater, assignor to himself and OSBORN WILSON, Monterey, Va.—*Car-Coupling.*—November 9, 1869.

Claim.—1. The wing H, secured to the rod E, and operating substantially in the manner and for the purposes herein set forth.

2. The combination of the bar D, rod E, handle G, and wing H, all constructed as described, and operating substantially as and for the purposes herein set forth.

3. The combination and arrangement of the draw-head A, rock-shaft B, coupling-bar C, bar D, rod E, and wing H, all constructed as described, and operating substantially in the manner and for the purposes herein set forth.

96,750.—GEORGE WIDDICOMB, Grand Rapids, Mich.—*Bed-Bottom.*—November 9, 1869.

Claim.—The combination of the slats C with their central perforated blocks *x*, and their curved springs B B, and helical cone-shaped springs H, on the piece G, and with their upper ends formed with pins which pass into the perforated blocks *x*, all as set forth.

96,751.—JACOB WIDMER, Newark, N. J.—*Fire-Arm.*—November 9, 1869.

Claim.—The arrangement, below the receiver C, of the open piece O, forming the medium for grasping and holding the fire-arm, and assisting to secure the receiver, when constructed and operating as described.

96,752.—HYMAN AUGUSTINE WILDER, Millville, assignor to GEORGE L. SQUIER, Buffalo, N. Y.—*Centrifugal Machine for Draining Sugar.*—November 9, 1869.

Claim.—1. The basket D, when made conical or with flaring sides, substantially in the manner and for the purposes set forth.

2. A hopper, so arranged as to feed the mush continuously to the bottom or near the bottom of the basket, substantially as set forth.

3. The spiral G, or its equivalent, for the purpose of securing a uniform feed, substantially as described.

4. In combination with the basket, a receptacle for receiving the sugar as it falls over the edge of the basket.

96,753.—BENJAMIN J. WILLIAMS, Philadelphia, Pa.—*Window-Screen and Blind.*—November 9, 1869.

Claim.—The combination of Venetian blinds D with a stationary or an adjustable window-screen, either with or without supplemental screens B, substantially as described.

96,754.—BENJAMIN J. WILLIAMS, Philadelphia, Pa.—*Adjustable Window-Screen.*—November 9, 1869.

Claim.—The stationary screen A, with supplemental screens B B, having the outer side-bars of the frames thereof provided with tongued edges *b*, in combination with grooved strips C, substantially as set forth.

96,755.—CHARLES D. WILLIAMS and WILLIAM H. NOBLES, Saint Paul, Minn.—*Reducing Ores.*—November 9, 1869.

Claim.—1. The stirrer or generator I, constructed as described, to be worked by hand, or stationary, substantially as and for the purposes herein set forth.

2. The furnace A and retort B, constructed as described, for desulphurizing metallic ores and chlorizing the precious metals, substantially by the means and in the manner herein set forth.

3. The application of an artificial light in the bottom of the retort containing the ores, for the purpose of increasing the action of the chlorine-gas, and rendering it more effective in chlorizing metallic ores, substantially as set forth.

96,756.—JOHN B. WILSON, New York, N.Y.—*Machine for Grinding Corrugated Knives.*—November 9, 1869.

Claim.—A machine, in which the opposite faces of the knife may be cut in precisely the same irregular form, and at an angle to each other in cross-section, without reversing the position of the knife, by means substantially such as and in the manner hereinbefore set forth.

96,757.—CALVIN J. WOODS and JOSEPH A. PHILLIPS, Centreville, Ind.—*Plow and Cultivator-Comb.*—November 9, 1869.

Claim.—The plow herein described, having beams and plows A, B, and C, bolt *a*, set-screws *d*, handles H, and sliding frame F, constructed and arranged as specified.

96,758.—THOMAS T. WOODWARD, Ansonia, Conn., assignor to T. B. SMITH MANUFACTURING COMPANY, same place.—*Knife-Guard.*—November 9, 1869.

Claim.—A blade-guard, consisting of parts A B C D E, constructed and operating substantially as and for the purposes herein shown and described.

96,759.—WILLIAM ZIMMERMAN, Lebanon, Pa.—*Combined Bag-Holder and Scale.*—November 9, 1869.

Claim.—The bag-holder herein described, having fender *q* and adjustable support *l*, in combination with the truck A, having braces C C and platform-scale G, constructed and arranged to operate substantially as specified.

96,760.—OTTO ZWIETUSCH, Milwaukee, Wis.—*Pump.*—November 9, 1869.

Claim.—A pump, when constructed with cylinder B, brake C, working without a pin in its end, enlargement D, piston-rod E, inlet-pipes F F, and pipes and faucets G G, valve H, piston I, valve K, valve L, cover M, connection N, valve-seat O, top P, plug Q, fulcrum S, support T, and frame A, all arranged substantially as described.

96,761.—H. C. ALEXANDER, New York, N. Y.—*Can-Opener.*—November 16, 1869.

Claim.—A can-opener, constructed as above described.

96,762.—FREDERICK D. ALTHAUSE, Morrisania, and JOHN F. ALLEN, Tremont, N. Y.—*Horseshoe-Machine.*—November 16, 1869.

Claim.—1. The combination of the stationary guide-standard M′, slotted as shown, the sliding die-stem L′, dies J′ and K′, and sliding die-plate H′, substantially as herein shown and described, and for the purpose set forth.

2. The device for operating the sliding feed-bar J, formed by the combination of the cam Q q^1 q^2, push-bar U, cross-head connecting-bar T R, and connecting-bar S with each other and with the said feeding-bar J, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the die J′ K′, constructed and arranged to operate as described, with the die N′ and sliding frame or plate H′, substantially as herein shown and described, and for the purpose set forth.

4. Combining, in a single machine, the dies for cutting off the bar, forming the calks, punching the nail-holes, forming the toe-scarf, and bending and finishing the shoe, substantially in the manner herein shown and described.

5. The hollow punch V′, for forming the toe-scarf, in combination with the other parts of a horseshoe-machine, substantially as herein shown and described.

96,763.—WESLEY ANDERSON, Pittsburgh, Pa.—*Reversible Die-Box for Nut-Machines.*—November 16, 1869.

Claim.—A reversible die-box, made substantially as described, with two or more cavities intersecting each other at or near the middle of the box, so as to give in each die-box four or more matrices, *c*, in which to punch and compress the nut-blanks.

96,764.—EMERY ANDREWS, Portland, Me., and WILLIAM TUCKER, Philadelphia, Pa.—*Machine for Making Match-Blocks.*—November 16, 1869.

Claim.—The combination of the saws *b b′*, the notching-cylinder A in the trough *a*, operating as herein described, and either with or without the lips or shoulders *e h*, as herein set forth.

96,765.—E. C. ANDREWS, Seneca Falls, N. Y.—*Filter-Rack.*—November 16, 1869.

Claim.—A filter-rack, composed of wires A, coiled near the middle, rings B, and cap C, all constructed and arranged, with respect to one another, in the manner described.

96,766.—JOEL N. ANGIER, Titusville, Pa.—*Tubing-Clutch.*—November 16, 1869.

Claim.—A tubing-clutch, with perforated base-plate *a*, and hinged valves *b b*, arranged upon the driving-pipe or casing, and operating substantially as and for the purposes set forth.

96,767.—AUGUSTUS FRASER BAIRD, Pimlico, England.—*Earth-Closet.*—November 16, 1869.

Claim.—The weighted chute-flap or valve A, arranged in earth-closets or urinals, in conjunction with a chute-trough, *e*, to operate substantially as herein shown and described.

96,768.—ANTONIO BARLI.—Canceled.

96,769.—JASON T. BARTLETT, Boston, Mass. assignor to himself and EDWARD E. BATMAN, same place.—*Railway-Rail Splice.*—November 16, 1869.

Claim.—The described arrangement of the slotted plate and its springs, with the screw-bolts and the nuts thereof, the plate under the said arrangement being supported on the bolts, and serving as an abutment or bearing for the nut or nuts.

96,770.—JOSEPH BELKNAP, Adrian, Mich.—*Potato-Digger.*—November 16, 1869.

Claim.—The arched screen or net-work D, as constructed with connecting-supports, in combination with the curved tines 1, 2, 3, 4, and tine-supporters C, and handle A, when constructed as shown, substantially as and for the purpose set forth.

96,771.—GEORGE F. BISSELL, Oneonta, N. Y.—*Farm-Gate.*—November 16, 1869.

Claim.—1. The combination of staples G on the rails, with horns F, arranged on the post B, in the manner described.

2. The combination of staples G, arranged on that side of the center nearest to the front thereof, and the horns F with the hinge and post, said parts co-operating to swing the gate at right angles to its ordinary direction.

96,772.—WILLIAM H. BONNELL, Buffalo, N. Y.—*Lantern.*—November 16, 1869.

Claim.—1. Constructing and securing together wires of wire frames by passing one wire through the other, substantially as and for the purposes specified.

2. In combination with a lantern, the deflecting-base C, to be constructed and to operate substantially as described and set forth.

96,773.—W. C. BURNHAM, Blooming Grove, N. Y.—*Stove-Pipe Shelf and Clothes-Drier.*—November 16, 1869.

Claim.—A compound shelf and clothes-drier, composed of shelf A, rim B, bars F, hook G, rod D, and thumb-nuts, all arranged and attached to a stove-pipe, in the manner described.

96,774.—GEORGE W. CARPENDER, Butler, Ind.—*Combined Seed-Planter and Cultivator.*—November 16, 1869.

Claim.—1. The combination, with the seed-box, of the broadcast sower *b*, planter *b′*, sliding plate *i*,

swinging partition C, toothed segment k'', toothed wheel, with shaft, armed with hooks M″, all arranged and operating substantially as described.

2. The combination of the seeder, planter, cotton-seed dropper, and cultivator, D D, adapted to either seeding, plantiug, covering the grain, or cultivating, as set forth.

96,775. — Denison Chase, Orange, Mass.— *Water-Wheel.*—November 16, 1869.

Claim.—1. In combination with the buckets C, arranged at their upper edges in a nearly radial line, and thence curving downward, the rims A and B, of unequal length, set at an inclination to the shaft and also to each other, substantially as herein shown and described, and for the purpose specified.

2. The valves E, arranged to be operated substantially as shown and described, for the purpose of regulating the flow of water.

3. The chairs I, having circular cavities for the reception of the rounded ends of the bridge-tree K, whereby the latter may be adjusted both laterally and longitudinally, by means of but two set screws L, and detachably connected to the base M, to permit the lowering of the bridge-tree, as described and shown.

96,776.—J. W. Close, Buffalo, N.Y.—*Combined Screw and Pipe-Wrench.*—November 16, 1869.

Claim.—1. The stationary jaw *b*, formed with the serrations 1, 2, 3, and 4, on its upper face, in combination with the adjustable clasp-hook D and openings *i h*, for the purpose described.

2. The angular pin *p*, and spring *k*, cast together, in combination with the hook D, and the jaws of a wrench, for the purpose described.

3. The opening *j*, in the face of the stationary jaw, in connection with the removable serrated block E, or pipe-cutter F, having projection *m*, for the purpose set forth.

96,777.—Maggie Clyde, Brady Post-Office, Pa. —*Umbrella.*—November 16, 1869.

Claim.—1. An umbrella or parasol, whose handle is provided with joints *m m*, locked, opened or closed, by the latches J J, plates K, and springs O, said parts being arranged and operating substantially as herein desired, for the purpose set forth.

2. The runner H, provided with notches in its lower end, for holdiug the top or roof of the umbrella in any described fixed position, as set forth.

96,778.—Nicholas Collignon and Claudius O. Collignon, Closter, N. J.—*Folding Chair.*—November 16, 1869.

Claim.—1. The seat D, pivoted to the front legs B, and at its rear end to the back legs C, whereby the several parts are adapted to be folded together, as herein shown and described, for the purpose specified.

2. In combination with the above, the brace E, arranged to operate substantially as described.

96,779.—Solon Cooley, Caro, Mich., assignor to himself and Ceylon M. Kelly, same place.—*Apparatus for Tying Fleeces.*—November 16, 1869.

Claim.—The arrangement of the hinged leaves C, the stem D, the table A, with a suitable opening for the stem D, the treadle-lever E, and the notches *b*, in one of the standards B, when constructed, combined, and operating as and for the purpose specified.

96,780. — Herrmann Cramer, Sonora, Cal.— *Washing-Machine.*—November 16, 1869.

Claim.—In combination with the tub A and the cylinder B, the furnace, composed of the parts L and M, all constructed and arranged as and for the purposes specified.

96,781.—John Dable, Chicago, Ill.—*Apparatus for Unloading Cars.*—November 16, 1869; antedated November 5, 1869.

Claim.—1. The swinging frame A′, consisting of the arms I, rods P Q and R S, lugs K O, and braces Y, in combination with the standards W, W Z, bars X, and pulleys 14, rope 16, drum C, and shaft B, as set forth.

2. The combination of the frame A′, frame M V, supporting-pulleys 15, rope 16, lever F, bar H, arm J, nut E, and screw-cylinder *a*, for laying the rope on the drum C, as set forth.

3. The combination of the frame A′, frame M V, standards W, W Z, bars X, pulleys 14, ropes 16, C′ C′, lever F, bar H, arm J, nut E, and screw-cylinder *a*, as set forth.

96,782.—Frederick W. Davidson, Cleveland, Ohio.—*Machine for Rolling Car-Coupling Pins.*— November 16, 1869.

Claim.—The rollers B B, having grooves *a a* formed around them, with the spaces *a′* and projections *b* to form the heads, and the projections *a″* to form the points on shackle-pins, substantially in the manner shown and for the purpose set forth.

96,783.—John R. Davis, Covington, Ga.—*Gate.* —November 16, 1869.

Claim.—In combination with a gate, which swings either in one or both directions, the rods E and J, arranged and operating substantially as and for the purposes herein shown and described.

96,784.—Augustus Day, Detroit, Mich.—*Track-Clearing Car.*—November 16, 1869.

Claim.—1. The reversible wings F, adjustable to various widths laterally, by means of the cranks *g*, pinions *f*, racks *e*, and bars H, substantially as and for the purposes described.

2. The arrangement of the bolts and set-screws *a*, *d*, and *h*, the metallic flanges G, and the bars H, when operated for the purpose of reversing the wings F, as above shown.

3. The bolts or set-screws *a*, *d*, and *h*, collars *i*, and nuts *b*, in connection with the metallic flanges G, when constructed, arranged, and operating substantially as set forth, for the purpose of vertically adjusting the wings F.

4. The bolts or set-screws *m*, provided with similar collars and nuts, by means of which the vertical adjustability of the snow-plows D is secured, substantially as specified.

5. The arrangement of the snow-plows D, and the reversible wings F, in connection with the bed-frame A, as and for the purpose specified.

96,785.—G. W. Dickerson, Prairietown, Ind.— *Water-Elevator.*—November 16, 1869.

Claim.—The combination, with a bucket, swinging and emptying spring, rope, and revolving shaft, of the disk H, detent I, ratchet G, spring K, lever K, and spring *n*, all arranged and operating substantially as described.

96,786.—Isaac Erb, Lancaster, N. Y.—*Washing-Machine.*—November 16, 1869.

Claim.—1. The combination of the hinged cover J, arms K, and cross-bar L, with the tub A, levers C, and presser-arms I, substantially as herein shown and described, and for the purposes set forth.

2. An improved washing-machine, formed by the combination of the tub A, levers C, handle D, lugs or bearings E, pins G, presser-plate H, arms I, hinged cover J, arms K, cross-bar L, detachable cover M, and device O P Q, with each other, substantially as herein shown and described, and for the purpose set forth.

96,787.— D. M. Estey, Brattleborough, Vt.— *Bedstead.*—November 16, 1869.

Claim.—1. The slots D and D′, formed in the inner sides of a bedstead, the latter being lengthened and also narrowed, to form shoulders for holding the contiguous ends of the slats, substantially as herein shown and described.

2. The combination of hooks F with the slats and grooved or slotted rails of the bedstead, substantially as herein shown and described, and for the purpose set forth.

96,788.—Alexander J. Forbes, San Francisco, Cal.—*Cabinet for Ladies.*—November 16, 1869.

Claim.—The combination and arrangement of the cabinet, as described, consisting of the desk *a b c*, narrow drawers *f f*, work-table *g*, basket or bag *h*, and fire-screens *k k*, in the manner described, for the purpose set forth.

96,789.—Robert B. Forbes, Boston, Mass.—*Rigging Ships.*—November 16, 1869.

Claim.—1. The bending of the square sails of vessels by the foot to the yards next below, in such manner that they can be reefed and furled without starting the foot, and without lowering the yard above.

2. Spars attached to the foot of courses, in combination with courses arranged to reef and furl, as herein described.

3. Slinging and parreling the yards of vessels to their masts above the eyes of the rigging and back-stays, and above the fore-and-aft stays.

4. Jack-stays arranged before or abaft the sails, for conducting them to their positions.

5. The arrangement for reefing and furling sails and courses, without starting the foot, and without lowering the yard above, consisting of yards slung and parreled to the mast above, instead of below the eyes of the rigging and back-stays, and fore-and-aft stays, sails bent by the foot, courses attached by the foot to spars, and coming down on deck to furl and reef, and jack-stays for conducting the sails.

6. Attaching spars to the head of the sails bent by the foot.

7. The space C, in combination with square sails, bent at the foot, as described.

96,790.—Alfred I. Frick and Jean Baptiste Le Clerc, San Francisco, Cal.—*Process for Reducing Rebellious Ores of the Precious Metals.*—November 16, 1869.

Claim.—1. The use of the within-described ingredients when mixed or compounded with the ore in about the proportions and in the manner herein specified, for the purpose set forth.

2. The use of acids and alkalies when mixed with the mortar or ore before burning, and subjecting the same to a high degree of heat, to produce the results described, for the purpose set forth.

3. Perforating the bricks or adobes before burning or roasting, substantially as and for the purpose set forth.

96,791.—Henry A. Gage, Manchester, N. H.—*Machine for Cutting Pasteboard.*—November 16, 1869.

Claim.—1. The movable knife *a*, when adjusted and operated by levers or cranks of different lengths, or their equivalents, from main shaft, so as to produce a shear-cut, substantially as described, and for the purpose set forth.

2. The combination of the lever *e*, the slide *d*, the cam *g*, and the rod *f*, with spring for clearing the card after it is cut.

96,792.—Daniel J. Gale, Sheboygan Falls' Wis.—*Calendar-Clock.*—November 16, 1869.

Claim.—1. A calendar-attachment for clocks, comprising the above-described trains of mechanism, constructed and arranged with reference to one another in the manner specified, so as to indicate, by appropriate notations upon a face or dial-plate, the day, the week, and month, the date on which each week commences, the number of weeks expired, and the phases of the moon, all operated by the same actuating-power, and automatically, as set forth.

2. The wheel F, having twenty-nine teeth, the wheel E, having fifty-six teeth, and the wheel C, having fifty-five teeth, combined, arranged, and operated as and for the purpose specified.

3. The arrangement of pins h h^1 h^2, hinge X, wheel I, and the eighteen pins thereto attached, arms k K, and the shafts O i, to adapt the movement of indicator to the difference in the length of the several months, as specified.

96,793.—Richard J. Gatling, Indianapolis, Ind.—*Beam.*—November 16, 1869.

Claim.—An improved beam or girder, formed of two iron plates, bolted to each other, and so shaped as to form recesses in one or both edges, to receive timbers, substantially as herein shown and described, and for the purpose set forth.

96,794.—Thomas R. George, West Dryden, N. Y.—*Gavel-Fork.*—November 16, 1869.

Claim.—1. The combination and arrangement of a gavel-fork, formed by the concave tines F, their angular bend at and resting on the head B, horizontal insertion in and through the head B, the broad head B, the handle A, set obliquely to the head B, and banded to the same by the strap D, substantially as set forth.

2. The combined whole, formed of the handle A, the broad head B, the braces C′ C″, the metallic cap E, the band D, the angled and concave tines F, the same arranged as and for the purpose set forth.

96,795.—D. W. Glassie, Nashville, Tenn.—*Sewing-Machine Fan.*—November 16, 1869.

Claim.—1. The combination of a pulley, A, attached to the balance-wheel of a sewing-machine, with pulley D, shaft E, bed C *c c*, bevel-gears F I, support H, and shaft G, all arranged to operate a fan, J J, in the manner described.

2. The combination of said pulleys A and D, located as described, with the bevel F, reversed, the crank O, crank-pin *h*, supporting-shaft G, all arranged to swing the fan L on its pivot in a vertical plane, as shown and described.

96,796.—Luman M. Godfrey, Colon, Mich., assignor to himself and George S. Sheffield.—*Wind-Wheel.*—November 16, 1869.

Claim.—The combination of the hollow bearings B, within which are sleeved the arms C, to which are secured the sails D, with the shaft A, when constructed, arranged, and operating substantially as and for the purposes herein specified.

96,797.—A. H. Graton, Lawrence, Kansas.—*Dress and Skirt Protector.*—November 16, 1869.

Claim.—The dress-protector herein described, when composed of the parts A B, united as shown, provided with a distending-ring, *a*, and adapted to be attached to the person of the wearer by the outer straps C and waist-belt E, and the short interior straps D, and their hooks *e*, by which they are attached to the lower portion of the skirt, all as hereinbefore shown and described.

96,798.—Clements A. Greenleaf, Indianapolis, Ind.—*Grate-Bar.*—November 16, 1869.

Claim.—A furnace-grate bar, constructed, as herein described, of longitudinal side plates, separated by intermediate cross-pieces, bent or curved in a horizontal plane, with their upper edges flat, substantially as herein set forth.

96,799.—James Grimes, Portsmouth, Ohio.—*Cooking-Stove.*—November 16, 1869.

Claim.—1. The air-tubes K and L, the latter passing through the stove, either above or below the oven-top plate, and the former communicating therewith, and supporting the inner ends of the divided cross-center J J, substantially as described.

2. The arrangement (in an inclined or angular position) of the flue-plates beneath the oven, and at the back of the oven, substantially as and for the purposes deserbed.

96,800.—Milburn Gunn, Jeffersontown, Ky.—*Machine for Tenoning Spokes.*—November 16, 1869.

Claim.—The described arrangement of the shaft K N, adjustable collar L M, cutter I J, frame A A, with braces C C, gauge E, set-screws B B D D, and thumb-nuts F F, all constructed to operate substantially as herein set forth.

96,801.—A. J. Grush, Springfield, Ill.—*Corn-Cultivator.*—November 16, 1869.

Claim.—1. The tongue or beam A, made in two parts, connected by a detachable joint, A′, and provided with the axles B D, substantially as specified.

2. The combination, with the plow-beams H′ and the tongue or beam A, of the bar M and lever O.

96,802.—Charles Godfrey Gumpel, Leicester Square, England.—*Door-Lock.*—November 16, 1869.

Claim.—1. The bolt-shifter, the fixed and guide-plates and bolt, or the auxiliary bolt, provided with perforations extending transversely through them, and having divided pins or sliders inserted therein, all arranged to operate as set forth, whereby, when the bolt is shot, the divisions of said pins shall be distributed in the perforations of the various parts as herein shown and described, for the purpose specified.

2. The arm or stud 9 carrying the pivot-pin 8, the bolt-shifter 5, provided with an arm carrying a pin, 6, working in the slotted connecting-link 7, and the spring-stop pins, or studs 17, all combined, constructed, and arranged with reference to the bolt 1, to operate as and for the purpose set forth.

96,803.—James S. Hamlet, Portsmouth, Ohio.—*Machine for Bending Thills.*—November 16, 1869.

Claim.—1. The combination of the removable central form E, flexible heel strap G, blocks *c c*, and retainers F F′, *g*″, all constructed and arranged as herein described, and for the purposes set forth.

2. The levers C C′ herein described, in combination with the sheaves M O and drum P′, arranged for the reception of a single operating-cord, N, as set forth.

3. The combination of the forms *c* E Z, levers C C′ I′, plate G, and follower H, cords J N, and drums K and P′, as and for the purpose stated.

4. The combination of the journal shafts K′ P S with drums K P′, and spur-wheels Q R S′ with the treadle and brake frame U U′ V *v* W, as herein described, and for the purpose specified.

96,804.—John E. Hawkins, Lansingburgh, N. Y.—*Bread-Machine.*—November 16, 1869.

Claim.—The combination of the conical tube A *a*, provided with a hopper, B, shaft D, screw-blade C, knife F, and endless belt H, when constructed and arranged to operate as herein described, for the purposes specified.

96,805.—Lewis Hazlett and Samuel D. Hazlett, Winfield Township, Pa.—*Portable Fence.*—November 16, 1869.

Claim.—1. In a portable fence, an interlocking joint, consisting of the ends *a*′, cleats *c*, and cross strips *b d*, all arranged and used substantially in the manner set forth.

2. The subject-matter of the foregoing claim, in combination with the cross-strip *e*, notches *o*, and sliding catch *g*, all arranged and operated substantially as set forth.

96,806.—Charles Hempel and Joseph Schatz, Detroit, Mich.—*Heating-Stove.*—November 16, 1869

Claim.—1. The radiating-case A, provided with registers *a*, door *b*, ash-pan B, sunken pan C, and diaphragm E, or their known equivalents, when arranged to operate as herein set forth.

2. The cylindrical stove F, whose base is the diaphragm E, and whose top is provided with the drum I and wings *d*, when constructed substantially as shown.

3. In a heating-apparatus, the combination of the case A and stove F, when each is constructed as herein described, and when both are arranged and operate substantially as herein described.

96,807.—Reuben C. Higgins and Abraham Fuller, Boston, Mass.—*Carpet-Sweeper.*—November 16, 1869.

Claim.—The construction and arrangement, with the case of the carpet-sweeper, of the adjustable brush-shaft and its driving-pinion, and the trundle-gear *i*, in the manner shown and described.

96,808.—C. L. Horack, Willimantic, Conn.—*Button.*—November 16, 1869.

Claim.—In combination with the stud or button A, the post B, tube D, and arms C, E, and F, constructed, arranged, and operating substantially as and for the purposes described.

96,809.—E. Howell, Ashtabula, Ohio.—*Hemmer for Sewing-Machines.*—November 16, 1869.

Claim.—The hemmer or folder A, when formed of the piece of metal B D E G, in the manner described, having tension-spring H and arm I, by which it is attached to the sewing-machine, all constructed and arranged to operate substantially in the manner and for the purpose described.

96,810.—Amos B. Hunt, Matteson, Mich.—*Horse Hay-Fork.*—November 16, 1869.

Claim.—1. The toggle-joint *b* and its lever *b*′, in connection with the handle A, the hinge B, and the hole C, when constructed, arranged, and operating as and for the purpose set forth.

2. In combination with the toggle-joint *b* and its lever *b*′, the bail I and radius-arm J, when constructed, arranged, and operating as and for the purpose specified.

96,811.—John S. Hyde, Pent Water, Mich.—*Lath-Mill.*—November 16, 1869.

Claim.—The feed rollers E, constructed as described, when used for the purpose of separating the laths, as set forth.

96,812.—Werner Itschner, Philadelphia, Pa.—*Apparatus for Preventing Horses from Kicking in the Stable.*—November 16, 1869.

Claim.—The apparatus, consisting of a suitable number of balls, *a a a a a a a a*, or their equivalents, the string *b*, and the hooks *c c*, substantially in the manner and for the purposes as set forth.

96,813.—John D. Kerrison, New York, N. Y.—*Railway-Car Coupling.*—November 16, 1869.

Claim.—The combination, with a draw-head and weighted lever, E, of the horizontal slide D, having the pins *g g* upon its side face, as shown and described.

96,814.—Andrew Kull, Jr., Bloomfield, Wis.—*Fence.*—November 16, 1869.

Claim.—A fence, when constructed with parts A, B, and D, the parts B and D forced into the ground, substantially as described.

96,815.—Charles Kuttler, West Hoboken, N. J.—*Manufacture of Plastic Veneer.*—November 16, 1869.

Claim.—1. The process, hereinbefore described, of preparing wood, or any ligneous material, in the manner described, so as to render it capable of being embossed, pressed, and stamped out in any desired form or design, in the direction of the grain of the wood, and preserving the appearance of wood of natural growth.

2. The material so made by my process, herein described, which I call composite plastic veneer, and which, when soft and fresh, is plastic, and capable of being embossed, pressed, and stamped out in any desired form or design, in the manner hereinbefore described.

96,816.—Leo Laley, Goshen, Ind.—*Railway-Car Coupling.*—November 16, 1869.

Claim.—In combination with the bumper A and the standards C, attached to it, the pin B, provided with a slot, L, rounded edge G, and notch F, and operated by the crank D, as and for the purpose set forth.

96,817.—Richard C. Lambart, Raynham, assignor to David Whittemore, North Bridgewater, Mass.—*Heel-Cutting Machine.*—November 16, 1869.

Claim.—1. Constructing the pattern with a detachable heel-plate, substantially as described, for the purposes specified.

2. The knife R, hung so as to allow its edge a rocking motion to and from the heel, in the manner described.

3. The combination of the cam D, with the rocking knife B, for the purpose set forth, in the manner specified.

4. The combination of the pattern, the guide *y*, the cam, and the rocking knife, substantially as described.

5. Securing the knife-stock to the machine by means of the hole *s* and slot *t*, to allow an adjustment for changing the bevel of the heel.

96,818.—William A. Lewis and George W. Butler, Joliet, Ill.—*Machine for Cutting Fellies.*—November 16, 1869.

Claim.—1. The combination and arrangement of the shaft *z*, cutter-head *m*, cutting-bits *v*, levers 2 and 3, step 4, elliptic spring 1, table *b* and *c*, dogs *e* and *l*, levers *i*, *g*, and *h*, gauge *f*, and main frame *a*, constructed and operating as and for the purposes set forth.

2. The combination and arrangement of the dogs *e* and *l*, levers, *i*, *g*, and *h*, gauge *f*, slide *q*, set-screw *r*, and adjustable table *b* and *c*, as and for the purposes set forth.

96,819.—THOMAS G. LUCAS, Middletown, Conn.—*Flask for Molding.*—November 16, 1869.

Claim.—The mold, composed of the parts B C, and plates E *d*, constructed and arranged as described.

96,820.—HANNAH LUCHS, Washington, D. C.—*Fluting Machine.*—November 16, 1869.

Claim.—The combination and arrangement of the adjustable handles D and D′, the heater C, and corrugated roller B, of a fluting-machine, substantially as and for the purpose specified.

96,821.—WILLIAM LUKER, Kalamazoo, Mich.—*Animal-Trap.*—November 16, 1869.

Claim.—The hinged curved knives A B, provided with screw K, in combination with the spring F G and screw L, constructed and arranged to operate as herein described.

96,822.—E. J. MARSTERS, Shaw's Flat, Cal.—*Field-Press.*—November 16, 1869.

Claim.—1. A method of making divisible bales of hay and any like product, by placing, in the press-chamber, two or more portions of the loose article, at separate times, and inserting between the same a partition or plane of division, the said partition being withdrawn before the follower is actuated, all substantially as above set forth.

2. A divisible bale, made on the above method, as an article of manufacture.

3. The improved train of mechanism for actuating the follower, consisting of the sliding crab M, the loose crab-sleeve L, cord K, pulleys *d k*, strap J, and toggles I, all arranged in the manner described.

4. The combination of the door F and follower H, with the cord *f* and pulleys P, whereby the act of opening the door withdraws the follower, all as shown and described.

96,823.—JOHN MATTHEWS, Jr., New York, N. Y.—*Soda-Water Draught-Apparatus.*—November 16, 1869.

Claim.—1. A tumbler-guide, F, constructed and applied or arranged for use, substantially as specified.

2. The turned-up edge or border *x*, around the openings provided in the bottom of the sirup-tank stall, for the reception of the tank-nozzles and the elastic envelope I, and the opening or openings *z*, at or near the bottom of the tank-stall, all arranged substantially as herein set forth, for the purpose of preventing leakage around the tank-nozzles, and permitting the escape of any liquid collecting in the stall.

96,824.—JAMES W. MCGEHEE, Fayetteville, Texas.—*Ditching-Machine.*—November 16, 1869.

Claim.—1. The combination, with a truck-frame, of a ditching-auger and elevator, either with or without a trough, when arranged substantially as specified.

2. The combination, with the frame, the auger, and the trough, of the crane A′ and grappling and hoisting apparatus, substantially as specified.

3. The arrangement, with the driving-shaft M, of the clutch-plates O, chain-wheels N, spirally-grooved tubes R, crotches S, and operating-shaft Q, all substantially as specified.

4. The combination, with the augers and elevator-cups, of the spring-plates *a*, substantially as specified.

5. Suspending the trough and auger by detachable connections, substantially as specified.

96,825.—WILLIAM H. MOORE, Jr., Blooming Grove, Ind.—*Grain-Drill.*—November 16, 1869.

Claim.—The combination of the central hopper L′, adjustable hoppers L L″, horizontal arm P, connecting-rods O O, shaft Q, and hand-lever R, with the wheel B, crank D, rods E H I J, disks F G, and seed-slides K, all constructed and arranged to operate as and for the purposes specified.

96,826.—W. N. MOORE, Neenah, Wis.—*Cooking-Stove.*—November 16, 1869.

Claim.—1. The extension-top B, attached behind the escape-flue *k*, and providing the same with a hot-air chamber, *d*, flue *g*, dampers *h* and *i i*, when attached to a cooking-stove, for the purposes set forth.

2. The extension-top B, hot-air chamber *d*, flue *g*, dampers *h* and *i i*, when arranged relatively to the stove A, provided with damper *o*, flues *e e e′ e′ f′* and *f*, or other accessories of a similar or equivalent character, as and for the purposes set forth.

96,827.—CHARLES MOTIER NES, York, Pa.—*Manufacture of Pig-Iron.*—November 16, 1869.

Claim.—1. The use of the concentrated blow-pipe blast in furnaces, for the production of iron from the ore, or in puddling-furnaces, in the manner and for the purposes herein described.

2. The use of the concentrated blow-pipe blast, in combination with electricity, in the manner herein shown and described, to facilitate the melting and purification of the iron in blast, cupola, or puddling furnaces, as set forth.

3. The employment, in the blast or other furnace for reducing iron-ore, of a perforated bottom or partition of soapstone, or other suitable material, to separate and keep free the molten metal from the cinder, ore, and other impurities, as herein set forth.

96,828.—CONSTANTINE NESSI, San Francisco, Cal.—*Beverage.*—November 16, 1869.

Claim.—The within-described ingredients, mixed or compounded in about the proportions set forth, substantially as and for the purpose specified.

96,829.—JOHN W. NEWTON, Geneva, Wis.—*Drag.*—November 16, 1869; antedated November 1, 1869.

Claim.—The straight, rigid-toothed drag, consisting of the stock A, teeth *a a*, braces *c c*, and curved bow or handle C, all constructed, arranged, and operated in the manner and for the purpose set forth.

96,830.—HENRY NUSTEDT, New York, N. Y.—*Sample-Card for Liquids.*—November 16, 1869.

Claim.—Frame A, consisting of bottom, top, and side strips, in combination with glasses B B and slide C, substantially as specified.

96,831.—AMOS D. OWEN, Thorntown, Ind., and JOHN D. SHERMAN, Paw Paw, Mich.—*Propelling-Apparatus for Vessels.*—November 16, 1869.

Claim.—In combination with the pins J and rods F, the links L, arms K, toggle-levers M, rods N, cam-levers O, and pivots *e*, sliding in the slots *f* of the hangers P, in connection with the tappets *g*, the guides G, vibrating beam C, and connecting-rod E, the whole constructed, arranged, and operating substantially as and for the purpose herein shown and set forth.

96,832.—EDWARD LIVINGSTON PERRY, New York, N. Y., assignor to COMBINATION RUBBER COMPANY, same place.—*Rubber-Hose.*—November 16, 1869.

Claim.—As a new manufacture, vulcanized India-rubber hose for steam fire-engines, and other purposes, in which the rubber is combined with a suitable number of plies of fine canvas, such as described, made of hard twisted and closely-woven threads or yarns, substantially as and for the purpose set forth.

96,833.—HIRAM S. PHILLIPS, Sewickley, Pa.—*Barrel-Filling Apparatus with Whistling Indicator.*—November 16, 1869.

Claim.—1. The arrangement, in connection with a barrel-filling inlet-pipe, of a whistling-tube, *i*, the lower orifice *o* of which is a little above the lower orifices of the air-passages *e e′*, substantially as and for the purposes set forth.

2. The arrangement of a tube, *e′*, with its lower orifice *o′* intermediate between the orifice *o* of the whistling-tube, and the orifices of the air-passages *e*, substantially as and for the purposes set forth.

3. The basin *d*, in combination with air-passages *e e′*, arranged substantially in the manner and for the purposes set forth.

96,834.—EDGAR M. POTTER.—Suspended.

96,835.—GEORGE W. PRENTICE, Whitinsville, Mass.—*Mechanism for Raising Top-Roller Weights in Spinning-Machines.*—November 16, 1869.

Claim.—1. In combination with the bridge I, or

other equivalent device for holding the weight-levers B, the cam-lever H, arranged to raise the weights, and to support them of itself, when raised, by the position it then assumes, substantially as described.

2. In combination with the lever H, the bridge I and adjustable standard F, constructed and arranged substantially as described.

96,836.—ELIJAH J. PRESTON, Eureka, Mo.—*Harrow.*—November 16, 1869; antedated November 1, 1869.

Claim.—1. The within-described device for cleaning the harrow, when used in the manner and for the purpose set forth.

2. In combination with the cleaners R, the divided harrow O, lever W, rod K, and plows D, when used in the manner and for the purpose set forth.

96,837.—ERNEST QUAST, Freedom, Mo.—*Ax.*—November 16, 1869.

Claim.—Ax-polls, constructed in two parts A, shaped and secured as described, and the bits, joined thereto by a tongued and grooved connection, all substantially as specified.

96,838.—S. G. RAYL, Agency City, Iowa.—*Combined Double-Shovel and Two-Horse Cultivator.*—November 16, 1869.

Claim.—1. Connecting the inner shovels B to the plow-beams A, by a curved standard, C, in such a way that the top of said shovels may be unobstructed, substantially as herein shown and described, and for the purpose set forth.

2. The shield F, constructed and connected with the plow-beams A, substantially in the manner herein shown and described, and for the purpose set forth.

3. Connecting the handles N and P, either or both, to the plow-beams A, by a system of detachable braces, substantially as herein shown and described, and for the purpose set forth.

4. The pivoting rods Z, perforated swinging plates B′, clevises C′, and bars D′, with each other and with the plow-beams A and carriage T U V, substantially as herein shown and described, and for the purpose set forth.

5. The carriage T U V X Y, constructed substantially as herein shown and described, that is to say, in such a way that the forward ends of the plow-beams A may project in front of the cross-beam U and knees V, as and for the purpose set forth.

96,839.—PHILIP ROLLHAUS, Port Chester, N. Y.—*Cooking-Range.*—November 16, 1869.

Claim.—The plate B, covering the lower tier of an elevated oven-range, and provided with an aperture, *b*, through which the pipes E can be reached, substantially as herein shown and described.

96,840.—GEORGE W. SANDERSON, Shirley, Mass.—*Stable-Hook.*—November 16, 1869.

Claim.—The stable-hook, composed of the hook A and spring-latch D, constructed and operating so that said latch opens outwardly, substantially as described.

96,841.—JOSEPH SAWYER, Sebewaing, Mich.—*Detachable Buoyant Ship's Deck.*—November 16, 1869.

Claim.—1. The detachable double-walled buoyant deck D, provided with compartments for receiving air-vessels, cork, or other buoyant material, and secured to the stanchions or cabin-walls, in any convenient manner that will permit of its being readily detached therefrom.

2. In combination with the deck D, a locker or receptacle, G, formed therein, for the purpose specified.

96,842.—IRA W. SHALER, Brooklyn, N. Y.—*Apparatus for Carbureting Air.*—November 16, 1869.

Claim.—1. The combination, with the air-reservoir, of the bellows for supplying air to the same, and the oscillating arm and connecting rods, through the medium of which motion is imparted to the bellows from the crank of the spring-power or other actuating-mechanism, said parts being constructed and arranged for joint operation, as set forth.

2. The employment, in the carbureting-chamber, of separate cylinders, or other-shaped tubes, of wire gauze, with a filling of cotton, wool, or other suitable absorbent, for operation, substantially as and for the purposes set forth.

96,843.—A. D. SMITH, Grafton, assignor to DAVID ROSE, Rawsonville, Ohio.—*Trunk-Tie and Clasp.*—November 16, 1869.

Claim.—1. The combination, in a trunk-tie, of straps 1, 2, 3, 4, and bands A B C D, joined together in any suitable manner, substantially as described and for the purpose set forth.

2. In combination with a trunk and tie, the adjustable screw-clasp, constructed substantially as described and for the purpose set forth.

3. The combination of said clasp with the trunk-tie strap G, substantially as described and for the purpose herein shown and set forth.

96,844.—CHARLES SPIRO, New York N. Y.—*Watch-Winding and Setting Attachment.*—November 16, 1869.

Claim.—The combination of fusee-post, fixed and movable clutch-sleeve *b*, and arranged for winding and setting the watch, substantially as described.

96,845.—CHARLES B. STEPHENS, Riverton, Conn.—*Envelope-Opener.*—November 16, 1869.

Claim.—1. The eraser-blade A, (with one or more points B,) in combination with a grooved handle, and operating substantially as described, for the purposes set forth.

2. In combination with the blade A and handle C, the lead-pencil eraser F, substantially as described.

3. The combination of an ink and lead eraser with an envelope-opener, substantially as described.

96,846.—CLEMENT ST. JAMES, Pittsfield, Mass.—*Fifth-Wheel for Carriages.*—November 16, 1869.

Claim.—1. The circle E, made with offsets at its sides, so that one of its parts may be the arc of a smaller circle than the other, substantially as herein shown and described, and for the purpose set forth.

2. Connecting the upper and lower half circles G H with each other adjustably, by means of the lugs *g′ h′*, substantially as herein shown and described, and for the purpose set forth.

3. The stay-arm or bracket L, for connecting the forward part of the circle E with the wagon-body, substantially as herein shown and described, and for the purpose set forth.

4. The combination of the socket M and pivot N with the bolster C, axle A, circle E, and half circles G H, substantially as herein shown and described, and for the purpose set forth.

96,847.—JAMES SWAN, Seymour, Conn.—*Die for Forming Bits and Augers.*—November 16, 1869.

Claim.—The die, for swaging auger-bits, constructed in two parts, B and C, and otherwise, as described and shown.

96,848.—GILLESPIE SWEENEY, New York, N. Y.—*Combined Umbrella, Cane, and Seat.*—November 16, 1869.

Claim.—1. The combination of a cane, umbrella, and seat in one article, substantially in the manner described.

2. The arrangement, with the stalk of an umbrella, of the arms E, braces F, and canvas or other web G, all substantially as specified.

96,849.—A. VAN CAMP, Washington, D. C., and M. M. HODGMAN, Saint Louis, Mo.—*Wood Pavement.*—November 16, 1869.

Claim.—The grooved blocks A A, when they are seated and secured in a concrete bed, B, and cemented together by concrete *b*, as shown and described.

96,850.—A VAN CAMP, Washington, D. C., and M. M. HODGMAN, Saint Louis, Mo.—*Concrete for Pavements and for other Purposes.*—November 16, 1869.

Claim.—1. A concrete composition for paving, roofing, flooring, &c., when the same is composed of asphaltum or the residuum of pitch or coal-tar, sand, and decomposed silex, substantially as described.

2. Laying the composition, herein described, for a

pavement or walk by means of hot tamps and hot rollers, substantially as described.

3. A water or drain pipe, when the same is composed of the composition herein described.

96,851.—PETER SPOHN VAN WAGNER, Saltfleet Township, Canada.—*Holdback for Carriage-Thills.*—November 16, 1869.

Claim.—The holdback B B, made of malleable cast iron, or other suitable metal, containing a spring, C, tumbler D, hook G, as above described applicable to any purpose for which it may be used.

96,852.—PETER SPOHN VAN WAGNER, Stoney Creek, Township of Saltfleet, Canada, assignor to himself and ALFRED E. CARPENTER, same place.—*Adjustable Trace-Fastening.*—November 16, 1869.

Claim.—The trace-fastener herein described, consisting of the grooved socket A, arrow-head E, and spiral spring F, so constructed that the arrow-head has only sufficient longitudinal movement to allow it to be turned round in the socket, substantially as specified.

96,853.—ALONZO WARREN, Boston, Mass.—*Water-Wheel.*—November 16, 1869.

Claim.—1. An inner and an outer casing, so constructed and arranged, that when the inlet-passages are fully open, the line of the inside of the inner casing and the adjacent line of the inside of the outside casing form nearly or exactly one and the same extended curved line, substantially as and for the purpose set forth.

2. In combination with the above, an unobstructed inlet-passage, the inside of which is formed by the union of the adjacent outside lines of the guiding-curves of the inner and outer casing, substantially as and for the purpose set forth.

96,854.—ASA WATERS, Mobile, Ala.—*Tube-Well.*—November 16, 1869.

Claim.—In combination with a tube-well, the wire-cloth covering B, and the perforated shield C, constructed and arranged substantially as and for the purposes described.

96,855.—GEORGE WELLHOUSE, Akron, Ohio.—*Cooking-Stove.*—November 16, 1869.

Claim.—1. The plates E F, as arranged in relation to each other, so as to form an arch-like central flue G, in combination with the rib *c*, side-flues D D, and oven C, substantially as and for the purpose set forth.

2. The plate I, as arranged in relation to the flues D and G′, in combination with the damper I′, for the purpose specified.

3. The oscillating bars N, semicircular plates O, in combination with the shaft M and frame L, in the manner substantially as and for the purpose described.

4. The shelves P P′, as arranged, in combination with the stove A, for the purpose specified.

96,856.—JAMES WHITE, Cleveland, Ohio.—*Fruit-Box Crate.*—November 16, 1869.

Claim.—The fruit-crate, composed of the slats A B, studs C, and right-angled solid wood corner-pieces F, when constructed in the manner and for the purpose substantially as described.

96,857.—GEORGE W. WILSON, Freeport, Ill.—*Wash-Boiler.*—November 16, 1869.

Claim.—The cover B, when provided with one or more partitions C and valve E, in combination with boiler A, constructed as herein described, for the purpose specified.

96,858.—JOHN WINSBORROW, Livermere Road, Dalston, England.—*Liquid-Meter.*—November 16, 1869.

Claim.—A meter, for measuring liquids, combining two vessels, *d d*, open at the bottom and arranged in different chambers on the same level, pistons *e e*, operated by the pressure of the liquid, a double crank-shaft, *h*, operated by the pistons, a registering-device, operated by the worm *p*, and a valve-gear, operated from shaft *h*, which allows the vessels *d* to be alternately filled and emptied, in the manner described.

96,859.—STEPHEN A. WOOD, Cardington, Ohio.—*Fence.*—November 16, 1869.

Claim.—1. The wire links or hooks C, in fences constructed substantially as herein set forth.

2. The picket B, provided with notches *d*, in combination with the wire links or hooks C, when constructed and operating substantially as herein described.

96,860.—J. ZIMMER, Jr., Halfday, Ill.—*Harness-Pad Block.*—November 16, 1869.

Claim.—The flexible clamping-bow D, arranged to clamp the leather equally to the long sides of the block A, in combination with said block, the bar G, links H, screw F, and plate B, as set forth.

96,861.—JOHN AHERN, Baltimore, Md.—*Composition for Destroying Insects on Flowers, Plants, and Bushes.*—November 16, 1869.

Claim.—The composition compounded of the above-named ingredients, and applied for the protection of trees, vines, and plants, substantially as set forth.

96,862.—ALBERT F. ALLEN, Providence, R. I.—*Hose-Pipe Nozzle.*—November 16, 1869.

Claim.—1. The hose-pipe nozzles lined with a flexible rubber bushing, for the purposes specified.

2. In combination with a hose-pipe nozzle, the flexible-rubber bushing C, and compresser B, provided with suitable screw-connections and an annular inclined plane, for the purposes specified.

96,863.—ALBERT F. ALLEN, Providence, R. I.—*Hose-Ladder Strap.*—November 16, 1869.

Claim.—As a new article of manufacture, the hose and ladder strap, herein described, consisting of the strap A, provided with hooks, sliding band, and handle, for the purposes specified.

96,864.—WILLIAM ARNOLD, Pawtucket, R. I.—*Washing-Machine.*—November 16, 1869.

Claim.—1. The arrangement and combination of the crank B, gears C C, wash-wheel A, with its projecting pins *a a*, and center-piece F, with its step O, as specified.

2. The combination of the wash-wheel A, center-piece F, step O, in combination with rolls *b b b*, or corrugated corner-boards *d d*, as described.

96,865.—BENJAMIN BACON, Morrison, Ill., assignor, by mesne assignments, to NATIONAL WATCH COMPANY.—*Reversible Safety-Pinion for Watches.*—November 16, 1869.

Claim.—In the train of a watch, the combination and arrangement of the separate nut D, and the coupling, substantially as described, with the pinion A and the arbor B, its screw and gear C, the whole being to operate as specified.

96,866.—JOHN AUGUSTUS BALL, Grass Valley, Cal.—*Chain-Elevator and Bucket.*—November 16, 1869.

Claim.—Operating elevator-buckets by means of the rods *b b′ b″ c*, and the jointed arms *d d*, which automatically raise and lower the guard and guard-rods at the proper point, in combination with the flap-door F, guard F′, and said guard-rod *c*, the whole constructed and arranged substantially as described.

96,867.—CHARLES E. BANCROFT, Montpelier, Vt.—*Seaming-Machine.*—November 16, 1869.

Claim.—1. The upright shaft *e*, arranged with a cam or bend in its upper part, and supporting the horizontal disk of a double seaming machine, as described.

2. In combination with the horizontal disk of a double-seaming machine, the automatic cam-shaft *e*, having elevating-screw P and stop *h*, as shown and described.

3. The double-seaming machine herein described, having the slotted base A, standards B D, vertical disk C, clamp-wheel F, horizontal disk E, made removable, and upright cam shaft *e*, stepped in the head of the elevating-screw P, and having the stop *h*, all constructed and arranged to operate as specified.

96,868.—Simon Barnhart, Chillicothe, Ohio.—*Saw-Mill.*—November 16, 1869.

Claim.—1. The removable parts C and D, arranged relatively to each other, and to the frame A and saw B, as and for the purposes herein set forth.

2. In combination with a portable saw-mill, A B, substantially of the character herein described, the end-supports H′ and J′, with means, as specified, for adjusting them, not only outwardly and inwardly, but up and down, at will, substantially as and for the purposes herein set forth.

96,869.—Edwin Bennett, Baltimore, Md.—*Fruit-Jar.*—November 16, 1869.

Claim.—A vitreous or earthen jar, provided with an annular interior recess in its neck, and a cover fitting therein, the annular joint between the neck and cover being covered by a packing-ring, held to duty by a screw-cap or similar clamping and retaining device, substantially as described.

96,870.—Albert Betteley, Boston, Mass.—*Wood Pavement.*—November 16, 1869.

Claim.—A wood pavement, composed of cylinders or cylindroids, the adjacent rows of which are scored on one or both sides, and are interlocked and inclined in opposite directions.

96,871.—Virgil W. Blanchard, Bridport, Vt.—*Preserving Fruits, Meats, and other Substances.*—November 16, 1869.

Claim.—1. The use of an alkaline solution of pyrogallic acid, substantially as and for the purpose set forth.

2. The combination of the cover B, elastic packing C, movable cup F, and sponge G, or their equivalents, substantially as and for the purpose described.

3. The combination of the vessel A, cover B, elastic packing C, cup F, sponge G, and the alkaline solution of pyrogallic acid or its equivalent, substantially as and for the purpose set forth.

96,872.—Virgil W. Blanchard, Bridport, Vt.—*Furnace and Process for Treating and Reducing Ores, &c.*—November 16, 1869; antedated November 6, 1869.

Claim.—1. The tube L and rod M, in combination with the furnace and blast-pipe C, substantially as and for the purpose specified.

2. The injection of prepared fuel and ore into the interior of a furnace, at such a point as to be exposed simultaneously to the heat of the molten metal in the hearth of the furnace and to the action of the gaseous elements contained in the blast, substantially as and in the manner set forth.

3. The tube L and rod M, constructed as described, in combination with the chamber H, substantially as and in the manner described.

4. The injection of coal-oil or coal-tar, in combination with the ore, into a furnace, at or near the point where the blast is applied, substantially in the manner and for the purpose specified.

5. The injection of coal-oil or pulverized coal, or any other suitable substance, into the interior of a furnace, at or near the point where the blast is applied, substantially as and in the manner specified.

6. The injection of iron-ore, in combination with prepared fuel and the chloride of sodium, or any other suitable substance, into the interior of a furnace, at or near the point where the blast is applied, substantially as and in the manner set forth.

7. The injection of prepared fuel into the interior of a blast-furnace, at or near the point where the blast is applied, substantially as and for the purpose specified.

8. The slide P and rod M, or their equivalents, in combination with the injecting-tube L, as and for the purpose set forth.

9. The injecting-tube L, constructed as described, in combination with the blast-pipe C, substantially as and in the manner specified.

96,873.—Eliam Boorse, Philadelphia, Pa.—*Fastening for Fruit-Jars.*—November 16, 1869.

Claim.—As a new article of manufacture, the locking-cap for screw-necked jars, constructed with engaging-arms D D^1 D^2 D^3 of unequal lengths, whereby the hooked ends of said arms engage under the same thread and hold at different points thereon, substantially as represented and described, and for the purpose specified.

96,874.—James M. Bottum, New York, N. Y.—*Process and Apparatus for Annealing Metals.*—November 16, 1869.

Claim.—The process and apparatus for annealing metals, substantially as herein described.

96,875.—Worden J. Boyce and George W. Haines, Maine Prairie, Cal.—*Gang-Plow.*—November 16, 1869.

Claim.—1. The machine described, consisting essentially of the frame *a b*, tongue *c*, adjusting-devices *e g i k*, wheels *n*, and lever *p*, the whole being combined and arranged for the purpose set forth.

2. The sliding stirrup *e*, moving in straps or ways *f f* at the top of the frame, and held in place by a pin, *g*, or their equivalents, substantially as set forth.

3. The lifting-bar *i*, with its movable fulcrum *k*, on the plate *k′*, so that by its link-connection with the end of the tongue the draught-pole can be thrown to the right or left, or the end raised and lowered, substantially as set forth.

96,876.—John F. Boynton, Syracuse, N. Y.—*Fire-Extinguisher.*—November 16, 1869.

Claim.—The combination of the vessel A with the generator *a* and capsule *b*, substantially as herein described.

96,877.—Charles B. Bristol, New Haven, Conn.—*Washing-Machine.*—November 16, 1869.

Claim.—1. The combination of the two rollers D and E with the slotted posts A and B, the springs *k* and *l*, and caps *f* and *g*, when constructed, arranged, and fitted for use, as herein described and set forth.

2. The combination of the lower roller D, with the bar *a b*, while sustaining its India-rubber plate C, when they are constructed and arranged as herein described and set forth.

96,878.—Thomas Brocket and Joseph J. Brown, Davenport, Iowa.—*Grain-Meter.*—November 16, 1869.

Claim.—1. The combination of the stationary hopper *e* with its apron *e*, the revolving hopper *d*, supported on the vibrating frame *i*, and having its partitions arranged to engage with the spout *f* and stop *h*, all constructed and arranged to operate substantially as described.

2. The arrangement of the dial *l* with its index, operated by the hook or pawl *k*, attached to the vibrating frame as set forth.

96,879.—George W. Brown, Providence, R. I.—*Snow-Shovel.*—November 16, 1869; antedated November 10, 1869.

Claim.—The cutter *a*, so attached to the shovel-blade A, by means of soft rivets or screws, that the cutter may be removed when the shovel is required for uses other than shoveling snow.

96,880.—Daniel Bull, Amboy, Ill.—*Carriage-Jack.*—November 16, 1869.

Claim.—1. The reciprocating rack-bars A′ A′, arranged on the standards to afford alternate support to the fulcra of the lever G of a lifting-jack, as specified.

2. The double fulcrum-lever G, with its dogs L L, when combined with double standards having ratchets, as described, and when arranged to operate as set forth.

3. In combination with the spring *s*, lifting-bar D, and double fulcrum-lever G, having dogs L L working on the rack-bars A′ A′, the sliding spring V, constructed and arranged to operate as specified.

96,881.—Calvin L. Butler, Greenfield, Mass.—*Bit Brace.*—November 16, 1869.

Claim.—The jaws D E, constructed to operate in inclined guides *d e*, by means of a conical female-screw socket H, so as to be at all times parallel with each other, and to seize the bit by its cylindrical portion in front of its head.

96,882.—J. K. CALDWELL, Allegheny City, Pa.—*Drying-Car.*—November 16, 1869.

Claim.—1. In a drying-car, for drying brick, fruit, grain, or other articles, the supports A A, having inclines *a a*, semicircular recesses *b b*, and projections *c c*, constructed and used substantially as shown and described.

2. The combination of the tables B B, half hinges C C, supports A A, inclines *a a*, semicircular recesses *b b*, and projections *c c*, in a drying-car for drying brick, fruit, grain, or other articles, when constructed and arranged substantially as specified.

96,883.—JOSEPH PATTEN CAMPBELL, Danville, Pa.—*Corn-Planter.*—November 16, 1869.

Claim.—1. The combination and arrangement of the removable cams *n*, disk *i*, levers H and *u*, with the seed-box E, base-board A, and vibrating bar *d*, as and for the purposes specified.

2. The bars *n*, *u*, and *v*, adapted to receive the conduits X, plows, Fig. 3, and rakes, Fig. 5, constructed and arranged as described.

96,884.—L. M. CAPRON, Worcester, Mass., assignor to ALEXANDER BIGELOW and GEORGE BARBER, same place.—*Stripper for Carding-Machines.*—November 16, 1869.

Claim.—The combination, with the main and doffer cylinders of a breaker carding-machine, of an adjustable stripping or cleaning cylinder E, arranged and operated substantially as and for the purposes set forth.

96,885.—GEORGE CLARK, Buffalo, N.Y.—*Steam-Boiler.*—November 16, 1869.

Claim.—Dividing the water-space of a drop return-flue boiler by one or more diaphragms, and arranging the feed-mouth of the water-pipe near the uptake, so as to compel a circulation of the water back and forth along the flues, in a direction reverse from that of the draught therein, substantially as and for the purposes hereinbefore set forth.

96,886.—P. J. CLEVER, Goliad, Texas.—*Sewing-Machine.*—November 16, 1869.

Claim.—1. The combiuation of the treadle A and clamp A^2, with the frame, so that the treadle may be adjusted to either side or one end of the table, according to the direction of the feeding-movement, substantially as specified.

2. The arrangement of the hinged supporting-frame B, the cam-dog B^3, and the spring B^4, substantially as specified.

3. The combination and arrangement of the vertically-adjustable driving friction-wheel A^{11}, loose friction-wheel B^7, ratchet-clutch B^{11}, spring B^{12}, fly-wheel B^{13}, friction-lever B^{14}, rod B^{16}, and finger-presser B^{17}, all substantially as specified.

4. The combination, with the shuttle, of the tension spring D^8, set-screw D^{10}, and guards D^{11}, when arranged substantially as specified.

5. The combination of the feed-shoe E, vertically-sliding plate E^1, adjusting-spring E^5, set-screw E^3, carrier E^2, and cam E^7, all substantially as specified.

6. The combination, with the feed-carrier E^2 and notched bar F, of the inverted V-shaped frame F^2, stud-pins H, spring H^1, vertical slide F^4, and cam F^7, all substantially as specified.

7. The combination, with the vertical slide F^4 and stud-pin F^6, of the bent arm H^3 H^4, and adjusting-screw H^7, substantially as specified.

8. The combination, with the tension-spring K, provided with the points K^1, and connected to the needle-arm support, as described, of the right-and-left threaded screw K^2, disk K^4, and friction-block K^5, substantially as specified.

9. The spooling-device L, consisting of the vertical stock, arm L^4, grooved pulleys L^1 and L^2, and arranged relatively to the table and friction-wheel B^7, all substantially as specified.

96,887.—ISAIAH A. CLIPPINGER, Newton, Iowa.—*Carriage.*—November 16, 1869; antedated November 8, 1869.

Claim.—The wrought-iron bolt A, in combination with the reach-head C, constructed and arranged substantially as herein described, for the purpose of protecting the spring against lateral and longitudinal strain, as set forth.

96,888.—GEORGE COMBS, Utica, N. Y.—*Washing-Machine.*—November 16, 1869.

Claim.—1. The arrangement and combination of the pitmen N N, and springs G G, with the washboards, substantially as and for the purposes herein described and set forth.

2. The combination of the self-adjusting washboards F F with the springs G G, reel E K, shaft I, crank H, pitmen N N, and shafts M M, in the manner as and for the purposes herein specified and shown.

96,889.—EDWARD T. COVELL, Brooklyn, N. Y.—*Bail or Handle for Pails, &c.*—November 16, 1869; antedated November 10, 1869.

Claim.—1. The combination of a guard or guard-piece, A, with the handle or bail of a can, pail, box, or other vessel, to form a handle for the same, by means of metal clamp-plates, partially embracing the wire and guard, substantially as herein set forth.

2. The combination of a longitudinally-divided and flatteued or cylindrically or polygonally-shaped guard E, with a metallic bail, B, and with metal clamps to secure and unite the two divisions of the guard, substantially in the manner herein set forth.

96,890.—EDWARD T. COVELL, Brooklyn, N. Y.—*Manufacture of Nozzle and Screw-Caps for Oil-Cans, &c.*—November 16, 1869.

Claim.—A separate threaded ring or ferrule, A, in combination with a nozzle or cap of thin or soft metal, substantially in the manner and for the purpose herein set forth.

96,891.—WILLIAM H. COX and THEOPHILUS LAROUCHE, Williamstown, N. Y.—*Thill-Coupling.*—November 16, 1869.

Claim.—1. The improved draw-iron A, having a chamber inclosed on all sides except the end which is covered by the cap *e*, as shown and described.

2. The combination of screw H and jam-nut *i*, with the draw-irou, and a shank provided with the cylindrical groove S, arranged as set forth, to prevent "rattling."

96,892.—THOMAS C. CRAVEN, Albany, N. Y., assiguor to WILLIAM L. and HENRY K. BOYER.—*Hay-Tedder.*—November 16, 1869.

Claim.—1. The stationary girt C, snpporting the rotating continuous sleeve or central tubular shaft D of the skeleton reel, in combination with the frame B B B′ and wheels A A, substantially as set forth.

2. The combination of the girt C, continnous sleeve or tubular shaft D, arms *d* and d^1, and ribs E, substantially as set forth.

3. The combination, substantially as described, of reel-arm *d* d^1, central continuous tubular shaft D, mounted upon a girt which connects the sides of the frame with the stationary gear-rim mounted on the frame, driving-wheels A A, and a system of gears, connecting said driving-wheels with the reel.

96,893.—JOHN J. CRAWFORD, Glasgow, Scotland.—*Steam Cloth-Press.*—November 16, 1869.

Claim.—The combination of the follower or plunger *d*, movable racks *g*, and sockets *j*, when said parts are constructed and arranged to operate as and for the purpose herein shown and described.

96,894.—JEPTHA CUMMINS, and CAREY E. CUMMINS, Perry, Mich.—*Horse Hay-Fork.*—November 16, 1869.

Claim.—1. The handle A, provided with the loop B, notched slot C, and apertures in its lower end, so as to regulate the tines, substantially as set forth.

2. The handle A, constructed as described, in combination with the clevis G, tines D, and trigger H, when combined to form a horse hay-fork, substantially as shown.

96,895.—HENRY CURTNER, Anna, Ohio, assignor to himself and ELI RAGON, same place.—*Water-Governor.*—November 16, 1869.

Claim.—The combination and arrangement of the float R, axial rod O, pitmen N and J, and rock-shaft

M L K, vertical guiding-stem I, ball-valve H, and removable seat-block H′, all substantially as and for the purpose described.

96,896.—William G. Davis and Levi T. Davis, McMinnville, Oregon, assignors to Daniel McCreary, J. B. Davis, and Levi T. Davis.—*Combined Harvester and Thrasher.*—November 16, 1869.

Claim.—1. The combination of the main frame A A′, and the frame C, the latter pivoted by the arms C¹ to the rear part of the frame A′, substantially as described.

2. The levers E and F, pivoted to the frame A′, and connected to the swinging frame C, in the manner set forth, to enable the operator upon the rear platform to regulate the height of the cutting-apparatus at will, as described.

3. A combined header and thrasher, constructed substantially as described, and having arrangements for attaching teams both at front and rear, substantially as set forth.

96,897.—Cyrus Dean, Buffalo, N. Y., assignor to John Alexander Blake, Port Robinson, Canada.—*Lantern.*—November 16, 1869.

Claim.—1. The device herein described, consisting, essentially, of the lamp, the glass, the sliding shield, the signal-glass, and door, and adapted to be used as an ordinary lantern, a signal-lantern, or a dark-lantern, when these parts and their adjuncts are constructed as herein shown.

2. In combination with the above, the match-lighting attachment E F, constructed and applied as shown.

96,898.—D. D. Decker, Saugerties, N. Y., assignor to himself and W. B. Dubois.—*Carriage Fifth-Wheel.*—November 16, 1869.

Claim.—1. A fifth-wheel, having a groove in its under face, of substantially the form shown and described, and adapted to turn on supporting-brackets, as and for the purposes described.

2. The employment, in combination with a fifth-wheel, of adjustable stops, for varying the throw or extent of turning of the mechanism, as and for the purposes explained.

96,899.—John Otto Donner, Jersey City, N. J.—*Kiln for Revivifying Bone-Black.*—November 16, 1869.

Claim.—1. The arrangement, relatively to each other, of a series of fire-places A A, the body of the kiln made up of two or more stories in communication at their ends, so as to form return-flues for the gaseous products of combustion, and the pipes or retorts L L, substantially as specified.

2. The arches B B, arranged to extend over and in rear of the fire-places, and provided with distributing-apertures *a a*, for the heated air and gases through them, in combination with the retorts L L, arranged, in relation to the fire-places A A, essentially as described.

3. The combination, with the retorts L L, of the beams N N, formed with sockets to receive the upper ends of the retorts, and the feeding-nozzles or thimbles O O, substantially as and for the purpose or purposes herein set forth.

96,900.—John Otto Donner, Jersey City, N. J.—*Vacuum-Pan and Similar Apparatus.*—November 16, 1869.

Claim.—The combination and arrangement, with the vacuum-pan or vessel A, and relatively to the escape-pipe B, for the vapor generated within said vessel, of the tapering or curved funnel-shaped rim C and cup D, constructed to leave an annular opening, *b*, between them, substantially as and for the purpose or purposes herein set forth.

96,901.—Thomas H. Eulass, Mason City, Ill. — *Hemmer for Sewing-Machine.* — November 16, 1869.

Claim. — As a new article of manufacture, the hemmer herein shown and described, consisting of plate A A′, B C G, formed as described, and having slots *c g*, scales *c′ c′*, and adjustable edge-turning block E, and set-screw F.

96,902.—Michel G. Fagan, Troy, N. Y., assignor to himself and Joseph B. Wilkinson, same place.—*Base-Burning Stove.*—November 16, 1869.

Claim.—1. The fuel-chamber A′, supported by the cylinder B at a point between the exit-pipe *c* and the grate *e′*, situated and used as and for the purpose as described and set forth.

2. The draught-aperture *b*, with its cover *b′*, in combination with the outlet connection-pipe *c*, and its air-tight damper *c′*, situated, constructed, and used as described and set forth.

3. The chamber *f*, with its dampered ingress-apertures *g*, and outlet *h*, constructed, situated, and used as described and set forth.

4. The chamber *i*, with its dampered ingress-apertures *j*, and outlet-apertures *k*, constructed, situated, and used as described and set forth.

5. The chamber *l*, with its ingress-apertures *m*, and outlet-apertures *n*, constructed, situated, and used as described and set forth.

6. The chamber C, in combination with the upper chamber A′, (and supporting the same,) situated and used as described and set forth.

7. The perforated bottom plate, or its equivalent. *r*, with the perforated damper S, operated by the handle S′, constructed, situated, and used as described and set forth.

8. The dampered aperture *t*, in combination with the outlet *u*, and the perforated plate *r*, constructed, situated, and used as described and set forth.

9. The illuminating-apertures *p*, covered or closed with mica, or its equivalent, and situated below the grate and above the base of a stove, as and for the purpose described and set forth.

10. The employment and construction of the lever G′, or any equivalent thereto, for the purpose of causing the fuel to drop downward, substantially as described and set forth.

96,903. — Edward Faron, Chester, Pa., assignor to Reaney, Son and Company, same place. —*Link-Motion Device for Steam-Engines.*—November 16, 1869.

Claim.—1. A solid link, A, arranged to slide in a disk, *b*, which is adapted to, and can oscillate in the cross-head of a valve-spindle, substantially as set forth.

2. The plate *d*, interposed between the disk *b* and the cross-head, and held to the latter by a pin, E, concentric with the said disk, all substantially as set forth.

96,904. — Cyrus Fisher, Canton, Mass., assignor to himself and Augustus G. Fisher, New York City.— *Carriage-Thill Coupling.* — November 16, 1869.

Claim.—The combination and arrangement of the separate clips B B, trunnioned block *b*, having conical-ended trunnion, and strap-bolt *a′*, all constructed and operating in the manner and for the purpose specified.

96,905.—Friend P. Fletcher and Virgil W. Blanchard, Bridport, Vt.—*Manufacture of Iron and Steel.*—November 16, 1869.

Claim.—1. The use and employment of a tilting, rocking, or revolving converting-vessel or bath, for the purpose of exposing the melted metal contained therein, in a globular or atomic state, a greater or lesser number of times, to a jet or jets of gaseous element or elements, substantially as and for the purposes set forth.

2. The repeated forcible reduction or dispersion of the molten metal into a globular or atomizing condition by the same jet or jets of a gaseous element or elements, substantially as and for the purposes specified.

3. The introduction, into the blast of a reverberating furnace, when such furnace is combined with a converting-vessel or bath, in which the molten metal is reduced to a globular or atomic state, any gaseous or volatile element or elements that will by chemical affinity eliminate or remove any deleterious element contained in the molten metal, or assist in the production of the desired product.

4. The use and employment of a tilting, rocking, or revolving converting vessel or bath containing two apartments or pockets for holding the molten

metal during the process of conversion or purification.

5. The exposure of the molten metal, in a globular or atomic condition, to the flame, or the products of combustion from a reverberating furnace, substantially as and in the manner specified.

6. A puddling-vessel, with its reverberating furnace, in combination with the converting-vessel, or bath, in which the molten metal may be reduced to a globular or atomic condition, substantially as and for the purpose set forth.

7. The introduction of wrought or cast iron, or any variety of iron ore, into a converting-vessel or bath, in which the molten metal is reduced to a globular or atomic condition within the effect or in the presence of a flame or products of combustion from a reverberating furnace, substantially as and for the purposes described.

8. The arrangement of blast-pipes, with their necessary valves, connected with the apartment of the converting-vessel, in combination with such vessel, and the reverberating furnaces, for the purpose of supplying and regulating the jet of gaseous elements required to reduce the metal to a globular or atomic state, and to supply and regulate the necessary blast for the reverberating furnaces, substantially in the manner specified.

9. The introduction of *spiegel eisen*, spathic ore, or any suitable substance containing a greater or lesser per cent. of carbon into a converting-vessel or bath combined with a reverberating furnace, and in which the molten metal is reduced to a globular or atomic condition by a jet or jets of gaseous elements, substantially as and for the purpose set forth.

10. The introduction of any hydrocarbon, vapor, or any gaseous or volatile element containing a greater or lesser per cent. of carbon, into the jet or jets by which the molten metal is atomized or globularized within the converting-vessel or bath, substantially as and for the purposes described.

11. The openings at each extremity of the converting-vessel, for the purpose of the exit of the products of combustion, and for the introduction of any suitable instrument for the removal of the scoria or slag from the molten metal, or for working the metal with a puddling-tool, substantially in the manner set forth.

12. The lever Q, or its equivalent, for tilting, rocking, or revolving the converting-vessel, substantially as and in the manner specified.

13. The forcible dispersion of a stream of molten metal into a globular or atomic state in the production of any desired grade or variety of product between the carburet of iron, or what is commonly known as cast iron and steel, substantially as and in the manner described.

14. Rising and falling pockets or apartments for holding the molten metal during the process of conversion or purification, substantially as and for the purpose set forth.

15. The use of the valve *a* in the depression M of the converting-vessel A, substantially as and for the purpose specified.

16. The use of the stationary disk D, in combination with the apartment F and blast pipe E, when used in connection with a converting-vessel, in which the molten metal is reduced to a globular or atomic state, substantially as and in the manner set forth.

17. In a tilting, rocking, or revolving converting-vessel, to which are attached reverberating furnaces, and in which the molten metal is repeatedly reduced or dispersed into a globular or atomic state by the same jet or jets of a gaseous element or elements, the purification or refinement of any other molten metal besides iron, substantially as and for the purposes specified.

96,906. — J. M. FLETCHER, Sidney, Ohio. — *Churn-Dasher.*—November 16, 1869.

Claim.—1. The adjustable wedges *e*, when constructed and operated in the manner and for the purpose substantially as set forth.

2. A churn-dasher, furnished with arms *b b*, fliers *d c*, and dovetailed wedge *e*, the whole being constructed and operated as and for the purpose substantially as described.

96,907.—ASAHEL FRANKLIN, Springfield, Ohio. | *Plow.*— November 16, 1869.

Claim.—1. Constructing the mold-board of a plow from a pattern laid off substantially in the manner and for the purposes herein set forth.

2. The mold-board A, having the curve F in the upper portion running from the point of the plow backward, as shown and described, for the purposes set forth.

3. Changing the draught of the plow, by means of notches, ratchets, holes, or their equivalents, on the back or rear to the main post, for the confinement of the end of the draught-rod, so that in lowering the end upon the post, the rod will form a brace to strengthen the plow when used in hard or sod ground.

96,908.—JOEL G. GARRETSON and OLIVER S. GARRETSON, Buffalo, N. Y.—*Sash-Holder.*—November 16, 1869.

Claim.—1. The eccentric D, and the slotted and cam-headed bolt B, when so constructed and arranged that the pivot of the former shall pass through the slot in the latter, and form a common pivot for both, substantially in the manner set forth.

2. The lug *b*, at the outer end of the bolt B, arranged with the cam D, so that the latter in releasing the bolt shall engage with the lug, and withdraw the bolt from contact with the casing, as hereinbefore set forth.

96,909.—E. P. GLEASON, New York, N. Y.—*Lamp-Shade-Holder.*—November 16, 1869.

Claim.—The combination of the wires B, having a flattened and half-round formation, with the ring A, provided with the straps *a*, when the same shall be constructed substantially as and for the purpose specified.

96,910. — JOHN JAMES GRANT, Northampton, Mass., assignor to CHARLES H. STOCKBRIDGE, same place.—*Machine for Cutting Threads on Bolts.*—November 16, 1869; antedated November 6, 1869.

Claim.—The tool *d*, constructed as described, in combination with the holder *e*, having a male screw on its periphery, and the rest *f* with a corresponding female screw, all arranged and operated together, substantially in the manner described.

96,911.—JAMES F. GUTHRIE, Somerville, Mass. —*Casting Copper Tubes.*—November 16, 1869.

Claim.—1. The combination and arrangement of the current-divider *f*, with the nose-piece or spout *e*, and the mold *a*.

2. The arrangement of the current-divider *f*, the spout *e*, the stay-piece *c*, the mold *a*, and the core *b*.

96,912. — SAMUEL HALLIWELL, New Haven, Conn.—*Tube-Cutting Machine.*—November 16, 1869.

Claim.—The revolving mandrel B, constructed with the shoulder *f*, combined with the revolving arbor E provided with the cutter L, and with the guide N and collar *s n*, arranged so as to govern the length of the cuts, the whole constructed and operating in the manner described.

96,913.—MOSES HAWKINS, Birmingham, Conn., assignor to himself, ROYAL M. BASSETT, and THEODORE S. BASSETT, same place.—*Friction-Clutch.*—November 16, 1869.

Claim.—1. The arrangement of the sliding bars D D on the friction-plate C, combined with the spiral grooves or slots *a* in the pulley, substantially as and for the purpose set forth.

2. In combination with the bars D on the plate, and slots or grooves *a* in the pulley, the arms E, arranged upon the shaft relative to the bars D, and so as to operate the said bars substantially in the manner and for the purpose set forth.

3. In combination with the plate C and bars D arranged thereon, and operated by the arms E, the slots *e*, constructed so as to serve the double purpose of drawing in the said arms, and withdrawing the plate from the pulley, substantially as set forth.

96,914.—ROWLAND HILL, East Boston, Mass.—*Pipe-Coupling.*—November 16, 1869.

Claim.—The pipe-coupling, as hereinbefore described, as composed of the right and left or annular screws C C, the tubular nut D, and the duplex tapering thimble E, the whole being to operate with and

couple two pipes, substantially in the manner as specified.

96,915.—David Hirschberg, Baltimore, Md.—*Carpet.*—November 16, 1869.

Claim.—The construction of the two pieces of leather, Figs. 1 and 2, by which a carpet is made, of any size or dimensions, and of any color or appropriate pattern, as herein described.

96,916.—John P. Hisley, Syracuse, N. Y., assignor to himself and Henry L. Duquid, same place.—*Method of Lining Rings, Buckles, &c.*—November 16, 1869.

Claim.—The method, herein described, of fitting and swaging linings upon the interior surfaces of rings, buckles, and like objects.

96,917.—Henry W. Holcomb, Northville, Mich., assignor to himself and W. Frank Hughes, same place.—*Horse-Rake.*—November 16, 1869.

Claim.—1. The arrangement of the cross-bar C, parallel with and in front of the axle A, provided with the plates *a* and the single rod *b*, to which are hinged all the rake teeth I, which are extended over the axle A and kept in position by the plates *f* and rods *i i*, and springs *e e*, all substantially as set forth.

2. The combination of the axle A, bar E, adjustable plates F, pins *i i*, springs *e e*, plates *f*, teeth I, bar C, catch H, and shafts G G, all constructed and operating substantially as herein set forth.

3. The spring-latch H, when attached to the rake, in the manner and for the purposes herein set forth.

96,918.—Phineas Howard, San Francisco, Cal., assignor to J. S. Josselyn, William B. Lake, and B. F. Josselyn, same place.—*Wooden Pavement.*—November 16, 1869; antedated November 3, 1865.

Claim.—In a wooden pavement, constructed with semi V-shaped openings, the employment of the key C, in the manner and for the purpose described.

96,919.—O. P. Humber, Greenville, N. C.—*Cotton-Seed Planter.*—November 16, 1869.

Claim.—1. The sliding valve K, and devices for operating the same, in combination with the cylinder E, substantially as and for the purpose set forth.

2. The sliding valve K, in combination with the lever L, spring *t*, shaft M, and pins *o* of the driving-wheel H, substantially as described, and for the purpose specified.

3. The slide *s*, in combination with the cylinder E and valve K, when operating substantially as and for the purpose set forth.

96,920.—David J. Hunter, Exeter, N. H.—*Brick-Machine.*—November 16, 1869.

Claim.—1. The combination, with the mold-box and its sliding cover and vertical plunger, operating in relation to each other as specified, of a plunger, arranged to move at right angles with the vertical plunger, and to feed the clay into the side of the mold, substantially as shown and described.

2. The employment, with the mold-box of a brick-machine, of two plungers or followers, operated substantially as described, the one to feed the clay into the side of the mold, and to exercise a lateral pressure upon the mass therein, the other to exert an upward or vertical pressure upon the clay, and to lift the formed brick from the mold, substantially as set forth.

3. The construction and arrangement of the vertical plunger, the peculiar-shaped cam, which imparts to the same its varied movements, and the devices for connecting said cam and plunger, substantially as shown and set forth.

4. The combination of the drum F, and the segmental flange which it carries, with the clay-hopper, and one or more feed-openings formed in that portion of its bottom intervening between the peripheries of the drum and the hopper, and arranged over corresponding feed-plungers, which carry to the molds the clay delivered at regular intervals by the said segmental flange, substantially as shown and described.

5. The sliding cover for the mold, and oscillating lever for operating the same, in combination with the wiper, cam, and forked arm, which actuate said lever, to produce the reciprocating movement of the mold-cover, said parts being constructed and arranged substantially as shown and described.

6. The scoring or grooving the upper surfaces of the flanges J J′, to permit of return of surplus clay, when the same are employed in connection with the filling-wing *c*, the whole being as before explained.

7. As a machine for molding and pressing bricks, the general arrangement and organization of individual features hereinbefore alluded to in detail, the same consisting mainly of the hopper A, with its orifices *d d′*, and provided with the drum F and segmental wing *c*, molds I I′, provided with the dually-arranged plungers J′ M′, and gates or covers *k k′*, the said flanges being operated by the cams O O′, and the gate by the rocker-shaft *m*, forked arm *p*, and vibratory lever *l*, and the whole operating in manner and to produce results before set forth.

96,921.—Thomas A. Hunter and John Blewitt, New York, N. Y.—*Facing for Buildings.*—November 16, 1869.

Claim.—A facing for buildings, made of glass, and prepared in the manner specified, as a new and useful article of manufacture.

96,922.—Peter H. Jackson, New York, N. Y.—*Iron Front for Buildings.*—November 16, 1869.

Claim.—1. The cast-iron shell *a*, forming plain, rustic, or ashlar facings for buildings, in combination with the bars *b*, that unite said shells into sections, substantially as and for the purposes set forth.

2. The filling-plates *o*, in combination with shells *a* and bars *r*, substantially as and for the purposes set forth.

96,923.—John C. Jewett, Buffalo, N. Y.—*Water-Filter.*—November 16, 1869.

Claim.—1. The arrangement of a removable filtering-cup, G, within a vessel, E, sunk in the permanent filtering-bed, substantially as set forth.

2. With a removable filtering-cup, G, embedded vessel E, and permanent bed of a filter, arranged as hereinbefore described, the outlet *e*, arranged near the top of the vessel E, as and for the purpose set forth.

3. The arrangement, with the division-plate *f* and removable filter, of the curb or flange *m*, in the manner and for the purpose specified.

96,924.—William H. Johnson, Sr., Clayton, Ind.—*Door-Check.*—November 16, 1869.

Claim.—The door-arrester herein described, having escalloped segment C and spring-wheel D, constructed and arranged to operate substantially as specified.

96,925.—Charles H. Knowlton, Camden, N. J.—*Mechanism for Operating the Jacks in Looms.*—November 16, 1869.

Claim.—A rigid reciprocating frame, sliding on a loom, and having one or more arms G, vibrated substantially as and for the purpose described.

96,926.—Benjamin Kuhns, Dayton, Ohio.—*Grain-Drill.*—November 16, 1869.

Claim.—1. The construction of arm H, substantially as and for the purpose set forth.

2. The combination and arrangement of the arm H, guide G, spring G′, having its stop-pin, and lever F, substantially as and for the purpose specified.

3. The combination of the lever F, ratchet F, gear-wheels E, E^1, E^2, E^3, E^4, E^5, and E^6, arranged to govern the discharge of the seed, as specified.

96,927.—Alfred Lawton, Philadelphia, Pa.—*Raising and Moving Coal, &c.*—November 16, 1869.

Claim.—1. The moving and raising of coal or other granular material by means of a car or suitable vessel, arranged to move in a chamber which extends beneath the platform upon which is deposited the coal or other material to be raised, and beneath a shaft, or its equivalent, so that the said material will of itself pass into the vessel, and so that the latter when filled may be raised in the said shaft, or its equivalent, all substantially as herein set forth.

2. In combination with the said chamber extending beneath the platform of deposit, the openings *i* in the latter, each furnished with a suitable door, *j*.

3. The arrangement, at the bottom of the chamber C, of the tracks *b* and *b'*, or any equivalent arrangement of tracks, whereby the ear or conveyer F can be conducted from the elevating-shaft to any of the openings *i* in the platform of deposit, or *vice versa*.

4. An elevating-shaft, consisting of a lower permanent portion, and of an upper movable portion, substantially as described, and as represented in Figs. 2 and 5 in the drawing.

5. The arrangement, substantially as herein described, in respect to the chamber C and elevating-shaft, of the platforms A and B.

96,928.—FRANZ LEHMANN, Riverside, Ill.—*Horse-Shoers' Hoof-Parer.*—November 16, 1869.

Claim.—The horse-shoers' hoof-parer, composed of the blade A *a* and the handle, constructed substantially as and for the purpose specified.

96,929.—M. T. LINCOLN, Washington, D. C., assignor to himself and WILLIAM ROBINSON, same place.—*Galley-Rest.*—November 16, 1869.

Claim.—1. The movable board B, ratch *c*, and pawl *d*, in combination, all constructed and arranged substantially as and for the purposes specified.

2. The detachable galley-head C, in combination with the rest B, constructed substantially as and for the purposes described.

96,930.—G. H. LINK and C. D. CURTIS, Syracuse, N. Y.—*Broiler.*—November 16, 1869.

Claim.—The double reversible gridiron A *a a*, in combination with the suspending-rim D and cover C, when the said bars *a a* are grooved, and made in circles, arranged concentrically, as herein shown.

96,931.—H. W. LITTLE, Muncie, Ind.—*Needle-Polisher, Sharpener, and Lubricator.*—November 16, 1869.

Claim.—The within-described device, consisting of the supporting-frame A, carrying an emery-cushion, E, whet or sandstone, B, and soapstone or French chalk, D, the said parts being arranged substantially as shown and described.

96,932.—FRANK B. LORD, Cincinnati, Ohio.—*Railway-Car Coupling.*—November 16, 1869.

Claim.—1. The swiveling reversible coupling-bar C, provided with link E and expansion jaws D D', operating substantially in the manner and for the purpose specified.

2. The pins *h*, spring H, and apertures *i i'*, for the purpose specified, in the described connection with the reversible bar C.

3. In connection with the jaws D D', the winged key L apertures *a' c*, and notches M, operating as described, and for the purpose explained.

96,933.—JAMES W. LOVELESS and CHARLES H. SHAFFER, Clark's Hill, Ind.—*Grain-Binder.*—November 16, 1869; antedated November 3, 1869.

Claim.—1. The combination of the bent teeth I^1, for compressing the gavel resting upon its supports, and the teeth g^2, which, projecting through the shelf B, serve to support the grain carried over, while the sheaf is being bound, substantially as set forth.

2. The shelf B and supports C C', when combined with teeth g^2, for supporting the grain on the shelf, and with mechanism for allowing it to fall from the shelf upon the supports C C', at the will of the binder.

3. The standards M, composed of the slotted plates *m*, bent rods, and spiral springs m^1, and fingers m^2, for supporting the band, substantially as set forth.

4. The combination of the supports C C', fork P, and operating-mechanism, for throwing the sheaf from the machine, substantially in the manner set forth.

5. The band L, composed of the loop *l* and hook *l'*, substantially as and for the purpose described.

6. In combination with the binder's seat, a series of treadles for compressing the sheaf on the supports, while the accumulating grain is retained upon the shelf, and for throwing the sheaf from the machine, substantially as described.

96,934.—CLOVIS LOWE, Randolph, N. H.—*Fence.*—November 16, 1869.

Claim.—The combination of the post-foot A, the dowel-pin B, post C, constructed with a hole, D, in the base, and panel E, substantially as and for the purpose set forth.

96,935.—JOHN MADDEN and UPSON BUSHNELL, Cleveland, Ohio.—*Thill-Shackle.*—November 16, 1869.

Claim.—The thill-shackle, composed of the parts A and B, bolt G, and nut H, the parts A and B constructed and arranged in the manner and for the purpose substantially as described.

96,936.—GEORGE ALBERT MARINER and FOLSOM DORSETT, Chicago, Ill.—*Composition for Preventing Oxidation of Metallic Water or Gas Pipes.*—November 16, 1869.

Claim.—The within-named composition, compounded as described, and applied to iron pipes, as and for the purposes set forth.

96,937.—CHELTON MATHENY, Greensburgh, Ind.—*Hand-Spinning Machine.*—November 16, 1869.

Claim.—The combination, in a hand-spinning machine, of a spindle-carriage and guide-track, with the bell-crank J K *k* connected to and operated by the treadle, substantially as and for the purpose set forth.

96,938.—WILLIAM M. MAYALL, Gray, Me., assignor to himself and JOHN C. MAYALL, Boston, Mass.—*Corn-Sheller.*—November 16, 1869.

Claim.—1. The wheels R, to the shelling-jaws, for the purpose specified.

2. The clamp A^4, constructed with slit G^2, and holes I^2 and J^2, substantially as described, for the purpose set forth.

3. The combination and arrangement of the flange L, shellers N, rollers R, guide-rods O, springs Q, rolls V, springs Y, and gear-wheels C E, substantially as herein represented and described.

96,939.—JAMES MCCORMICK, Boston, Mass.—*Brewing Ale, Beer, &c.*—November 16, 1869.

Claim.—In the process of brewing, subjecting the wort or mash-liquid to charcoal, or its equivalent, either alone or in combination with other materials, and either in combination or not with a screen or screens, substantially as and for the purpose described.

96,940.—JOHN MCNEVEN, New York, N. Y.—*Vapor-Bath Apparatus.*—November 16, 1869.

Claim.—1. The perforated base-plate E, in combination with case A, and with the pan C and the boiler or boilers D, substantially as described.

2. The pipes *d d e*, provided with stop-cocks *f*, in the interior of the case A, in combination with the pan C and base-plate E, and boiler or boilers D, substantially as set forth.

3. The arrangement of the hinged partition-plate G, between the steaming or heating apparatus, at the base of the case A, and the exhaust at the top thereof, substantially as and for the purpose described.

4. The combination of the swinging interior vessel *l*, the outer vessel *k*, provided with exhaust-port *m'*, and the case A, substantially as set forth.

96,941.—JAMES MCPHAIL, Charles City, Iowa.—*Bag-Holder.*—November 16, 1869.

Claim.—1. The combination and arrangement of the bed-piece A, grooved standard B, notched sliding bar C, and arm D, all substantially as and for the purposes herein set forth.

2. The arrangement of the rods *a a*, levers *d d*, rod *o*, lever H, and ratchet-bar I, all substantially as and for the purposes herein set forth.

3. The combination and arrangement of the bed-piece A, grooved standard B, sliding bar C, arm D, jaws G G, rods *a a*, hooks *e e*, levers *d d*, rod *o*, lever H, and ratchet-bar I, all constructed as described, and operating substantially as and for the purposes herein set forth.

96,942.—HENRY W. MILLAR, Utica, N. Y.—*Cheese-Hoop.*—November 16, 1869.

Claim.—The packing-rings D E, of rubber or similar elastic material, when applied as herein described in the pressing of cheese.

96,943.—Samuel J. Miller, Economy, Ind.—*Medical Compound from Oak Bark.*—November 16, 1869.

Claim.—The medical compound herein described, compounded of the materials and in the manner substantially as specified.

96,944.—Daniel Mills, New York, assignor to Charles Goodyear, Jr., New Rochelle, N. Y.—*Sewing-Machine for Boots and Shoes.*—November 16, 1869.

Claim.—1. In combination with a mechanism for sewing boots and shoes, of otherwise ordinary or suitable construction, the stationary and movable jaws, arranged for operation substantially as herein shown and described, the movable jaw being actuated positively by a cam, or its equivalent, to hold and firmly clamp the outer sole to the welt while in process of being sewed together, the pressure between said jaws being released while the feed is performing its function.

2. The combination of the movable, positively-actuated jaw and the feed-mechanism with the stationary jaw and sewing-mechanism, under the arrangement and for operation substantially as herein shown and set forth, so that the former may be raised bodily in relation to the latter, to admit of the introduction of the material to be sewed, and also that the said upper or movable jaw and feed may adjust themselves automatically to various and unequal thicknesses of stock while in the operation of sewing.

3. The arrangement of a ball-and-socket joint, forming the connection between the feed-dog and the feed-lever, substantially as described.

4. The combination of the parts constituting the adjustable feeding-device, substantially as described, and for operation as set forth.

96,945.—Thomas N. Morse, Fairhaven, Mass.—*Method of Warming Railroad-Cars.*—November 16, 1869.

Claim.—1. An air-forcing apparatus, in combination with a pipe leading through the steam and water-space of a steam-boiler, and communicating with pipes which are arranged beneath the car-beds, and which are connected by hollow universal joints, substantially as described.

2. The construction of the flue-boiler B, with an air-pipe arranged within its water and steam space, substantially as and for the purposes described.

3. The combination of balls and sockets *i j*, *i' j'*, telescopic joint *k k'*, springs *h h'*, and pipes D D, constructed and put together substantially as described.

96,946.—Joseph Nampel, Freeport, Ill.—*Animal-Trap.*—November 16, 1869.

Claim.—The combination, as herein set forth, of the box A, adjustable frame B, inclined bottom C, and pivoted false bottom D, all arranged to operate as and for the purpose described.

96,947.—Samuel B. B. Nowlan, New York, N. Y., assignor to James Coleman and William Baxter, same place.—*Pump.*—November 16, 1869.

Claim.—1. The combination of pipe N and chambers I I', as and for the purpose specified.

2. The arrangement of the siphon-pipes G and H, and the oscillating valve-gate J, in combination with a double-acting force-pump, substantially as described.

3. The combination of the double cylinder A B, pistons E E, siphon-pipes G H, valve J, chamber I, and pipe N, with the valves K K, when the same are arranged to operate substantially as and for the purposes described.

96,948.—William Oller, Scenery Hill, Pa., assignor to himself and James D. Ulery, same place.—*Sawing-Machine.*—November 16, 1869.

Claim.—The bars *c*, levers *d d'*, spring-plates *e e'*, and extensible connecting-rods *h*, combined and arranged, in connection with the cross-beam B, substantially as described.

96,949.—Charles R. Otis, Chicago, Ill.—*Seam for Tin Cans.*—November 16, 1869.

Claim.—A seam for tin cans, formed by bending the edges, substantially in the manner herein shown and described.

96,950.—Oscar Paddock, Watertown, N. Y.—*Blind-Slat Operator.*—November 16, 1869.

Claim.—1. The combination of the two gears, fixed to the blind-slats and blind-frame, respectively, with the gear-stop and thumb-piece and spring, to which the same is attached, said parts being constructed and arranged to operate as shown and set forth.

2. A blind-slat opener and fastener, composed of the two gears, fixed to the blind-frame and slats, respectively, and the spring stop, for locking the gears, when the blind-frame gear is provided with a central opening or socket, for the passage of the key, and the spring stop is arranged in rear of said opening, so as to be operated by the key, substantially as shown and described.

96,951.—Lewis A. Palmer, Boston, Mass., assignor to himself and Frank E. Hibbard, same place.—*Corset.*—November 16, 1869.

Claim.—A corset, made in two parts, each of which is composed of four pieces, which are so shaped that the edges, forming the middle seam, shall be of the same length and form, united by a matched seam, and those forming the side seams shall be of equal length and different form, united by drawn seams, substantially as described, and for the purpose set forth.

96,952.—Philip O. Palmer, Swoope's Depot, Va.—*Water-Wheel.*—November 16, 1869.

Claim.—1. The curved gates I I, hung on trunnions *e e*[1], in connection with the slotted arms N, the pins *i*, the sliding ring M, and the rack and pinions *o o*[1] O, all constructed to operate substantially as and for the purposes set forth.

2. The supplemental buckets *a a*, on the outside of wheel D, when arranged with reference to the joint between the wheel and the curb, substantially as and for the purposes specified.

96,953.—Erastus C. Philbrick, Bath, Me.—*Lip-Shield.*—November 16, 1869.

Claim.—A lip-protector, composed of two or more adjustable curved shields, of different sizes, united and connected in the manner and by the means substantially as herein shown and described.

96,954.—Charles Felton Pidgin, Boston, Mass.—*Fabric for Shirt-Collars.*—November 16, 1869; antedated November 3, 1869.

Claim.—As a new and improved material for the manufacture of collars, cuffs, bosoms, &c., the textile fabric of single thickness, substantially as herein described.

96,955.—William P. Pierce, New York, N. Y.—*Weighing-Scale.*—November 16, 1869.

Claim.—1. The pan E, supported on the end of the balance-beam, by means of a point formed on the end of a screw, and slightly eccentric to the axis thereof, for the purpose of linear adjustment.

2. The open loop-piece *e*, to the lower arm of which the balance-weight is connected by a screw *h*, adjustable to form a stop, to prevent the disengagement of said loop from the balance-arm, all substantially in the manner and for the purpose herein set forth.

96,956.—E. J. Pinkham, Portland, Me.—*Hanging Lower Top-Sail Yards.*—November 16, 1869.

Claim.—The shoulder or lip *k*, applied as and for the purposes herein described.

96,957.—Charles Pomeroy, Mattoon, Ill.—*Pipe-Wrench.*—November 16, 1859.

Claim.—The handle A, hook *a*, slide B, swinging lever *b*, spur *b''*, and spring *b'''*, all constructed and arranged substantially as described.

96,958.—Charles Pratt, New York, N. Y.—*Oil-Can.*—November 16, 1869.

Claim.—1. The construction of nozzles for oil-cans, in the manner herein shown and set forth, the same being formed in one piece with the top of the can, by punching and slitting the metal, and then bending and shaping the parts, as herein shown and set forth.

2. The combination of the nozzle sunk within, and formed in one piece with the can, and shaped as

specified, with the soft-metal cap, under the arrangement herein shown and described.

96,959.—Washburn Race and S. R. C. Mathews, Lockport, N. Y., assignors to S. R. C. Mathews.—*Hydrant.*—November 16, 1869.

Claim.—The detached case B, so combined and arranged with hydrant A as to have an end-play or vertical motion of several inches, to compensate for the heaving by frost, the upper part of same passing outside of main stock of hydrant, so that any change in its position can be easily ascertained, and the case driven back to its place without disturbing the hydrant.

96,960.—Thomas Reaney, Chester, Pa.—*Machine for Shearing Angle-Iron.*—November 16, 1869.

Claim.—An angle-iron shearing-machine, having a two-edged shearing-blade, arranged to reciprocate in a course, at an angle of forty-five degrees, or thereabout, to a horizontal plane, in combination with a two-edged stationary blade, when the edges of the said blades are arranged substantially as herein described.

96,961.—J. S. Reid, Orange, Ind.—*Stand for Exhibiting Photographs, &c.*—November 16, 1869.

Claim.—The knob H, rod L, and cylinder I, in combination with the cap G, cylinder F, base C, rod E, and bed-piece A, all constructed as described, so as to form a double revolving photographic stand, or album, containing pictures of different size, substantially as herein set forth.

96,962.—Peter W. Reinshagen, Cincinnati, Ohio, assignor to himself and John H. Buckman, same place.—*Coupling for Hollow Shafts.*—November 16, 1869.

Claim.—1. The winged bush A *a a*, in the described connection with the slotted or notched shafts B B′, arranged and operating substantially in the manner and for the purpose set forth.

2. In combination with the elements of the preceding clause, the conical notched segments C *c*, nuts D D′, and sleeve E, constructed and operating substantially in the manner and for the purpose explained.

96,963.—Joseph Repetti, Philadelphia, Pa.—*Velocipede.*—November 16, 1869.

Claim.—1. The helical springs *r r*, in combination with the axle-sections *b b*, substantially as and for the purpose specified.

2. The combination of the helical springs *r r* with the cams *n n*, substantially as and for the purpose herein set forth.

3. The combination of the helical springs *r r* and cams *n n* with the levers or treadles *m m*, straps *o o*, pulleys *p p*, and support *p′*, together with the springs *r′ r′*, substantially as and for the purpose specified.

4. The arrangement of the bearings *f f g g*, for the axles *b b*, ribs *g′ g*, brace-rods *j j*, and seat *k*, substantially as and for the purpose herein specified.

5. The opening for the brake-cord *z′*, entering the side of the stem *t*, and issuing therefrom at the center of its upper end, substantially as and for the purpose set forth in this specification.

96,964.—T. M. Richardson, Stockton, Me.—*Steering-Apparatus.*—November 16, 1869.

Claim.—The guide K, in combination with the pin *c′*, slide C, springs *s s*, and tiller B, when constructed and arranged to operate as specified.

96,965.—Edward H. Ripley, Boston Highlands, Mass., assignor to himself and John A. Kohl, same place.—*Alarm for Letter-Boxes.*—November 16, 1869.

Claim.—1. The pivoted plate B, and rotating spindle C, for covering the slit in the door, and for operating the alarm-mechanism, substantially as herein shown and described.

2. The combination of the pivoted plate B, rotating-spindle C, coiled spring D, dog or tumbler E, spring-catch F, spring-hammer G, and bell H, with each other, substantially as herein shown and described, and for the purpose set forth.

96,966.—Frederick Robbin, Hudson City, N. J., assignor to himself and Philip Lahr, New York City.—*Writing-Desk.*—November 16, 1869.

Claim.—1. The arrangement of the top A and case B, in combination with the frame C, whereby the desk or the table is formed, as described.

2. In combination with the convertible desk, the sector-plates E, whereby the case B is raised, as described.

3. The supports H, in combination with the rods F and plates E, as and for the purposes set forth.

4. The combination of the plates E, rods F, slotted plates D, case B, and top A, arranged and operating as described, for the purposes specified.

96,967.—Frank L. Roberts, Jacksonville, assignor to James M. McPherson, Ripley, Ill.—*Churn.*—November 16, 1869.

Claim.—The churn-dasher F K, consisting of the horizontal rim K, with holes *k k*, and the hollow cone F, with holes H H, when used in combination with the churn-box A, provided with the expelling-block G, substantially as and for the purpose specified.

96,968.—Charles W. A. Romer, Newark, N. J.—*Hasp-Lock.*—November 16, 1869.

Claim.—1. The adjusting-lever *f*, in combination with the nose of the latch C, and with the tumblers *d* and bolt E, constructed and operating substantially as described.

2. The cavity *g*, in the side of the nose *e* of the latch, to operate in combination with the lever *f* and tumblers *d*, substantially as set forth.

3. The safety-shield *h*, in combination with the adjusting-lever *f* and tumblers *d*, as described.

96,969.—Benoit Roux, Cincinnati, Ohio, assignor to himself and George Haupt, same place.—*Sash-Pulley.*—November 16, 1869.

Claim.—The sash-pulley boxing herein described, consisting of the three members, A, D, and D′, the cheek-plates D D′ being secured together, and to the face-plate A, by stumps C C′ and lips F F, substantially as explained.

96,970.—J. V. Rowlett, Richmond, Ind.—*Straw-Cutter.*—November 16, 1869.

Claim.—1. The lever R, constructed with an extension or handle for the operator, as shown and described, and used in combination with a straight knife, A, and swinging arm P, substantially in the manner and for the purpose set forth.

2. The slotted plate E, when used in combination with the arm P, for the purpose of operating the feeding-mechanism, substantially as described.

3. In combination with the arm P and plate E, the lever D, pawls *d d′*, and spring Y, when constructed and operated as herein set forth.

4. The swinging arm P, having an extension beyond the pivot I, as described, when said extension is used to operate the feeding-mechanism, substantially as set forth.

96,971.—William Sailer, Philadelphia, Pa.—*Clamp.*—November 16, 1869.

Claim.—1. A joist-clamp, consisting of a frame, B, having a head, *h*, and serrations or teeth *k*, and of an arm, B′, hinged to the said frame, and having at its outer end a serrated block, *l*, all substantially as and for the purpose described.

2. The block *m*, connected to the frame B by an adjustable arm, B′, for the purpose set forth.

96,972.—Ernest Santin, New York, N. Y.—*Toy.*—November 16, 1869.

Claim.—As a new article of manufacture, the velocipede-toy herein described.

96,973.—George S. Saxton, Saint Louis, Mo., assignor to himself and John M. Saxton, same place.—*Broiler.*—November 16, 1869.

Claim.—1. A device for broiling and similar purposes, formed of two parts, A and A′, hinged together, and secured at their handles by a ferrule, or in other convenient manner, when each of said parts has an open bottom, and is arranged with an inner grating, substantially as set forth.

2. The parts A and A′, arranged with inclined annular bottoms a^3, having raised edges a^2, and used either with or without a cover, C, substantially as and for the purposes set forth.

96,974.—JACOB SHEETZ, Sunbury, Pa.—*Platform-Ladder.*—November 16, 1869.

Claim.—1. The locks P, placed upon both sides of the standards, and so arranged that they will catch and secure the platform at any desired place, substantially as described.

2. The standards A, joined together by the cross-pieces B, sections D, braces G, arms H, secured together by the cross-piece *a*, platform K, screw L, rope M, friction rollers N, locks P, and hook R, when all are arranged and combined, substantially as specified.

96,975.—GEORGE H. SELLERS, Wilmington, Del.—*Machine for Rolling Tubes.*—November 16, 1869.

Claim.—1. The combination of the suspended mandrel with the shaping and the compressing rolls, adjustable relatively to the axis of the mandrel, the combination being and operating substantially as set forth.

2. The combination, with the rolls, of the mandrel, the clamping-stand, and the rotating-wheel, the combination being and operating substantially as set forth.

3. The combination of adjustable rolls, having reversible rotary motion, with an interposed mandrel, which follows the ingot after it has passed through the roll, the combination being and operating substantially as set forth.

4. The combination, with the rolls, of the tubular following-mandrel, the combination being and operating substantially as and for the purpose set forth.

96,976.—GEORGE SHATSWELL, Waukegan, Ill.—*Railway-Car Coupling.*—November 16, 1869.

Claim.—The catch Z, arranged to have a sliding and swinging movement in the bumper A, and provided with a curved plate M *b*, in combination with the spring L, rope S, and coupling-bars C D D, the latter being provided with a lug, E, as set forth.

96,977.—DANIEL SHERWOOD, Lowell, Mass., assignor to WOODS, SHERWOOD AND COMPANY, same place.—*Hanging Basket.*—November 16, 1869

Claim.—The hanging basket, constructed of twisted wire, provided with suspenders of the same material, and a receptacle within, and of the same conformation as the basket for holding the flowers, &c., substantially as described and set forth.

96,978.—MERRILL B. SHERWOOD, Jr., Buffalo, N. Y.—*Apparatus for Curing Meat.*—November 16, 1869.

Claim.—1. The vessel A, constructed as described, having an opening large enough to admit a full charge of meat or fish at one time, and closing with a tight head, for the purpose of salting meats or fish by vacuum, substantially as herein set forth.

2. The crate or vessel B, constructed as described, to be used as a vehicle to convey meat or fish into the vacuum-vessel, and capable of carrying a full charge at one time, substantially as herein set forth.

3. The arrangement of the platform-car D, having frames *h h* and hinged pieces *i i*, for the purpose of carrying one or more crates to and from the vessel in which the meats or fish are salted, substantially as herein set forth.

4. The above-described process of salting meats or fish, by producing a vacuum on said meats or fish after the brine is on them or covers them, substantially as herein set forth.

96,979.—JAMES SIMPSON, Cordova, Ill.—*Cultivator.*—November 16, 1869.

Claim.—1. The combination of the adjustable plows *d* and *e*, and the shovel *c*, with the beam *a* and handles *b*, all arranged as described.

2. The detachable shovel *c*, and the adjustable stem *l*, constructed and applied to the beam as herein set forth.

3. The reversible brace-rod h^3, in combination with recessed and detachable blocks j^3, arranged to operate as described.

96,980.—CHARLES E. SMITH, Goffstown, N. H.—*Blind-Rack.*—November 16, 1869.

Claim.—The combination and arrangement of the lazy-tongs, and its clamp-screw and nut, with the series of teeth, and the slotted carrier, substantially as specified.

96,981.—EARLE A. SMITH, Waterbury, Coun.—*Buckle for Clothing.*—November 16, 1869.

Claim.—The herein-described buckle for clothing, consisting of the frame B C D, with the tuck-bar F, and hinge-bar G, secured to the frame, substantially as set forth.

96,982.—HIRAM SMITH, Norwalk, Ohio.—*Jointed Pipe-Connection.*—November 16, 1869.

Claim.—The sections of pipe A B, standard D, and swiveled or hinged stem F, as arranged and combined to operate conjointly in the manner substantially as described, and for the purpose set forth.

96,983.—JOHANN M. SCHMIDT, New Albany, Ind.—*Spring.*—November 16, 1869.

Claim.—The combination of the spring C, slotted at the ends, and its leaves held in position as described, with the caps D D and hangers E E, substantially as herein set forth.

96,984.—JOHN W. SMITH, Washington, D. C., assignor to JOHN C. PEDRICK and BENJAMIN FENNER, for five-eighths interest.—*Concrete Compound for Pavements, &c.*—November 16, 1869.

Claim.—The manufacture or preparation of the compound, substantially as herein described, and for the purposes to which the same is found adapted.

96,985.—PETER J. SMITH, Philadelphia, Pa., assignor to himself, CONRAD B. ANDRESS, BENJAMIN F. PINE, HORATIO G. SICKLE, THOMAS WOODS, and JOHN Q. GINNODO, same place.—*Brick-Machine.*—November 16, 1869.

Claim.—1. The external pressure-plate S, supported between levers N N′, by pins *j*, sliding in slots *k*, and operated by cams *m m* upon connecting-bars M M, all constructed and arranged as herein set forth.

2. The combination of the shaft T, having a cam, *m′*, on its inner end, and the lever P connected with its outer end, the said lever being held at its outer end by pins *q q*, whereby the said cam *m′* has a partial turn given it, and produces a second pressure on the bricks in its action on the ends of the piston-rod *e*, substantially as described.

96,986.—ROLAND H. SMITH, Pittsburgh, Pa., assignor to JAMES S. and T. B. ATTERBURY, same place.—*Lamp.*—November 16, 1869.

Claim.—1. A lamp which has a fluid-reservoir, of glass or other vitreous substance, connected to its pedestal by means of a screw-thread, formed on the peg of the said reservoir, and a corresponding thread on the pedestal or sleeve thereof, substantially as described.

2. A lamp reservoir, of glass, or other vitreous substance, produced with a screw-thread upon its peg *e*, substantially as described.

3. A lamp-pedestal, having a screw-socket in it, adapted for receiving the screw-threaded peg of glass lamp-reservoir, substantially as described.

4. A lamp-reservoir, of glass, or other vitreous substance, produced with a screw-thread upon the neck or flange *d*, which surrounds the opening in the reservoir, substantially as described.

96,987.—THOMAS SMITH, Jr., Boston, Mass.—*Top for Sirup-Pitchers.*—November 16, 1869.

Claim.—1. The construction of the encircling ring B for the body of the pitcher, with the spindle or pivot *a*, from one piece of metal, as shown and described.

2. In combination with the encircling ring B, as constructed, the top A, as shown and described.

96,988.—HIRAM F. SNOW and JAMES H. DAVIS, Dover, N. H.—*Composition for Pavements.*—November 16, 1869.

Claim.—1. The employment of sulphuric acid with coal-tar, when used with sawdust, and sand or

gravel, or a mineral matter, in the formation of a composition, as set forth.

2. The employment of sulphuric acid with coal-tar and resin, when used with sawdust and sand, or gravel, or a mineral substitute therefor, in the making of a composition for the purpose as specified.

96,989. — DANIEL E. SOMES, Washington, D. C.—*Means for Ventilating, Cooling, and Warming Beds.*—November 16, 1869.

Claim.—1. A mattress, bed-sack, or pillow, the covering of which is composed of air-tight material, having perforations, or their equivalents, as described.

2. The mattress or bed-sack B or pillow C, ventilated as described, either by drawing air from, or forcing it into the same.

3. In combination with the mattress or bed-sack B, or pillow C, the reservoir D, wherein air may be compressed and stored, as and for the purpose set forth.

4. In combination with the mattress or bed-sack B, or pillow C, the reservoir D, provided with means for warming or cooling the air therein, or both, as described.

96,990. — SAMUEL W. SOULE, Milwaukee, Wis.—*Paging-Machine.*—November 16, 1869.

Claim. — 1. The combination, with the rotary type-disks B C D, of the locking-dog M and feeding-dog N, connected, to slide in unison, by means of the cross-shaft L, and the one of which (N) has also a swinging motion communicated to it, to effect the feed of said disks, substantially as specified.

2. The combination of the bell-crank O, the spring P, the stop R, the cam or guide Q, the locking-dog M, also feeding-dog N, and the rotating type-disks, provided with notches or slots, *i i* and *j j*, for action in concert with a stepped shoulder, *h*, to the feeding-dog, essentially as herein set forth.

3. The combination, with the feeding-dog N, of the reversible cam Q, for changing the direction in feed of the rotary disks, substantially as specified.

4. The arrangement of double sets of units on the unit-disk, in combination with single sets of units on the adjacent type-disks, essentially as herein set forth.

5. The combination of the locking-dog M, the feeding-dog N, the rotating type-disks B C D, the reversible cam or guide Q, the stud or projection *l*, on the feeding-dog, the spring S, the bell-crank O, the spring P, and stop R, substantially as and for the purpose or purposes specified.

6. The combination, with the unit-type disk, having two consecutive sets of units, and adjacent disks having but single sets of unit-types, of a feeding-dog or device common to the several disks, and made reversible in its action as regards the feed of said disks, essentially as described.

96,991.—WILLIAM SPARKS, New York, N. Y.—*Coal-Screen.* — November 16, 1869; antedated November 5, 1869.

Claim. — The screen *k*, the hopper *b*, with a converging bottom, and appendages *d*, *e*, *f*, *g*, *h*, *i*, and *o*, combined, constructed, and operating in the manner described, or their equivalents.

96,992.—HENRY SPLITDORF, New York, N.Y.—*Telegraph-Sounder.*—November 16, 1869.

Claim.—The sounding-box D, elevated on posts F, and having the anvil G secured directly on its top, and openings in its sides to increase the sound and allow the passage of the tightening-spring, substantially as and for the purpose described.

96,993.—WILLIAM M. STEVENSON and AUSTIN PEARCE, Harmony, Pa., assignors to themselves and GEORGE E. HANDY, Boston, Mass. — *Packing for Pistons and Valves.*—November 16, 1869.

Claim.—The arrangement of the auxiliary ring *c* and its chamber or groove *b*, with each or either of the main rings C C′, and with passages *d f*, for leading the steam to the inner periphery of the main ring, and thence into the groove *b* of such main ring, the whole being substantially as and to operate as hereinbefore explained.

96,994.—JOHN STOWELL, Charlestown, Mass.—*Baking-Powder.*—November 16, 1869.

Claim.—1. The use of bitartrate of ammonia, with an alkaline carbonate, substantially as described, for the purpose of raising bread.

2. A baking-powder, made up of bitartrate of ammonia and an alkaline carbonate, substantially as above described.

96,995.—R. STUCKWISCH, Terre Haute, Ind. — *Brick-Machine.*—November 16, 1869.

Claim.—1. The adjustable guides *t t*, constructed substantially as and for the purpose set forth.

2. The platform P, in combination with guides *t t*, when said guides are constructed and arranged substantially as specified.

3. The parts herein mentioned, when all are constructed, combined, and arranged together in a brick-machine, as and for the purpose described.

96,996.—HIROM C. STOUFFER, East Lewistown, assignor to GEORGE SMITH, Lowellville, Ohio.—*Hay-Elevator.*—November 16, 1869; antedated May 17, 1869.

Claim.—The combination of the tube M, rope L, and catch J, with the block E, lever H, and trip I, all constructed and arranged to operate in the manner and for the purpose substantially as described.

96,997.—AUGUSTUS HENRY TAIT, Jersey City, N. J.—*Still for Distilling Naphtha and Petroleum.*—November 16, 1869.

Claim.—The pipe G, with its stop-cock 3, in combination with the pipe C′, ascending worm E, pipe F, and condenser H I, all constructed and operating substantially as herein shown and described.

96,998. — HENRY TAUSZKY, New York, N. Y., assignor to ELI D. BANNISTER and RUDOLPH TAUSZKY.—*Process of Preparing Grain for Distillation.*—November 16, 1869.

Claim. — 1. The process of preparing grain, as and for the purpose set forth.

2. The rollers b^1 b^2, in combination with roller *a* and rollers d^1 d^2, when constructed and arranged substantially as described, and effecting the process specified.

3. In combination with the rollers b^1 b^2, the knives c^1 c^2, as and for the purposes herein described.

4. In combination with the rollers d^1 d^2, the knives n^1 n^2, as and for the purpose herein described.

96,999. — HENRY TAYLOR and JOSEPH M. COALE, Baltimore, Md.—*Safety-Valve.*— November 16, 1869.

Claim.—The combination of the two valves, one large and the other small, with the coiled spring, and the bearing-levers and steam-ways, so that the valve shall be held shut when the steam is below the regulated pressure, and opened by the steam when it rises above the designated pressure, substantially as and for the purpose described and represented.

97,000.—ANSON P. THAYER, Syracuse, N. Y.—*Machine for Grinding the Cutters of Mowing-Machines.*—November 16, 1869.

Claim. — 1. The combination, with a grinding-stone and operating-mechanism arranged on a breast-stock, of one or more adjustable guides, arranged to bear and slide back and forth on the cutters or cutter-bar, substantially as specified.

2. The arrangement, with the breast-stock, of the supports for the stone-mandrel for maintaining the stock in line with the edge of the cutter being ground, while the plane of the stone is perpendicular to the cutter-bar, substantially as specified.

97,001. — ELI THAYER, Worcester, Mass., assignor to himself and MARSHALL COWING, New York City. — *Mode of Collecting and Storing Carbonic Acid for Extinguishing Fires.*—November 16, 1869.

Claim.—The process, substantially as herein described, of extinguishing fires, the same consisting in storing the carbonic-acid gas, or other equivalent gas, in one or more reservoirs, under pressure, and connecting said reservoirs with suitable pipes, as described.

97,002.—Albert Thompson, Norway, Me., assignor to himself and G. T. Wheeler, Ridgway, Pa.—*File.*—November 16, 1869.

Claim. — An improved single-cut flat file, having teeth whose planes of strike or prolongation from the opposite sides shall cross each other, but whose dip or pitch on the two sides shall be shown in longitudinal section, as lying in the same or parallel planes, all as shown and described.

97,003.—James P. Tibbits, New York, N. Y.—*Book-Rack.*—November 16, 1869.

Claim.—The book-rack for pews, composed of the body A, hinged and forwardly-tilting front *b*, elastic straps *c*, cover or covers *g*, hinged to the top-piece *m*, and furnished with a stud or studs, *a'*, to operate in conjunction with a spring-catch or catches, *b'*, the whole arranged as and for the purpose herein set forth.

97,004. — Christian Volckmann, Columbus, Ohio, assignor to Otto Dresel, John Seltzer, and Philip A. Schlapp, same place. — *Artificial Marble.*—November 16, 1869.

Claim.—1. The preparation of the various compounds, and the combining of the same, substantially in the manner as hereinbefore set forth, for the purpose of producing artificial marble.

2. An artificial marble, composed of the above-named ingredients, compounded substantially as hereinbefore specified, and to be used in sheets for ceilings, walls of houses or rooms, or otherwise, or to be molded into mantels, counters, furniture, vases, urns, columns, obelisks, monuments, &c., and useful and applicable for all other purposes to which genuine marble is applied, besides being susceptible of many uses to which genuine marble cannot be practically applied.

3. The process of polishing the marble so produced, substantially in the manner and by means of the ingredients hereinbefore set forth, so as to give it a brilliant and durable gloss, equal if not superior to that of polished genuine marble.

97,005. — A. S. Vorse, Des Moines, Iowa.—*School-Desk.*—November 16, 1869.

Claim. — The combination of the end frames A, having the guides A', and projections *a* and *b*, writing-table D, and levers F, substantially as and for the purposes set forth.

97,006. — Joseph M. Ward, Oxford, Ohio, assignor to himself and Thomas B. White, same place.—*Drier.*—November 16, 1869.

Claim. — The drawers G H, constructed with inclined bottoms I J, and arranged, relatively to the stove D, as herein shown and described, for the purposes set forth.

97,007. — Alexander Warfield, Alexandria, Va.—*Compound Soap.*—November 16, 1869.

Claim.—The compound for soap above described, when made substantially of the ingredients and in the manner herein set forth.

97,008. — Henry P. Watts, Lynchburg, Va., assignor to himself and James A. Cooley. — *Corn-Sheller.*—November 16, 1869.

Claim. — The combination of the standard A, flanged outer rings B, inner revolving ring D, parallel guide-bars E, jaws F, knife I, guide-frames G, spiral or equivalent springs H, and two cranks J, with each other, said parts being constructed and arranged substantially as herein shown and described, and for the purposes set forth.

97,009. — George W. Wheeler, 2d, New Ipswich, N. H.—*Vehicle for Transporting Machines.*—November 16, 1869.

Claim.—A carriage for transporting mowing-machines, composed of the frame *a*, constructed and arranged upon an axle and wheels, substantially as shown and set forth.

97,010. — Charles P. Whitman, Charlemont, Mass., assignor to himself and W. C. Dodge, Washington, D. C.—*Bit-Stock Fastening.*—November 16, 1869,

Claim.—1. A bit-stock, having a socket, *a*, formed in its end, to receive the shank of the bit, with a screw-thread formed on its exterior, and a cap, B, with a corresponding internal screw-thread, with the openings *d e* formed in it, substantially as described.

2. The cap B, having a circular opening in its end, of such a size as to receive the stem of the bit, but not large enough to permit the shoulders of the shank to pass through it, said opening being connected, by lateral passage, with an opening in the side of the cap, of sufficient size to permit the shank of the bit to be inserted therein, substantially as described.

97,011. — T. P. Wilcox, Hebron, Ind.—*Water-Elevator.*—November 16, 1869.

Claim. — 1. In a water-elevator, the combination with a single crank shaft C, of the two drums E F thereon, each furnished with an independent rope or chain, for raising and lowering an independent bucket, and always turning with said shaft, and in the same direction with it, and secured thereto by staples and pin, or other releasing and adjusting mechanism for adjusting the rope or chains to the height of the water in the well, the whole arranged to operate as and for the purpose described.

2. In combination with a single shaft, and the two drums secured thereon by staples and pin, or other releasing and adjusting mechanism, each of said drums containing the rope or chain of one of a pair of alternating buckets, the two hinged and linked pawls, and a single star-ratchet, in which the two pawls work, the whole being arranged to operate in the manner and for the purpose described.

97,012.—Daniel Witt and Aaron Wait, Hubbardston, Mass.—*Handle for Brushes, Cards, &c.*—November 16, 1869.

Claim.—The lower fork *b'*, extended beyond the other, to form a long bearing to receive the strain which is counteracted by the short fork *b*, when the two forks are cast with a body, C, having a socket at the opposite end, and the parts form a cast-metal connection, as a new article of manufacture.

97,013. — David J. Wilcoxson, Milan, Ohio, assignor to himself and A. J. Mowry, same place.—*Mode of Attaching Seats to Wagons.*—November 16, 1869.

Claim.—In combination with the slotted tenon *a*, the key F, for securing it in place, when said key is held by a pin, *h*, sliding in a slot, *k*, substantially as herein set forth.

97,014. — George Baldwin Woodruff and George Browning, London, England, assignors to "The Singer Manufacturing Company," New York City. — *Sewing-Machine for Button-Holes.*—November 16, 1869.

Claim.—1. The combination, in a sewing-machine, of the table thereof, with a cutting-blade, to cut the slit for the button-hole, substantially as before set forth.

2. The combination of the table, cutting-blade, and cutting-block, with mechanism, by which the blade and block are caused to approach each other simultaneously, from opposite sides of the table, substantially as before set forth.

3. The combination of the cutting-blade and cutting-block, by a link, in such manner that the strain of cutting, and holding for cutting, are made to counteract each other, so that the machine is relieved of the strain, substantially as before set forth.

4. The combination of the cutting-blade and the movable stock thereof, with a handle, by means of which the said stock may be brought rapidly into position for cutting, and moved comparatively slowly, but with great force, during cutting, substantially as before set forth.

5. The combination of the under jaw of a forked cloth-clamp, with oscillating movable jaws, which adapt themselves to variations in the thickness of the fabric, substantially as before set forth.

6. The combination of the forks of the jaws of the cloth-clamp, with mechanism for moving said forks apart laterally, after the cloth is clamped, so as to spread the button-hole for sewing, substantially as before set forth.

7. The combination of the forked cloth-clamp with the blade for cutting the cloth so that the cloth may be cut while it is clamped, substantially as before set forth.

8. The combination of the table-plate of the sewing-machine, the forked clamp for holding the material, and the blade for cutting it, so that the work may be cut in the same clamp in which it is sewed, substantially as before set forth.

9. The combination of the clamp with the feeding-mechanism, (for moving it during sewing,) and with a cutting-blade arranged at one side of such mechanism, by means of a pin, by which the clamp may be secured reciprocally in the proper position relatively to the cutting-blade, and in the proper position relatively to the feeding-mechanism, substantially as before set forth.

10. The combination of the needle, carried in the reciprocating guide-box of the sewing-machine with a filling in the throat of the table-plate, to prevent the deflection of the needle, substantially as before set forth.

11. The combination of the table of the sewing-machine with an inclined wall-guide, for the needle beneath the table, so as to guide the point of the needle out of the path of the looper, the whole constructed to operate substantially as before set forth.

97,015.—Solomon H. Woods, Berlin, assignor for one-half to Russell S. Gladwin, West Meriden, Conn.—*Die for Making Shears.*—November 16, 1869.

Claim.—The dies, constructed as shown and described, for forming scissors or shears from a wrought blank, substantially in the manner as herein specified.

97,016.—Harvey A. Wright, Logansport, Ind.—*Signal-Light for Railroad-Cars.*—November 16, 1869.

Claim.—The combination and arrangement of the horizontally-revolving angular arms *h h*, carrying different-colored lights or signals, and the single horizontally-revolving arm *h'*, carrying a light or signal corresponding in color to one of those on the angular arms, the two arms being separated from each other, and serving to indicate, by their relative movements, the direction and speed of the train substantially as described.

97,017.—James J. Johnston, Allegheny, Pa. assignor to himself, Alexander Postley, Samuel H. Nesbit, J. C. Pershing, Lewis Peterson, and Thomas Fawcett, same place, and John Hunter, Alliance, Ohio.—*Process of Manufacturing Steel.*—November 16, 1869.

Claim.—1. Treating the fluid metal in a vessel with the detersive and converting agent herein described, as and for the purpose set forth.

2. Imparting a whirling motion to the fluid metal and nitric oxide, in the mold D, during the process of casting, substantially as described, and for the purpose set forth.

3. The use of copper mold for casting ingots in the process of manufacturing steel, substantially as described, and for the purpose set forth.

4. The use, in the process of manufacturing steel, of nitric oxide, combined with an active current of air, substantially as herein described, and for the purpose set forth.

5. The detersive and converting agent hereinbefore described, when used in the process of manufacturing steel.

97,018.—George L. Witsil, Philadelphia, Pa., assignor to himself and Charles Merrill, Detroit, Mich.—*Washing-Machine.*—November 16, 1869.

Claim.—1. The combination and arrangement of the perforated diaphragms, the oscillating agitator, and the inclosing-vessel, substantially as and for the purpose specified.

2. The combination of the oscillating agitator and the hollow journal, substantially as and for the purpose set forth.

97,019.—George L. Witsil, Philadelphia, Pa. assignor to himself and Ramon D. L. S. Gutgesell, same place.—*Device for Grating Green Corn from he Cob, &c.*—November 16, 1869.

Claim.—The within-described grater or cutter, consisting of the bed A and plate or plates B, with the apertures therein cut at an acute angle, substantially as and for the purpose set forth.

97,020.—A. Van Camp, Washington, D. C., and M. M. Hodgman, Saint Louis, Mo.—*Street-Railway.*—November 16, 1869.

Claim.—The rail A, having a center bearing-surface, A', when the same is laid or embedded in concrete B, substantially as described.

97,021.—Wesley Anderson, Pittsburgh, Pa.—*Horseshoe-Machine.*—November 23, 1869.

Claim.—1. The jaws D D, constructed substantially as described, and in their operation serving to support, convey, bend, fold, and embrace the blank, in the manner described, in combination with the die E for bending the horseshoe-blank, substantially as described.

2. The jaws D D, constructed, operated, and subserving the functions, substantially as described, in combination with adjustable guides *e e*, for securing the requisite compound motion for bending the bar or blank around a former, substantially as described.

3. The slide *u*, and the mechanism for actuating the same, in combination with the lower die E and jaws D D, arranged and operated substantially as described.

97,022.—Alexander P. Baldwin, Newark, N. J.—*Mouth-Piece of Bridle-Bits.*—November 23, 1869.

Claim.—A bridle-bit, provided with an elbow or rule-joint, so that it may be used as a jointed or barbit, substantially as herein described.

97,023.—John F. Beazel, Uniontown, Pa.—*Welding Iron and Steel.*—November 23, 1869.

Claim.—The employment of caustic soda for welding iron and steel, substantially as specified.

97,024.—Max E. Berolzheimer, New York, N. Y.—*Key-Guard.*—November 23, 1869.

Claim.—A lock, provided with a perforated spindle, A, a slide, B, with flanges, and a pin, C, upon one end, a cap, E, and a grooved guide, D, all constructed and arranged, with respect to each other, in the manner described.

97,025.—Cephus Beucus, Waupun, Wis.—*Scoop and Sifter for Flour, &c.*—November 23, 1869.

Claim.—In combination with the body A of the scoop and sifter, the bail D, when its ends are extended to allow lateral movement of the instrument, substantially as herein shown and described, for the purpose specified.

97,026.—Bentley C. Bibb, Baltimore, Md.—*Magazine for Base-Burning Stoves.*—November 23, 1869.

Claim.—1. The section A, constructed with a closed top, in which is the feed-door B, said section being adapted to fit loosely upon and be held in place by a lower section, C, substantially in the manner and for the purpose herein set forth.

2. The top-feeder magazine, for a fire place stove, made of two independent sections, A C, the lower section slanting back, and both sections constructed and adapted for use, substantially in the manner and for the purpose described.

97,027.—Bentley C. Bibb, Baltimore, Md.—*Fire-Place Stove.*—November 23, 1869.

Claim.—A vertically-movable pivoted or swinging fender-rail section, C, substantially as and for the purposes described.

97,028.—Bentley C. Bibb and Philip Klotz, Baltimore, Md.—*Fire-Place Stove.*—November 23, 1869.

Claim.—A divided sliding screen, applied directly to, and supported by the frame of a fire-place stove, substantially as described.

97,029.—Bentley C. Bibb and Philip Klotz, Baltimore, Md.—*Fire-Place Stove.*—November 23, 1869.

Claim.—1. The perforated diaphragm *g*, at the

base of chamber P, provided with a movable perforated plate, *h*, substantially as and for the purposes described.

2. The opening through the case A, leading into chamber P, and provided with one or more doors D, substantially as and for the purposes described.

97,030.—WILLIAM J. BIRDSALL, Newark, N. J.—*Chisel Holder for File-Cutting Machines.*—November 23, 1869.

Claim.—1. The combination of the eccentric *c*, shaft *f*, intermediate *b*, lever-handle *g*, segment *h*, chisel *a*, and frame A, all constructed and arranged substantially as specified and shown.

2. The combination of the springs *d*, semicircular block B, and frame A, in a file-cutting machine, in the manner and for the purpose shown.

97,031.—H. S. BLOOD, Jefferson Parish, La.—*Sleeping-Car.*—November 23, 1869.

Claim.—The combination, with my patented improved railroad-car seats, as shown on the drawings, of an overhanging platform, when the latter is sustained upon rods B B B′ B′, by means of jointed sleeve-brackets *c c c′ c′*, substantially in the manner herein described.

97,032.—S. W. BROCK, Niantic, Ill.—*Cultivator.*—November 23, 1869.

Claim.—The curved slotted strap H, pin or key I, bar F, and adjustable bolts E with each other and with the slotted plow-beams G and slotted standards C attached to the cross-beam A, substantially as herein shown and described, and for the purpose set forth.

97,033.—JESSE BROWN, San Francisco, Cal.—*Stench-Trap.*—November 23, 1869.

Claim.—The trap described, consisting of the box A, with cover B, trapping-pipe D, and pipe E, when combined as described, for the purpose set forth.

97,034.—GEORGE BROWNLEE, Princeton, Ind.—*Picture-Case.*—November 23, 1869.

Claim.—The combination of the clamping-device D J D with a picture-receptacle, A, constructed as described.

97,035.—ISAAC C. BRYANT, Washington, D. C.—*Drain-Pipe Machine.*—November 23, 1869.

Claim.—The improved arrangement, in the drain-tile machine above described, of the parts herein shown, consisting of the vertical tapering clay-hopper or pug-mill G, with its flanges H, ring K, grooves L, the vertical shaft C, with flanged screw D, flanges I, grooved tapering screw E, and removable mouth-piece M, when said parts are all constructed, arranged, and operating as herein described, and for the purposes set forth.

97,036.—GUSTAV A. BUCHHOLZ, Shepherd's Bush, England.—*Manufacture of Semolina.*—November 23, 1869; patented in England, November 19, 1862.

Claim.—1. A blade, for flour-mills, fastened in its holder by means of bands *g*, and notches or recesses in the working-edge thereof, all as shown and described.

2. The combination of two ripping-rolls *a a′*, having teeth formed by the intersection of oblique, deep-cut lines on their peripheries, with the feeding-mechanism shown and described.

3. The combination of two or more pairs of rubbing-surfaces *a c′*, arranged one above another, with circular plates C′, having radial openings *d* to pass the grain from one pair to another, in the manner set forth.

4. The combination of transverse bar *c*, having inclined faces, frame having shouldered inclines *b*, screw-shaft *d*, disk *e*, and catch *f*, all arranged as and for the purpose specified.

97,037.—GUSTAV A. BUCHHOLZ, Shepherd's Bush, England.—*Manufacture and Means of Assorting Semolina and Flour.*—November 23, 1869; patented in England, March 28, 1867.

Claim.—1. The converging-funnels I I^1 I^2, arranged around the rotating shaft B, to receive, convey, and discharge into separate receptacles, the different sizes of ripped grain in the manner described.

2. The said funnels I I^1 I^2, in combination with a centrifugal spreader, conical valve, and delivery-tube, all arranged and operating together in the manner set forth.

3. A centrifugal spreader, D, provided with a series of steel blades, F, arranged around its beveled inner surface, as shown and described.

97,038.—GUSTAV A. BUCHHOLZ, Shepherd's Bush, England.—*Machine for Manufacturing Semolina and Flour.*—November 23, 1869; patented in England, September 4, 1867.

Claim.—1. The method of manufacturing semolina, by passing the grain through successive pairs of ripping-rolls, and sifting out the finer parts between each pair, in the manner described.

2. The arrangement, between the sets of rollers, of shaking perforated troughs E E^1 E^2 E^3, inclined alternately in opposite directions, to carry the fragments of grain, and to sift the fine dust through, in the manner described.

3. The combination of inclined and perforated shaking-troughs E E^1 E^2 E^3 with trays *e*, to carry the pulverized grain.

4. The cylindrical brushes *a*, arranged with respect to the perforated troughs E E^1 E^2 E^3 of a flour-mill, and operating in the manner described.

5. The axles and axle-boxes of brushes *a*, connected together in sets by tie-rods, in combination with slotted frames *b*, and slotted rock-levers K, having fixed fulcra, and operated by crank-plates L, in the manner described, to give a transverse motion to the brushes in their guides.

97,039.—GUSTAV A. BUCHHOLZ, Shepherd's Bush, England.—*Hulling-Machine.*—November 23, 1869; patented in England, August 12, 1868.

Claim.—The combination of a series of radial rotating blades, *e*, and a series of corresponding stationary blades, *d a*, arranged as set forth, with ring-plates, having discharge-holes a^3, therein, each set of said hulling-tools being located one above another, and operating successively upon the grain, in the manner described.

97,040.—MARTIN BUCK, Lebanon, N. H., assignor to himself and AARON H. CRAGIN, same place.—*Blind-Mortising Machine.*—November 23, 1869.

Claim.—1. A blind-mortising machine, provided with slides C, and ratchet-bars C′, having notches thereon of different pitch, as and for the purpose specified.

2. A blind-mortising machine, provided with vibrating arms E, for varying the throw of the carriages, as shown and described.

97,041.—FREDERICK BURGHARDT, Curtisville, Mass.—*Machine for Making Wood-Pulp.*—November 23, 1869; antedated November 15, 1869.

Claim.—1. A revolving wheel, with one or both sides provided with a grating, filing, rasping, or roughened surface, substantially as and for the purpose herein shown and described.

2. The adjustable block J, with the filing, grating, rasping, or roughened surfaces K, in combination with the wheel B, substantially as described.

97,042.—G. E. CALKINS, Rock Island, Ill.—*Wash-Boiler.*—November 23, 1869.

Claim.—A boiler-bottom, consisting of a sectional rim-base, B, curvo-convex plates C, and ribbed braces E, said parts being shaped and fitted together in the manner described.

97,043.—CYRUS C. CARTER, Exeter, Ill.—*Wagon-Seat Spring.*—November 23, 1869.

Claim.—The adjustable sliding bar F, in combination with the springs C, arranged substantially as and for the purposes set forth.

97,044.—H. W. CASS, Lodi, Wis.—*Draw-Bridge.*—November 23, 1869.

Claim.—A draw-bridge, provided with the chords A B, counter-chords C, braces D, and rods E F G, all constructed and arranged, with reference to each other, in the manner specified.

97,045. — ALFRED H. CASTLE, Ann Arbor, Mich.—*Compound for Insulating.* — November 23, 1869.

Claim. — An insulating-compound, composed of bitumen, argillaceous earths, and quicklime, when the ingredients named are compounded and used for the purpose herein described.

97,046. — LUKE CHAPMAN, Collinsville, Conn., assignor to COLLINS COMPANY, same place.—*Manufacture of Cast-Metal Dies.*—November 23, 1869.

Claim.—The improved method herein described of making patterns from which to mold, in sand, in the ordinary way, metal dies to be used for swaging axes; that is to say, obtaining the pattern by compressing two or more pieces of lead around and upon a finished ax, so as to obtain thereof the exact impression of the ax.

97,047. — M. H. CHRYSLER, Kinderhook, N. Y. — *Vegetable-Cutter.* — November 23, 1869; antedated November 18, 1869.

Claim.—1. The slotted annular revolving cutting-bed D, carrying the cutters E, when arranged on a vegetable-cutter, substantially as described, and constructed with a central opening, all so that the articles to be cut can be cored or not, as may be desired.

2. The weight G, carrying the pin *f*, when combined with the slotted annular revolving cutting-bed D, substantially as herein shown and described.

3. The cylindrical plug or bar H, when arranged in combination with the weight G, and with the slotted annular revolving cutting-bed D, substantially as herein shown and described.

97,048. — JAMES O. CLAY, Hudson, Wis. — *Steam Cooking-Apparatus.*—November 23, 1869.

Claim. — 1. A steam-generator, for cooking-purposes, consisting of a reservoir or base, A, so constructed as to set flat on the top of a stove, and provided with tubes *b*, for conveying steam to the cooking-vessels, and for holding the latter in place, substantially as described.

2. The cooking-vessels B, provided with the concave bottoms *d*, with tube *c* attached, substantially as and for the purpose set forth.

3. The combination of the generator A and the water-supply vessel G, when constructed and arranged to operate substantially as described.

97,049. — NATHAN CLOUGH, Lowell, Mass. — *Combined Butter-Cutter and Stamp.*—November 23, 1869.

Claim. — A combined butter-cutter and stamp, composed of the metallic cutter *b*, with parallel interior and exterior sides secured to the perforated stock *a*, in combination with the piston *c* and stamp *d*, substantially as and for the purpose herein specified.

97,050. — BENJAMIN F. CONLEY, Funnelton, West Va.—*Fire-Place.*—November 23, 1869.

Claim.—A fire-place hearth, formed of a single piece of metal, with rebate B, and moldings C, as shown and described.

97,051.—JOHN B. COOLIDGE, Boston, Mass.—*Mercurial Gas-Regulator for Nitrous-Oxide Apparatus.*—November 23, 1869.

Claim.—1. The use of mercury, operated by the pressure of gas upon the mercury, in combination with the tube A, containing the mercury, and the inlet-tube C, substantially as shown, and for the purpose specified.

2. The adjustable inlet-tube F, combined and arranged with the packing-box B, and a tube, A, holding a column of fluid, substantially as shown, and for the purpose specified.

3. An extra vent, so arranged as to keep the flame burning when the regulator-vent is closed by the mercury, substantially as shown, and for the purpose specified.

97,052.—JOHN B. COOLIDGE, Boston, Mass.—*Mercurial Regulator for Vulcanizing and other Heaters.*—November 23, 1869.

Claim.—1. The application of the expansion of mercury to regulate the heat in vulcanizing rubber, or its equivalent, for dental purposes, substantially as shown.

2. The use of mercury, by expansion, to regulate the heat of ovens, where uniformity of heat is required, in combination with the device C, constructed substantially as shown, and for the purpose specified.

97,053.—JAMES S. CORYA, Dupont, Ind.—*Butter-Mold and Print.*—November 23, 1869.

Claim.—The combination herein shown, of the follower B, mold A, steelyard-bar C, and loop *b*, when combined and arranged in the manner substantially as shown, for the purposes set forth.

97,054. — C. B. COTTRELL, Westerly, R. I.—*Apparatus for Tempering Steel.* — November 23, 1869.

Claim.—1. The employment of the hood A, in connection with a tempering-apparatus, substantially as and for the purpose herein shown and described.

2. The combination of the hood A and basket *d*, substantially as and for the purposes herein shown and described.

97,055.—JEWELL DAVIS, Indianapolis, Ind.—*Hive for Raising Queen Bees.*—November 23, 1869.

Claim.—1. The shields I and I, when constructed and used in manner and form substantially as set forth.

2. The combination of the wire cages with the wooden frame-work A B C D, constructed with the compartments E F G H, and the covered ways L L, L′ L″, and L″ L″, whereby, if it is not desirable to use one cage singly it can be advantageously used in connection with several others, substantially as set forth.

97,056.—ROLLIN DEFREES, Newark, N. J., assigns to JOHN D. DEFREES, ANTHONY DEFREES, and THOMAS PERCIVAL, three-fourths of his right. — *Steam-Engine Governors.*—November 23, 1869; antedated November 19, 1869.

Claim.—1. The combination and arrangement of the spring B with the reservoir E and pump H, whereby the force of the spring shall be uniform, substantially as herein set forth.

2. The combination of the reservoir E, piston F, spring B, pump H, and shaft M, whereby the speed of the engine-governor, through the pressure of a current of oil, or other liquid, driven in a continuous circuit, by means of the pump, will be regulated, in the manner substantially as shown and described.

3. The combination, and arrangement of the devices whereby to suspend the governor-valve between the two forces, without any solid connection between it and any part which receives its motion directly from the engine, so that its position may depend, not upon the speed of the engine, but upon the amount of valve-opening required to maintain the engine at a uniform speed, as herein set forth.

4. The construction and arrangement of the devices for varying the speed of the engine at will, with the adjustable valve in the oil-passages, whereby to regulate the quantity of liquid circulating in a given time through the governor, substantially as shown and described.

5. The construction and arrangement of the rotary pump, with reference to the devices immediately arranged therewith, as shown and described.

6. The construction and arrangement of the governor's steam-valve D, substantially as described.

97,057.—MATHEW DELANY, Virginia City, Nevada.—*Billiard-Table Cushion.*—November 23, 1869.

Claim.—1. The combination, with the cushion A, of wires or cords B, and straining-keys or other straining-devices, arranged to hold the wires under tension, substantially as specified.

2 The combination, with the cushion, wires, or cords, and straining-devices, of the bridges D, substantially as specified.

97,058.—LOUIS A. DE LIME, Saint Louis, Mo. —*Portable Still.*—November 23, 1869.

Claim.—1. A portable apparatus, as described for distilling alcoholic and other materials, consist

ing of tubs A, diaphragms E, coils F, refrigerator J, steam-generator O, the whole constructed and operated substantially as and for the purpose above specified.

2. The combination of a portable steam-boiler with a portable still, substantially as described.

97,059.—Louis A. De Lime, Saint Louis, Mo.—*Apparatus for Obtaining Extractive Matters from Sugar-Cane and other Materials.*—November 23, 1869.

Claim.—1. The apparatus, herein described, for obtaining extracts, the same consisting in the combination of a series of extractors, to operate successively, as described.

2. The combination, with the tubs or vessels *a*, as described, of pipes for liquids and steam, so as to operate as described.

3. The process, herein described, of using steam and water of high temperature, so as to obtain extractive matters from solids, in the manner set forth.

4. The arrangement of pipes and cocks, so that the liquid is forced, automatically, from one vessel to another, as described.

5. The combination of a series of vessels with a revolving table, as described.

97,060.—Joseph Dill and Hubbard E. Jordan, Grand Rapids, Mich.—*Method of Constructing Ornamental Wood-Work.*—November 23, 1869; antedated September 22, 1869.

Claim.—The herein-described method of producing articles of fancy and ornamental wood-work, by first dovetailing together blocks or pieces of different kinds and differently-colored wood, and then turning the same into the desired shape, substantially as and for the purposes set forth.

97,061.—Napoleon B. Dixon and Myron W. Sprague, Rochester, N. Y., assignors to N. B. Dixon.—*Bag for Gathering Fruit.*—November 23, 1869.

Claim.—A fruit-bag, so constructed that the mouth thereof is distended by a hoop, B, provided with a bail, C, yoke *b*, hook H, gathering-cords D, and a lappet, E, all arranged and combined to operate in the manner substantially as described, and for the purpose set forth.

97,062.—G. L. Du Laney, Mechanicsburgh, Pa.—*Harvester-Cutter.*—November 23, 1869.

Claim.—1. The cutter-blade C, when constructed with an eye or socket, as shown and described, and for the purpose specified.

2. The cutter-bar D, when constructed as described, and used in combination with the cutter-blade C.

3. The adjustable heel-piece I, together with the set-screw A, when used in combination with the blade C and bar D, as shown and described, and for the purpose set forth.

97,063.—Abraham Dyson, Saint Louis, Mo.—*Chair and Fan.*—November 23, 1869.

Claim.—The chairs A and B, springs g g^1 g^2 g^3, fans o^1 o^2 o^3, with their actuating spring *h* and cord *k*, arranged on a hinged frame, D, rendered adjustable by an arm, *p*, and spring-bolt *s*, all combined, constructed, and arranged for joint operation, substantially as and for the purpose shown and specified.

97,064.—Thomas Dyson and George Smith, New York, N. Y.—*Steam-Engine Valve-Gear.*—November 23, 1869; antedated November 19, 1869.

Claim.—The supplementary valve E and pistons *b* *b'*, in combination with the rigid connection L, adjustable toes *n*, *n'*, and *p*, and starting-fork T, constructed and arranged as set forth and described.

97,065.—Albert A. Easton, Killingly, and Arnold J. Harrington, Plainfield, Conn.—*Water-Wheel.*—November 23, 1869.

Claim.—The arrangement of the plates, E, E', G, and F, with the plates A B, in combination with the spiral water-box H, substantially as set forth.

97,066.—Richard Eaton, London, England, and Joseph Marks, Boston, Mass.—*Cooking-Stove.*—November 23, 1869.

Claim.—1. The employment, in combination with the oven and the fire-pot of a cooking-apparatus, or in combination with any heating-apparatus, a chamber or passage by means of which oxygen is heated by the escaping gases as they are passing from the fire to the smoke-escape flue, and supplied to the fire, essentially in manner and operating as before explained.

2. In combination with the cylinder J, hereinbefore mentioned, the employment of the auxiliary heating-drum U, substantially as before described.

3. The arrangement of the spaces Q R, and their valves S T, under the arrangement hereinbefore described, whereby a passage of oxygen is regulated and controlled for the purpose before explained.

4. A stove composed in general of the cylinder J, and, as a prolongation thereof, the air-passage L, the interior cylinder U, and the spaces Q R, with their valves S T, when such constituent parts are combined with a fire-pot oven, smoke-discharge flues, and other adjuncts of a stove as now generally constructed.

97,067.—W. A. Elam, Milan, Tenn.—*Bee-Hive.*—November 23, 1869.

Claim.—A hive, provided with a compound tube, having an inner elongated channel for the entrance of the bees, and a surrounding chamber, K, to receive and stop the insects, as they crawl forward from the outside of the hive, all as shown and described.

97,068.—William H. Elliot, New York, N. Y.—*Excavating-Machine.*—November 23, 1869.

Claim.—1. The shield *k*, when suspended from a car by suitable suspending-devices, substantially as and for the purpose set forth.

2. The engine *d'*, in combination with shield *k*, and any suitable devices for raising and lowering the same, substantially as and for the purpose specified.

3. The drop *n*, with its vertically-adjustable ways *o*, when carried upon a car, substantially as specified.

4. The described drop, arranged upon a platform, sliding laterally in a direction across the excavation, as and for the purpose specified.

5. The ways *o*, adjustable vertically on bed-piece *n'''*, suitably held and operated, substantially as set forth.

6. The adjustable bed-piece *n'''*, when hinged to a fixed or movable platform, and held in position by any suitable device, substantially as and for the purpose specified.

7. On the described car, carrying an engine, crane, and drop, the platform for supporting the same, when made adjustable, for the purpose set forth.

8. An excavating-machine, provided with a crane, *l*, shield *k*, and engine for operating the same, all constructed and arranged substantially as and for the purpose specified.

97,069.—Jim B. Fuller, Norwich, Conn.—*Lamp-Burner.*—November 23, 1869.

Claim.—1. Arranging two stationary flat wicks around a central tube, having side passages for supplying air to the interior of the central tube, so as to produce an argand-flame, and having an outside tube, for regulating the exposure of one side of the wicks to the action of the flame, said wicks being kept even with the upper end of the central or wick-tube, the whole being constructed and arranged substantially as and for the purpose set forth.

2. The tubes A and B, the case C, the cone D', and the tube B', or their equivalents, when used in connection with two stationary wicks, in the manner substantially as herein described, and for the purpose specified.

3. The check-plate F, or its equivalent, substantially as shown and described.

4. The lips *g* and aperture *g'*, as and for the purpose specified.

5. The cup *f* and aperture *f'*, when arranged substantially as shown and described, so that the oil returning through the aperture into the case shall pass between the wicks.

97,070.—JOHN GARDINER, Philadelphia, Pa.—*Grain-Conveyer.*—November 23, 1869.

Claim.—1. The construction of the carriage B, Fig. 3, with the adjustable arms C C and the unloading-pulleys D D, and their combination with the grain-conveyer, substantially in the manner herein described, and for the purpose set forth.

2. The use of the tram-ways A A, Fig. 1, and the device for unloading the conveyer at any point intermediate between the two ends, either by reversing the bag or twisting the belts or bag, so as to unload the conveyer on either or both sides.

3. The construcion of the bows M, with the projection *m*, the bases N, and the hinge-joint *m n*, and their attachment to the upper surfaces of the parallel belts of the grain-conveyer, substantially in the manner herein described, and for the purpose set forth.

4. The arrangement and combination of the rotating brushes H H with the grain-conveyer, substantially in the manner herein described, and for the purpose set forth.

97,071.—JOHN GARDNER, San Francisco, Cal.—*Ticket-Punch.*—November 23, 1869.

Claim.—In combination with a punch or nipper, the receptacle or ticket-holder *a*, substantially as described.

97,072.—CHARLES H. GATCHELL, Oldtown, Me.—*Blacking-Box.*—November 23, 1869.

Claim.—As an improved article of manufacture, blacking-boxes, provided with sharp points or tacks projecting from the bottom, and adapted for holding the box on a board or table when rubbing the brush on the blacking, as specified and shown.

97,073.—I. N. GATES, Burnside, Ill.—*Cultivator.*—November 23, 1869.

Claim.—The knuckle D and adjustable knuckle-holder E e^1, constructed and operating in connection with the plow-beam and truck-frame of a cultivator, substantially as herein shown and described, and for the purpose set forth.

97,074.—MARIE GETHER, Saint Louis, Mo.—*Hand-Guide for Pianos.*—November 23, 1869.

Claim.—A hand-guide, fastened to the bottom of the piano-case, in such a manner, that it may be folded down and stored away, without detaching it from the piano, when not used, materially as above described.

97,075.—A. J. GIBSON, Cincinnati, Ohio.—*Combined Roller and Ice-Skate.*—November 23, 1869.

Claim.—1. The foot-board A, having upon its under side a curved rib, H, and a circular bearing-plate at each end, in combination with circle-plates B, H, and C, adapted to receive rollers.

2. The foot-board A, having depressions in each end, concave washers F, and screw-bolts E, in combination with the circle-plates or hangers B D and C D, or with the runners K L, as and for the purpose described.

97,076.—EZRA T. GILLILAND, Cincinnati, Ohio, assignor to himself and PETER NEFF, Jr.—*Dial-Telegraph Apparatus.*—November 23, 1869.

Claim.—The provision, in a "dial"-telegraph, of the shaft C, ratchet F, pawl G, and arm H, or their equivalents, said shaft and arm being so arranged as to impinge at the termination of each stroke of the latter, as and for the purpose set forth.

97,077.—WASHINGTON L. GILROY, Philadelphia, Pa.—*Digester for Coffee-Pots.*—November 23, 1869; antedated November 12, 1869.

Claim.—1. Making the capacity of the chamber E adjustable, substantially in the manner described, for the purpose specified.

2. In combination with the said receiving-chamber E, the enlarged mouth at the upper end of the frustum A B, and the relatively shortened height of the frustum C D, the said parts being constructed to operate together, substantially as and for the purpose described.

97,078.—JOHN C. GOULDING, Trenton, N. J.—*Baby-Walker.*—November 23. 1869.

Claim.—The arrangement of fabric C, broad belt D, and buckling strap *a*, upon the frame A B, as shown and described.

97,079.—JOHN PEVEAR GREELY, Boston, Mass., assignor to himself, RUSSELL ARNOLD BALLOU, SANFORD GREELY, and JONATHAN PIERCE, same place.—*Fire-Proof Safe.*—November 23, 1869.

Claim.—1. My improved manufacture or safe, as having its heat-resisting stuffing composed either of lamp-black alone, or such in mixture with plaster of Paris or other equivalent material.

2. The employment of lamp-black as a stuffing for a safe, whether it (such lamp-black) be used alone for such, or in connection or mixture with plaster of Paris or other material.

3. The employment of lamp-black as a heat non-conducting stuffing for the jacket of a steam-boiler, pipe, or other article exposed or to be exposed to heat.

4. As my invention, and an improvement in a safe, the employment therein of a mass of lamp-black, and the compacting of it, substantially as described, whereby a stuffing of a superior character, tending to render the safe practically fire-resisting, is produced.

5. As of my invention, a safe having its stuffing composed of lamp-black, compacted substantially as described.

97,080.—JOHN GRIMM, Darlington Township, Pa.—*Coal-Drilling Machine.*—November 23, 1869.

Claim.—1. The sliding standard A, having perforations B, or bearings E upon its face, in combination with the screws A^3 and pawls A^4, constructed and operating substantially as and for the purpose described.

2. The screwed spindle D and crank D^3, in combination with the pivoted jointed nut C^2, brackets C, and pin C^3, substantially as and for the purpose set forth.

3. The combination of the above parts in the construction of a coal-drill, whereby the drill can be set at any angle, and its feed regulated by the revolution of the spindle D, substantially as described and set forth.

97,081.—VICTOR M. GRISWOLD, Peekskill, N. Y.—*Clip or Paper-Holder for Photographers.*—November 23, 1869.

Claim.—1. The clamp or clip, formed of the two parts or legs A A, twisted together at the top, crossed obliquely at *a a*, for the purpose specified, and brought together to form jaws at the bottom, substantially as and for the purpose specified.

2. The combination with the said clip, formed as described, of the hook *d*, substantially as set forth.

3. The coating or covering of the jaws B B, to protect them from the action of corrosive substances, substantially as hereinabove set forth.

4. The combination, with the legs A A, portions *a a*, and portions *b b*, of the jaws B B, bent up nearly at right angles with the portions *b b*, to prevent the said jaws from passing each other, and to obtain a better and larger bearing-surface, substantially as specified.

97,082.—VICTOR M. GRISWOLD, Peekskill, N. Y.—*Photographers' Dripping and Drying Rack.*—November 23, 1869.

Claim.—1. The supports B B, arranged in pairs, in a series, and set upon, or into, or secured to a suitable frame or backing, substantially as and for the purpose set forth.

2. The combination, with the supports B B, of the trough A, substantially as set forth.

3. The combination, with the body of the rack, of the legs or braces D, substantially as and for the purpose specified.

4. The rack described, formed of one piece of sheet-metal, substantially as and for the purpose set forth.

97,083.—THOMAS J. HALL, Bryan, Texas.—*Coffee-Roaster.*—November 23, 1869.

Claim.—The removable coffee-stirrer, when constructed with the stirrers B, attached to and depending from the under side of cover A, and operating in

the manner and for the purpose substantially as described.

97,084. — JOSEPH D. HARDEN, Troy, N. Y. — *Cooking-Stove.*—November 23, 1869.

Claim. — 1. The employment, in a cooking-stove wherein the products of combustion escape direct, of a current of air, first heated by the fire of the stove, and thence caused to circulate around or around and through the stove-oven, for producing the baking-heat therein, substantially as herein specified.

2. In a cooking-stove constructed as described, the passage of a current of air, similarly heated, through a space or spaces in contact with a hot-water reservoir, for heating the water therein, substantially as herein set forth.

3. In a cooking-stove constructed as described, the employment of the current of air, thus heated and thus previously utilized, to furnish a hot draught to the fuel in the fire-box, substantially as herein specified.

97,085.—A. M. HARDING, Oregon City, Oreg.—*Turbine Water-Wheel.*—November 23, 1869.

Claim.—1. The case C, with its lower plate c^2, that forms the bottom of the chutes c^1, inclined upward and outward, to partially close the periphery of said case, substantially as herein shown and described, and for the purpose set forth.

2. The hoop-gate D E F, substantially as herein shown and described, in combination with the case C, c^1 c^2, and tube G, as and for the purpose set forth.

3. The combination of the inclines H, case C, arms E, gate D, and shafts A G, when arranged substantially as shown and described.

4. The spiral rack I and pinion-wheel J, in combination with the hoop-gates D E F and case C c^1 c^2, substantially as herein shown and described, and for the purpose set forth.

5. The wheel B, consisting of a concavo-convex top, on which are formed the buckets b^1, connected at the bottom by the strengthening-ring b^2, and having the form described, whereby to obtain the full effect, and, at the same time, allow the free escape of the water, as set forth.

97,086. — B. B. HERRICK and C. W. WICKER, Duquoin, Ill.— *Post-Hole Digger.* — November 23, 1869.

Claim. — The arrangement of the expansive D-shaped cutter F P, plunger D, shaft L, arm C, and spring S, with the handle A and band M, all constructed to operate substantially as set forth.

97,087.—FRANK N. HOPKINS, Baltimore, Md.—*Composition-Fuel.*—November 23, 1869.

Claim.— The composition of matter formed by combining Ritchie mineral and Albertite, or either, or their chemical equivalents, with anthracite or bituminous coal, either with or without using the flux aforesaid, in the manner substantially as and for the purpose herein described.

97,088.—FRANK N. HOPKINS, Baltimore, Md.—*Conglomerate for Paving, Roofing, and Similar Purposes.*—November 23, 1869.

Claim.—The use of pine-tar, in combination with Ritchie mineral or Albertite, either or both, and sand, gravel, or other equivalent substance, to form a conglomerate for paving, roofing, and analogous purposes, prepared in the manner substantially as herein set forth.

97,089.—FREDERICK HOWER, Brooklyn, N. Y. —*Whooping-Cough Plaster.*—November 23, 1869.

Claim.—A medical compound, composed of the ingredients herein specified, and in about the proportions named.

97,090.—W. H. HOWLAND, San Francisco, Cal. —*Knife-Sharpener.*—November 23, 1869.

Claim.—The disks E F, holder B C, and screw D, constructed and arranged as described, and for the purpose specified.

97,091.—JONATHAN J. HOYT, Chelmsford, Mass. —*Lubricator.*—November 23, 1869.

Claim.—1. The adjustable regulating-plug, when constructed, applied, and arranged to operate substantially in the manner and for the purpose specified.

2. The combination of all the effective parts specified, viz, the adjustable regulating-plug, having a flattened shank, B, and a tapering lower end, A, the socket *c* and screw-plug D, the half nuts F, and the washer *e*, and the glass globe, all constructed, combined, and arranged for action and effect, as and for the purpose specified.

97,092.—NICHOLAS JENKINS, New York, N. Y. —*Paneling-Machine.*—November 23, 1869.

Claim.—1. The clamp E^1 E^2, in combination with the paneling-cutter *b*, constructed and arranged for gauging by the face of the wood, substantially as herein set forth.

2. Supporting both the cranks E^4 and F^{11} on the carriage F, and providing the connections F^9, &c., or their equivalents, so as to operate and traverse forward and back together, relatively to the paneling-cutter *b*, as herein set forth.

3. The means E^5 E^6 E^7, or their equivalents, for changing the crank E^4 around on the shaft at will, in combination with the table E, herein described, and with the paneling-cutters *b*, and their connections, as herein set forth.

4. The sub-support F^1, for the carriage F, running on the rail or way *a*, constructed and arranged as herein set forth.

5. The stops K M, separately adjustable, as specified, arranged as represented, in combination with the cutters *b*, and the other parts, as herein set forth.

6. The turning-ring P, the spring-clip Q, or its equivalent, and steadiment O, arranged, relatively to each other and to the cutting-arbor B^1, as herein set forth.

7. The device G, reaching through from the front, and penetrating the back, with the spring *g*, arranged as represented, to lock and unlock the cutter-carriage C^1, as herein set forth.

8. The telescopic blast-pipe U^1 U^2, arranged as represented, relatively to the carriage A^3, the movable cutting-arbor B^1, and fixed blower U, for the purposes herein set forth.

9. The pins N and rollers *n*, arranged to operate relatively to each other, and to the arbor B^1, and to suitable lifting-devices on the pattern, as herein set forth.

97,093.—T. D. KEITH, Mayville, Wis.—*Plate-Lifter and Bread-Toaster.*—November 23, 1869.

Claim. — A compound plate-holder and toaster, consisting of rods A A, hooks B B, slide E, and handle C D, each of said parts being constructed and arranged, with respect to the others, in the manner described.

97,094.—PHILIP KLOTZ, Baltimore, Md.—*Fire-Place Stove.*—November 23, 1869.

Claim.—A screen, or part of a screen, fixed to and movable with the cover to the feed-passage of a top-feed fire-place stove, substantially as described.

97,095.—LUCIUS J. KNOWLES, Warren, Mass. —*Machine for Winding Thread on Bobbins, &c.*— November 23, 1869.

Claim.—1. The combination and relative arrangement, with the screw-shaft P and pulleys B and C, of the shipper R and wheel T, substantially as and for the purposes set forth.

2. The combination, with the adjustable cam H, of the vibratory winding-guide I, its pivot J, and slotted hanger, in which such pivot is held and adjusted, substantially as and for the purposes set forth.

3. The combination of the frame E and weighted arm L, having the recessed disk M, with the pin *q*, said parts being constructed and arranged substantially as and for the purposes set forth.

4. The combination, with the frame E, of the projection V and forked arm W, hinged or pivoted to said projection, so as to admit of the turning of the quiller-frame, according as it is used upon a right or left-handed loom, substantially as and for the purposes set forth.

5. A quiller, the parts of which are constructed, combined, and arranged, in relation to each other, as shown in the drawings, and above described.

97,096. — RAMSEY LAWSON, Shelburne Falls, Mass.—*Lathe for Turning Ovals.*—November 23, 1869.

Claim. — An improved attachment for lathes, formed by the combination of the center A, recessed and grooved sliding plate B, oval plate C, grooved plate D, pin E, and rubber or equivalent spring F, with each other, substantially as herein shown and described, and for the purpose set forth.

97,097. — HENRY B. LEACH, Boston, Mass.—*Fluid-Meter.*—November 23, 1869.

Claim.—1. The arrangement, in fluid-meters, of two measuring-cylinders, placed end to end, with their axes in the same line, and each provided with a piston, and suitable water-passages communicating with a valve-chamber common to both, so that the fluid may be admitted to either end of either cylinder, and move either piston, while the other is stationary, whether said cylinders be cast in one piece or separately, substantially as described.

2. In combination with two cylinders and their pistons, constructed and arranged as set forth, the arrangement of the valve-rods G and G^1, the brackets, or arms F and F′, and the arms G^2 and G^3, substantially as described.

3. In combination with two cylinders and their pistons, constructed and arranged as set forth, the arrangement of the water-passages and ports *g*, *h*, *i*, *j*, *k*, and *l*, substantially as described.

4. The pistons D and D′, having their motions controlled so as to insure the completion of the stroke of each piston before it commences its return-stroke, by locking one valve by the motion of the other valve, substantially as described.

97,098.—THOMAS LORING, Blackwoodtown, N. J.—*Grindstone.*—November 23, 1869.

Claim.—The grindstone F, with hub or bushing *d*, arbor and pinion E, driving-wheel D, and the case A B, with jaws *a a*, all constructed and arranged as described.

97,099.—JOEL MANCHESTER, New York, N. Y.—*Combination Pocket-Rule.*—November 23, 1869.

Claim.—The combination of the pocket-rule, consisting of the two parts B and C, pivoted together, and provided with the several cutting-edges, and constructed as herein shown and described, constituting a combined implement adapted to the various uses specified and set forth.

97,100.—FREDERICK MARRIOTT, San Francisco, Cal.—*Aerial Steam-Car.*—November 23, 1869.

Claim.—1. A spindle, having conical ends B and D, and a space, C, in the middle, between the conical ends, for the motive-power, attendants, passengers, and freight.

2. The rigid or stationary wings or planes E, arranged upon the sides of the spindle of an aerial or flying machine, for the purpose set forth, substantially as described.

3. And, in combination with the rigid or stationary wings or planes E, on the sides of a flying-machine, the adjustable plane G, arranged to operate substantially as described.

4. In combination with a flying-machine, a four-vaned rudder or tail, I, arranged to vibrate in either direction, substantially as described, for the purpose of steering the machine.

5. And, in combination with the four-vaned rudder or tail I, the adjustable planes G, arranged to co-operate with the rudder, when required to steer the machine.

97,101. — JOHN MCDONALD, New York, N. Y.—*Combined Bed and Musical-Instrument Board.*—November 23, 1869.

Claim.—1. The combination of folding bed, upright frame, and key-board, when said key-board is permanently connected with the said folding bed.

2. The combination of guides and stops with the treadle-rods E, to compel them to always drop into position upon the treadles F when the case A is raised into a vertical position, as herein shown and described, and for the purpose set forth.

3. The combination of springs H with the treadles F, to hold them in proper position to receive the treadle-rods E when the case A is raised into a vertical position, as herein shown and described, and for the purpose set forth.

97,102. — ALEXANDER MCLEOD, Black River Falls, Wis.—*Stump-Extractor.*—November 23, 1869.

Claim.—1. The combination of the pawls E, oscillating bar F, levers G, chain J, wheel I, and frame C A, with each other, and with the wheel and axle D B, arranged and operating substantially as and for the purposes described.

2. The combination of the hoisting-lever R, trucks U, cable P, axle and wheel B D, pawls E, oscillating bar F, chain J, wheel I, and frame C A, substantially as shown and described, for the purposes set forth.

97,103.—FRIEDRICH MILLER, Frostburgh, Md.—*Churn.*—November 23, 1869.

Claim. — The churn-body, having two compartments, one for the cream and the other for the gear-wheels, in combination with the dasher B, wheel G, pinion H, and lock-bar K, all arranged as specified.

97,104. — JOHN H. MILLER and F. A. PICKERING, Niantie, Ill.—*Harrow.*—November 23, 1869.

Claim.—1. The combination of the toothed bars C C, central bar A, jointed connections D E B, and windlass G, substantially as described.

2. The windlass G, and the mode of raising the sides of the harrow, substantially as described.

97,105.—GEORGE R. MOORE, Philadelphia, Pa.—*Water-Closet.*—November 23, 1869.

Claim. — The water-closet hopper, having a removable cover, with suitable lugs to rest down perpendicularly upon the pan-shaft, which is journaled in the sides of the hopper, while at the same time the cover fits within the top part of the trunk, so as to bring the joint between them and the top, substantially in the manner and for the purpose herein set forth.

97,106. — WILLIAM MURKLAND and JOHN W. MURKLAND, Lowell, Mass.—*Power-Loom for Weaving Ingrain Carpets.*—November 23, 1869.

Claim. — 1. The levers j^1 j^2, combined with and operating both the trap-boards and the journals, substantially as described.

2. The combination, with the sliding cylindrical boxes, of the stationary double-hooked pawl and lever n^2, controlled by the jacquard, for revolving such boxes, substantially as described.

3. The vertical and cylindrical boxes *p p* and *q q*, substantially as described, when arranged and operating with the lathe, as and for the purposes set forth.

4. The lay and its springs f^i f^1, in combination with the shuttle-box frame S S, arranged within the openings of the lay I, for lessening the jarring of the boxes by the movement of the lay, as specified.

97,107. — JOHN NAUGLE, Moresville, Ind. — *Tire-Bending Machine.*—November 23, 1869; antedated November 10, 1869.

Claim. — 1. In combination with a tire-bending machine, a series of interchangeable collared rollers, as and for the purpose specified.

2. Forming grooves in the rollers adjacent to the collars, as and for the purpose specified.

3. In combination with the frame A, the pivoted latch H, arched support I, and roller C, as and for the purpose specified.

4. In combination with the frame A, and rollers B and C, the carriage F, racks *f f*, pinions *g g*, and shaft G, as and for the purpose specified.

97,108. — CHARLES M. O'HARA, New York, N. Y.—*Covering for Steam-Boilers.*—November 23, 1869.

Claim.—The application of ashes as a non-conductor of heat, substantially as shown and described, and for the purpose specified.

97,109. — CHARLES MELSOM O'HARA, Bolivar, Tenn.—*Hand Corn-Sheller.*—November 23, 1869.

Claim. — The improved hand corn-sheller herein described, consisting of the hinged plates provided

with concave inner surfaces bearing shelling-corrugations, as shown and described.

97,110. — JOSEPH IVES PEASE, Stockbridge, Mass.— *Velocipede.*—November 23, 1869.

Claim.—1. The elongated yoke or frame K, extending diametrically across and supporting the guide-wheel J, and pivoted in the dash-board H, and stepped in the shoe I, together with the braces *p q r*, holding said shoe in place, the arm M, projecting from and at right angles to the turn-post, traversing over and locking into the semicircle N, substantially as described.

2. In combination with cone-pulleys *b b*, the belt-shifter and brake D, the fast and slow gears *e c c e*, combined and used together, as and for the purposes set forth.

3. The treadles *g g*, hinging upon the frames or yokes *h h*, and attached to the cranks, as described.

4. The wheels shod with rubber tubing, which tubing is held secure within a grooved tire or felly, by a metallic rod, passing through its entire length, and tightened by a right-and-left screw, or its equivalent.

97,111.—J. A. PECK, Taunton, Mass., assignor to himself and WILLIAM L. WHITE, jr., same place.— *Fifth-Wheel for Carriages.*—November 23, 1869.

Claim.—The fifth-wheel of a carriage, composed of a continuous strip of wood, bent into a circle, or an arc of a circle, then the same, or its bearing bed or support, is plated with hardened steel, or its equivalent.

97,112. — WILLIAM PENNY, Milton, Fla.—*Saw-Mill.*—November 23, 1869.

Claim.—1. The frame A, of a gang-saw mill, constructed as described, and provided with flanges or brackets, R, between the cylinder C and the saw-frame F, substantially as described, so that it is suspended and properly balanced in the manner specified.

2. The cylinder C, provided with flanges *a*, to brace the plates B, of the frame A, and to become portion of said frame, substantially as herein shown and described.

97,113.—DAVID PIERCE, Almont, Mich.—*Bending-Machine.*—November 23, 1869.

Claim.—1. The combination of the grooved rectangular former A, yielding bearing-levers C, springs *f*, and roller *h*, when arranged substantially as specified.

2. The combination of the ogee reciprocating former B, and roller-formers C, D, and E, when arranged substantially as specified.

3. The combination of the grooved roller I, roller K, lever-bearings L, foot-piece N, and spring-lever O, when arranged substantially as specified.

97,114.—JACOB W. PIPER, Chicago, and WILLIAM J. HANGER and JACOB S. HANGER, Taylor, Ill. —*Derrick.*—November 23, 1869.

Claim.—The cam E, provided with collar H, in combination with the two-part collar F G, provided with rollers V W, standard A, latch *x*, arm M L, and link Q, as set forth.

97,115.—THOMAS PLACE, Alfred Centre, N. Y. —*Machine for Making Wheels.*—November 23, 1869.

Claim.—1. The turn-table B, adapted for adjustment upon the carriage A, in any required plane, with reference to the rest O, or boring-tool, by means of the set-screws L and adjustable eye-bolt M, arranged to operate as herein shown and described.

2. The slotted adjustable rest O, provided with the vertically-adjustable slide-rest P and the felly-support, in combination with the carriage A and turn-table B, as herein described, for the purpose specified.

97,116.—THOMAS O. POTTER, Boston, Mass.— *Suspender.*—November 23, 1869.

Claim.—As a new article of manufacture, the suspender and shoulder-brace combined, above described, consisting of two loops, each provided with straps, as described, and connected together behind by an adjustable strap, all substantially as described.

97,117.— ABRAM REESE, McClure Township, Pa.—*Machine for Rolling Bars for Horseshoes.*— November 23, 1869.

Claim.—1. In a machine for rolling bars for horseshoes, the malleable-iron die-rings C and *e*, and creaser *d*, combined with the rolls, as described.

2. A malleable-iron ring, C, having cylindrical and beveled parts *c c'*, made separate from the roll, as described, and for the uses set forth.

3. The construction, herein described, of the tongue or collar *n* and groove *o* of the rolls *m m'*, in virtue of which there results a space between the working faces of the tongue and groove, of the form substantially as described, and substantially as shown at *o'*.

4. As a step in the manufacture of horseshoes, rolling a bead, *s'*, along the edge of one face of the bar, preparatory to creasing, substantially as described.

5. The delivery-guide *g*, having a lug, *g'*, entering the groove *e'*, substantially in the manner and for the purposes set forth.

6. The combination of the adjustable guide-rests *p p'*, with the malleable-iron die-rings C and D, and the rolls *b b'*, substantially as described.

97,118. — JACOB REESE and ABRAM REESE, Pittsburgh, Pa.— *Horseshoe-Machine.* — November 23, 1869.

Claim.—1. The arrangement of the former *m*, pair of forming-plates *i i*, and double forming-rollers *e e'*, substantially as described.

2. The double rollers *e e'*, arranged on a stem, *d*, which operates in a box, *d'*, substantially as and for the purposes set forth.

3. The raised portion of the die underlying and surrounding the former *m* with its narrow point *n'* and broad part *n*, in combination with the collar *z* on the roller *e*, as and for the purposes set forth.

4. The clearing-plates *l*, with its projection *l'* and pins *u*, in combination with its clearing-arm *u'*, substantially as and for the purposes set forth.

5. The arrangement of a series of formers, two or more, with the ends on which are formed the toes of the shoes turned in opposite directions, in connection with a corresponding arrangement of forming-plates *i* and forming-rollers *e*, so as to bend shoes at both strokes of the machine.

97,119.—C. RENNE and F. LANDENBERGER, New York, N. Y.— *Weighing-Basket.*—November 23, 1869.

Claim. — A weighing-basket, formed of willow twigs or metal, and provided with a movable bottom, springs, guide-rollers, index, and scale, each of said parts being constructed and arranged, with respect to the others, in the manner described.

97,120.—THOMAS C. ROBINSON, Boston, Mass. —*Paper-Cutting Machine.*—November 23, 1869.

Claim.—1. The combination of the knife K with the toggle-mechanism, for operating the clamp, substantially in the manner described.

2. The combination and arrangement of the bar S, springs *q q'*, toggle-mechanism, and knife K, substantially as described, for the purpose of throwing up the knife at the completion of its downward stroke, as stated.

97,121.—JOHN A. ROCKWOOD, Kinderhook, Ill., assignor to himself and S. MORRIS, same place.— *Combined Planter and Cultivator.*—November 23, 1869.

Claim.—The combination of the harrow N O P with the beam A, dropping-device G H I J K L M, handles F, and rear or covering-plows D E, whether used with or without the furrowing-plow B C, substantially as herein shown and described, and for the purpose set forth.

97,122.—MARCUS A. ROOT, Philadelphia, and JACOB D. CUSTER, Norristown, Pa.—*Portable Gas-Apparatus and Carbureter.*—November 23, 1869.

Claim.—1. The box or case A, cast in one piece with its partitions *a b*, so as to comprise within it the two chambers 1 2, made and arranged for the purpose and in the manner described.

2. In combination with a carbureting-apparatus, the blowing-wheel D, composed of winged buckets, with deflecting surfaces, as and for the purpose herein described and represented.

3. In combination with the blowing-wheel D, constructed and operating as herein described, and revolving in a well partially filled with a hydrocarbon, the lifting-cups 7, on said wheel, for carrying up from the well the hydrocarbon that is to supply the carbureting-chamber, and flowing it therein or thereto, substantially as described.

4. In combination with a carbureting-apparatus, in which the air is subjected to two distinct charging-operations, a burner and cock, connecting with each interior chamber, and an exterior communicating-pipe, with a cock for each burner, so that the air differently charged in the interior may be separately burned or mixed before coming to the flame, as and for the purpose deseribed.

97,123.—Ernest Sandoz, Hudson City, N. J.—*Securing the Cannon-Pinions of Watches.*—November 23, 1869; antedated November 15, 1869.

Claim.—The arbor *c*, with a neck, 2, in combination with the spring-tube of the cannon-pinion *d*, formed with the internal collar 3, substantially as and for the purposes set forth.

97,124.—Riley Sanford, Marion, N. Y.—*Bee-Hive.*—November 23, 1869.

Claim.—The vibrating bottom F, transverse passage-way J, in combination with the form of the hive A, sliding-valve I, insulated boxes D, frame B, and metallic box L, all being constructed as herein described and represented, for the purpose set forth.

97,125.—Henry C. Sergeant, Newark, N. J.—*Fluting-Machine.*—November 23, 1869.

Claim.—The bracket, for carrying the upper roll B, connected with the standard by means of the face-plates A A^1, pivoted together eccentrically, the movable one being provided with a lever extending laterally and on the opposite side from said eccentric pivot, substantially as and for the purpose shown and described.

97,126.—William H. Seymour, Brockport, N. Y.—*Mowing-Machine.*—November 23, 1869.

Claim.—1. The adjustable main frame C, connected at its rear end with the main axle on opposite sides of the inner drive-wheel, in combination with a hinged cutting-apparatus, arranged in line with the tread of the drive-wheels, as described.

2. The vibrating main frame C, and gear-plates D D′, arranged relatively to each other and to the main drive-wheel axle, substantially as and for the purpose set forth.

3. In combination with a hinged cutting-apparatus connecting with the main frame in line with the tread of the drive-wheels, the arrangement, substantially as described, of the gearing on the main frame and drive-wheel axle, outside of the hub of the inner main drive-wheel.

4. The finger-bar hinged to the frame in line with the tread of the driving-wheels, in combination with the pivoted hand-lever O, and link or loop N, arranged and operating as described.

5. The combination of the adjustable frame C, pivoted coupling or brace-rods K and L, hinged shoe I, and link or loop N, arranged and operating as described.

6. The carrying-wheel M, applied to the independently-hinged rear brace K, in combination with the hinged cutting-apparatus, arranged substantially as described.

97,127.—Thomas Slaight, Newark, N. J.—*Padlock.*—November 23, 1869.

Claim.—The bolt D, constructed with the hook *i*, projections *j k*, stump *l*, and part *k′*, when used in connection with the ordinary shackle B, tumblers C, and spring *e*, all being constructed, arranged, and operated substantially as herein described.

97,128.—Charles W. Small, Worcester, Mass.—*Work-Box and Desk.*—November 23, 1869.

Claim.—A combined work-box and writing-desk, composed of the box A, cover B, plate C, and rods D D, all arranged to operate as herein shown and described.

97,129.—Austin S. Smith, Lawrence, Mass.—*Device for Packing Eggs for Transportation.*—November 23, 1869.

Claim.—A duplicate egg-pocket, A, formed of a single piece of stiff paper, in the manner specified, and for the purpose set forth.

97,130.—Cyrus W. Smith, Morrisville, N. Y.—*Apparatus for Building Sod Fences.*—November 23, 1869.

Claim.—1. The winches *b b*, in combination with, and arranged as described with relation to the guys, crane A *a*, and frame B, whereby the crane can always be readily kept in vertical position, even if the ground is uneven, as herein described.

2. The herein-described apparatus for building sod fence, consisting of the crane A *a*, adjusting-guys, and winches *b b*, the sod-fork D, frame B, and a vehicle, C, all constructed, arranged, and operating as hercin described.

97,131.—P. W. Strong, Evans's Mills, N. Y.—*Apparatus for Manufacturing Cheese.*—November 23, 1869.

Claim.—1. The combination of the automatic device R, or equivalent, the water-supplying pipe *c*, vat-tank E, and funnel *n*, substantially as described.

2. The arrangement of the water-chamber C, constructed to operate as described, heater M, vat F, and tank E, all constructed and combined substantially as described.

3. The arrangement of the perforated pipes P and *t*, vat F, tank E, funnel *n*, and water-supply chamber C, constructed as described, in the manner and for the purpose described.

4. The combination of an air-supplying apparatus with a vat, F, and tank E, substantially as described.

5. The combination of air-supplying agitators with vat F and tank E.

6. One or more pipes leading from an air-supplying apparatus beneath the rack in a curd-sink, I, substantially as described.

97,132.—Josef Stuehler, Brooklyn, N. Y.—*Stair-Rod.*—November 23, 1869.

Claim.—A stair-rod, slotted near its ends, and provided with a slotted cap, B, pin D, spring *d*, and perforated block *b*, all constructed as described, to lock the said rod upon the hooks E, in the manner specified.

97,133.—Henry R. Swan, Norwalk, Conn.—*Buckle.*—November 23, 1869; antedated November 8, 1869.

Claim.—Providing the part *a*, of the frame A, with holes *n*, arranged as and for the purpose specified.

97,134.—George S. Thompson, Philadelphia, Pa.—*Balancing Millstone.*—November 23, 1869.

Claim.—The horns D, the upper and lower upwardly and downwardly projecting screws H K, the nuts L, with their tenons *d*, and the housings F, with their mortises *e*, substantially as shown and described.

97,135.—Charles True, Pecatonica, Ill.—*Close Stool and Closet.*—November 23, 1869.

Claim.—1. The combination of horizontally-sliding covers with a vertically-moving seat, substantially as described, for the purpose set forth.

2. The closet described, consisting of the box, seat, flexible band, sliding covers, springs, pulleys, standards, and bands, when combined and arranged as described, for the purpose set forth.

97,136.—William I. Tustin, San Francisco, Cal.—*Windmill.*—November 23, 1869.

Claim.—1. The table F, with its projecting segmental rack *e*, turning on the flange *a*, in combination with the wheel E and rudder D, substantially as and for the purpose herein described.

2. The vertical connecting-rod I, with its gear-wheel Q and pinion *i*, when used for connecting adjusting-gears on the lower end of the vertical shaft C, either with the table F, or directly with the wheel E or rudder D, substantially as and for the purpose herein described.

3. The pulley G, with its toothed pinion *g*, and under-projecting lugs or pins *n*, the same being raised by means of the curved lever L, and operated by the endless cord *v*, passing over pulleys N and O, and kept taut by the weight P, substantially as described, for the purpose herein set forth.

97,137.—W. A. VAN BRUNT, Horicon, Wis.—*Seeding-Machine.*—November 23, 1869.

Claim.—1. The adjustable seeding-cylinder, with radial flanges B^1, of about one-eighth of an inch radius less than the bearing part A of the cylinder, or sufficient to allow the grain to pass without crushing, said radial flanges running lengthwise of the cylinder, substantially as and for the purpose specified.

2. In combination with the adjusting seeding-cylinder, above claimed, so arranging the opening C^1 for receiving, and the opening C^2 for discharging the grain, that the latter shall be received and discharged on opposite sides of the vertical diameter of the seeding-cylinder, substantially as and for the purpose set forth.

97,138. — HERMANN VON SCHLAGINTWEIT-SAKÜNLÜNSKI, Munich, Bavaria.—*Revolving Scale.*—November 23, 1869.

Claim.—The combination of the graduated scale C, at the extremity of the handle A, with the pointed spur-wheel B, formed and operating substantially as described.

97,139.—DAVID F. WAGNER, West Hanover, Pa.—*Corn-Planter.*—November 23, 1869.

Claim.—1. The frame A A^1 *a*, connected to the axle of two transporting-wheels, by means of the casings B, in which turn the hoppers F, substantially as described.

2. The bar D, from which the seed-tubes are hung, applied to the rear overhanging ends of straps *a a*, when these straps also serve to connect together the two beams, A A^1, and when these two beams are sustained by the cylindrical hopper-casings B, substantially as described.

3. The pivoted draw-rods *j*, hooked on their front ends and pivoted to the pendants *h*, by means of wooden pins *i*, in combination with the catch-pins *t*, arranged below pins *i*, substantially as described.

4. The double perforated rotating hopper F, applied upon axle C, and combined with a stationary case, B, and an adjustable slide, E, all constructed substantially as described.

5. The tubular eyes V, on the rear end of draw-rod J, applied to the axle V′ of wheels *s s*, and to flange *g′* of tube E, substantially as described.

97,140.—F. L. WALKER, Boston, Mass.—*Paper-Cutting Machine.*—November 23, 1869.

Claim. — The combination and arrangement of mechanism for effecting the downward and forward movement of the cutter, substantially as described.

97,141. — WILLIAM WICKERSHAM, Boston, Mass.—*Machine for Making Nails for Horseshoes.*—November 23, 1869.

Claim.—1. In horse-nail machines, two series of pairs of working-rolls, one series placed at right angles to the other, each with a progressive increase of size from the beginning pair, and formed and constructed with longitudinal-grooved surfaces, as described, so that they shall have the same size and form throughout their whole length, and having working-surfaces such, that each pair shall work on the opposite sides only, or opposite edges only, of the nail, while it is being formed, as it passes between them, substantially in the manner described, and for the purpose set forth.

2. The combination of the cutting-rolls G G′, transferring-rolls *b b′*, and press-gears, as described, and for the purpose set forth.

3. In machines for making nails for horseshoes, the intermittingly rotary press-gears N and N′, operating in conjunction to form a series of dies, in which to straighten and incline the point of a nail, otherwise completed, substantially as set forth.

4. In horse-nail machines, the irregular screw *f*, in combination with the press-gears N and N′, for imparting to said gears an alternate motion and rest, as and for the purpose set forth.

97,142. — ISAAC WILLIAMS, Bucyrus, Ohio.—*Wagon-Ladder.*—November 23, 1869.

Claim.—The combination, in a wagon-ladder, of the following devices: First, a tight bottom, having rectangular holes to receive posts of the wings or sides of the ladder, having dowel-pins to insert in holes in the posts of said wings, and having slotted cross-ties fitting to the bolsters and standards of wagons, substantially as set forth; second, wings, having for their support posts, with beveled lower ends, supporting each other, with the tenoned end posts held by mortised clamps, substantially as set forth.

97,143.—CHARLES ABRESCH, New York, N. Y.—*Process for Brewing Beer.*—November 23, 1869.

Claim.—The within-described process for brewing beer, by mixing barley-malt with rice or ground starch, about in the proportion above stated, and treating the mixture substantially in the manner herein set forth.

97,144.—ISAAC ADAMS, Jr.—Suspended.

97,145.—REUBEN A. ADAMS, Cambridge, Mass.—*Curing and Preserving Fish.*—November 23, 1869.

Claim.—The use of saltpeter in the process of curing fish, in the manner and for purposes substantially as described.

97,146.—JOSEPH F. ALEXANDER, New York, N. Y.—*Propelling-Apparatus.*—November 23, 1869.

Claim.—The blade E, situated below the water-line, and connected to two cranks B C, situated at a suitable angle toward each other, substantially as shown and described.

97,147.—N. I. ALLEN and JAMES C. MOODY, Brunswick, Me.—*Spindle for Loom-Shuttles.*—November 23, 1869.

Claim.—The improved shuttle-spindle herein described, that is, made of malleable cast iron, and having the inclined beards or ridges on the surface formed from the body of the spindle itself, and on one side thereof only, as herein described.

97,148.—EDWIN R. AUSTIN, Elmira, N. Y.—*Step-Ladder.*—November 23, 1869.

Claim.—A clasp, composed of the band B, jaws C and F, crank D, and pivots E, all constructed, arranged, and operating in the manner described, and for the purpose set forth.

97,149.—D. W. BAILEY, Chelsea, Mass.—*Concrete Pavement.*—November 23, 1869.

Claim.—A pavement for streets, &c., composed of materials, deposited in successive layers, substantially as hereinbefore explained.

97,150. — S. R. BAILEY, Bath, Me. — *Sleigh.*—November 23, 1869.

Claim.—Elongating the sides of the sleigh-body, so as to cover the bottom, side, and rear rails, to which the runner cross-bars are affixed, substantially as herein shown and described.

97,151.—D. H. BALL, Sinnamahoning, Pa.—*Machine for Sawing Shingle-Bolts.*—November 23, 1869.

Claim.—The arrangement, upon the frame A, of the posts E, shaft K, with its fly-wheel, pulley, and saw, in connection with the traveling-table D, when constructed as herein shown and described, and for the purpose set forth.

97,152.—JAMES BALL, Brooklyn, N. Y.—*Knife and Fork.*—November 23, 1869.

Claim.—The combination, with a knife or fork, of a skewer-clamp, substantially as set forth and described.

97,153.—ROBERT L. BARCLAY, Brooklyn, E. D., N. Y.—*Progressive Reciprocating Motion for Stamping and other Machines.*—November 23, 1869.

Claim.—1. The eccentric *f*, in combination with the eccentric *i* and connection *g*, arranged and operating substantially as set forth, whereby the progressive reciprocation is effected by the rotation of both eccentrics, as set forth.

2. The flange *m*, of the eccentric *i* and pins *n*, in combination with the escapement *s t*, and eccentric *f*, substantially as and for the purposes set forth.

97,154.—Francis H. Barnard and Walter L. Brace, Hartford, Conn.—*Pocket-Knife.*—November 23, 1869.

Claim.—A pocket-knife, *a*, with spring *b*, thumb-latch *b'*, and thumb-piece *b''*, blade *c*, awl *e*, screw-driver *d*, with the rough enlargement *a'* constructed and arranged as described, substantially as set forth.

97,155.—Joseph B. Bidwell, Grand Rapids, Mich., assignor to himself and John C. Knoblock, South Bend, Ind.—*Confection from Raisins.*—November 23, 1869.

Claim.—As a new article of confectionery, raisins coated by a compound composed of the ingredients, and substantially in the proportions set forth.

97,156.—William H. Blake, Waterbury, Conn.—*Method of Forming Sleeve-Button Shanks.*—November 23, 1869.

Claim.—The improved method, herein described, of forming the shank *d*, with its cup-shaped disk *f*, in one and the same piece of metal.

97,157.—Olpha Bonney, Jr., San Francisco, Cal.—*Horse-Rake.*—November 23, 1869.

Claim.—1. The combination of the thumb-screw and interposed plate with the knee or shank, for connecting the tooth of the rake to the bar, and for adjusting the tooth in the knee or shank, as herein recited.

2. The arrangement of the central bars *e* in relation to the bars *o*, *q*, and *r*, and foot-bar *t*, whereby the entire series of gangs may be operated, as herein set forth.

3. The double adjustment of the bars *e*, upward and downward, and forward and backward, as and for the purposes herein recited.

97,158.—Jesse L. Branson, Pittsburgh, Pa.—*Loom.*—November 23, 1869.

Claim.—1. A hollow cam-shaft, within which the main shaft revolves, each shaft having its own independent bearings or supports, and each having movements independent of the other, substantially as described.

2. The journal-boxes H, constructed each of a single piece, provided with two concentric bearings, of different sizes, in combination with a hollow cam-shaft, within which revolves another shaft, substantially as shown and described.

3. The arrangement of the lever-clutches K L, on opposite sides of the cam-shaft, and so that as one of the clutches moves back, it shall partially revolve the cam-shaft, and cause one of the leaves of the cam to depress a heddle, and as the other clutch moves forward it shall, by a further movement of the shaft, relieve the heddle of such depression, substantially as set forth.

4. In combination with the lever-clutches, arranged on opposite sides of the shaft, the adjustable clutches M M, by means of which the shed may be kept open a greater or lesser period, at option.

5. The combination of the main shaft with the reversible tappet-shaft, which impart the picker-movements, by means of a chain and sprocket-wheels upon the shafts, substantially as described.

97,159.—Martin Briggs, Rochester, N. Y.—*Safe.*—November 23, 1869.

Claim.—A safe, consisting of the inner plates A, the outer panels B, screws *a*, and angle-irons C C, covering the angles of the sides and top and bottom, said irons being connected together by mortise-and-tenon joints, the whole constructed and arranged as set forth.

97,160.—Charles H. Burleigh, Worcester, Mass.—*Pipe-Trap.*—November 23, 1869.

Claim.—1. The combination, with the body of a pipe-trap, of an aperture for cleaning the interior thereof, arranged in the side of the trap, as shown and described.

2. The combination, with the lower partition C, of a drain stop-screw or plug, as above described.

3. The combination, with the body of the trap, of the net or strainer D, substantially as and for the purposes set forth.

4. The combination, with the body or globe of the pipe-trap, of a projecting stem, H, and socket G, having male and female screw-threads of the same size, substantially as and for the purposes set forth.

97,161.—R. P. Buttles, Mansfield, Pa.—*Bee-Moth Instrument.*—November 23, 1869.

Claim.—As new articles of manufacture, a set of instruments, substantially as herein described, for use in the rearing and management of bees.

97,162.—Francis M. Caldwell, New York, N. Y.—*Plow.*—November 23, 1869.

Claim.—1. The adjustable stem B, when constructed and arranged in the manner and for the purpose herein described.

2. The combination and arrangement of the stem B with the plow-sweep A A, bolt *c*, and lug *e*, in the manner and for the purpose herein described.

97,163.—Frederick J. Calhoun, Boston, Mass.—*Railway-Frog.*—November 23, 1869.

Claim.—The employment, in a railway-frog, of one or more hardened and water proof sheets of pulp, made from paper or other fibrous material, substantially as and for the purposes herein set forth.

97,164.—Henry Carter, Cleveland, Ohio.—*Ditching-Machine.*—November 23, 1869.

Claim.—1. The pronged wheel D, as arranged to operate in combination with the adjustable plow E, in the manner substantially as described, and for the purpose specified.

2. The conductor or chute L and fingers N, as arranged, in relation to and in combination with the wheel B and prongs *b*, in the manner as and for the purpose set forth.

3. The adjusting-standard F, arm G, gnide H, and plow E, all combined and arranged to operate in the manner as described, and for the purpose set forth.

4. The combination and arrangement of the wheel B, plow E, frame K, and platform I, substantially as and for the purpose specified.

97,165.—Peter F. Cederholm, Stillwater, Minn.—*Syringe.*—November 23, 1869.

Claim.—The syringe, having a separate suction-pipe, C, formed around the central discharge-pipe B, and provided with valves *c c*, substantially as and for the purpose herein described.

97,166.—H. P. Chapman, Essex, assignor to the Centre Brook Manufacturing Company, Centre Brook, Conn.—*Extension-Bit.*—November 23, 1869.

Claim.—1. The head or fixed cutter, constructed so as to form a gouge-lip or cutter, *a*, in combination with a cutter, C, made adjustable in the head above said gouge-lip *a*, substantially as set forth.

2. In adjustable bits, the cutter C, when constructed with the slot *f*, with its inclined edges, and combined with the conical-headed set-screw D, so that the said screw will spread each side from the slot, to bind the cutter into its seat, substantially in the manner and for the purpose set forth.

97,167.—A. A. Chassepot, Paris, France.—*Breech-Loading Fire-Arm.*—November 23, 1869.

Claim.—As an improvement on the fire-arm described and claimed in Letters-Patent, No. 60,832, dated January 1, 1867, the combination with the sliding and rotating breech-bolt, which contains the percussion-pin T, of the metallic piston, constructed as described; that is to say, centrally perforated, for the passage of said percussion-pin, and provided with a stud to actuate the cartridge-retractor, and held in a chamber formed in the end of the said bolt, in the manner shown and set forth.

97,168.—William R. Clark, Indianola, Ill.—*Fruit-Drier.*—November 23, 1869.

Claim.—A fruit-drier, combining, in its construction, a receptacle for the fruit, the walls of which have formed within them steam-spaces, said receptacle being also provided with horizontal and vertical partitions, having steam-spaces within them, the

vertical ones being for the purpose of dividing the receptacle into two compartments, and a steam-induction pipe, arranged, as described, so as to serve as an induction-pipe for the steam, and an eduction-pipe for the water of condensation, substantially as and for the purpose set forth.

97,169. — BENJAMIN ROWLAND CROASDALE, Philadelphia, Pa.—*Bag for Guano, Phosphates, and other Fertilizers.*—November 23, 1869.

Claim.—A bag, coated and saturated with substantially such materials as are herein described, for the purpose set forth.

97,170.—WILLIAM DEERING, Louisville, Ky.—*Baling-Press.*—November 23, 1869.

Claim.—1. The combination of the nut B, screw C, and eccentric L, or its equivalent, when employed with intermediate mechanism, substantially such as is herein described, to give simultaneous movement to the upper and lower platens of a press, substantially in the manner set forth.

2. The combination and arrangement of the eccentric L, frame M, with its arms or guides N, hooks J, and lever P^2, substantially as and for the purpose described.

3. The combination and arrangement of the cam-wheel Y, roller Z, pulley *p*, and bent arms *r*, substantially as shown and described.

97,171. — JOHN J. DE GRUMMOND, Knoxville, Ill.—*Horse Hay-Fork.*—November 23, 1869.

Claim.—A hay-fork, having forks A, levers B, blocks *n* and *v*, and pulleys *s* and *y*, constructed and arranged substantially as specified.

97,172.—GEORGE DENIS and GEORGE GRASSAL, Osceola, Iowa.—*Hay-Rack.*—November 23, 1869.

Claim.—The pivoted upright frame or end-rack A and the pivoted notched standard D, in combination with the folding hay-rack B, substantially as described.

97,173.—WILLIAM DENNISON, Cambridge, Mass.—*Machine for Making Chains.*—November 23, 1869.

Claim.—1. The method herein described, of welding and forming chain-links, that is to say, by forcing them into dies C C by means of die *m*, as herein described.

2. The combination of dies C C, with bridge-slot within, substantially as set forth.

3. The segment-gear K, rods L angle-lever M, follower I, and tube H, all arranged as shown, in combination with dies C C, as and for the purposes set forth.

4. The combination of the cross-slatted cylinder N, with mechanism, substantially as set forth, for rotating it and moving the chain intermittently, as the same is formed.

5. The combination of the vise E, connecting-rod J, segment-gear K, pinion Q, ratchet V, pawl *d*, shaft P, crank R, rod S, segment-gear T, with segment-gear U, attached to the cylinder N, in the manner and for the purpose set forth.

6. The wheel *h*, gears *f f'* Z Y X, cylinder O, ratchets *j j'*, pawls *i i'*, in combination with the cylinder N, constructed in the manner and for the purpose set forth.

7. The vise E, dies C C *m*, tube H, follower I, cylinder N, and wheel *h*, combined in the manner and for the purpose substantially as described.

97,174.—ELIAS DILDAY, South Pass, Ill.—*Fruit-Drier.*—November 23, 1869.

Claim.—1. The dry-house A, constructed as described, and divided into two compartments by means of the movable partitions G G, and having slides H H and guides *d d*, all substantially as and for the purposes herein set forth.

2. The combination and arrangement of the dry-house A, furnace B, flue C, chimney D, frame J, and drawers I I, all constructed as described, substantially as and for the purposes herein set forth.

97,175. — GEORGE DUCKWORTH, WILLIAM DUCKWORTH, JAMES DUCKWORTH, and JOHN C. DUCKWORTH, Pittsfield, Mass.—*Loom.*—November 23, 1869.

Claim.—1. In combination with the pickers of a loom having shifting shuttle-boxes, a protecting-mechanism, substantially as described, whereby the loom is stopped when a picker fails to withdraw from a shifting shuttle-box at the proper time to permit it to be shifted.

2. In combination with the lay-swords, the adjustable connections and adjusting-screws, substantially as described.

97,176.—WRIGHT DURYEA, Glen Cove, N. Y.—*Velocipede-Wheel.*—November 23, 1869; antedated November 12, 1869.

Claim.—A velocipede-wheel, constructed in or around its periphery with one or more flutes, bound or bordered by corrugated edges, substantially as specified.

97,177.—THEODORE DUVAL, Hartford, Conn.—*Carpenter's Grooving-Plane.*—November 23, 1869.

Claim.—As an article of manufacture, a "dado" or grooving-plane for carpenters' use, when constructed in two parts, and made adjustable in the manner substantially as shown and described, and for the purpose specified.

97,178. — RUDOLPH EICHEMEYER, Yonkers, N. Y.—*Machine for Pouncing Hats.*—November 23, 1869.

Claim.—1. A pouncing-cylinder or emery-wheel, consisting of an elastic rubber body or holder, provided with means of circumferential distension, and a sleeve or cover of emery-paper or emery-cloth, or its equivalent, substantially as described.

2. The arrangement and combination of a rotating pouncing-cylinder with a vertical supporting-horn, substantially as described, whereby the supporting-horn may be used to support the tip, side crown, or brim, during the operation of pouncing the hat.

3. In combination with a rotating pouncing-cylinder, and a rest or supporting-horn, a swiveling feeding-mechanism, substantially as described, whereby the hat may be drawn between the pouncing-cylinder in different curves, or directly forward, as required.

4. In combination with the rotating pouncing-cylinder and supporting-horn, the hinge and set-screw, whereby the supporting-horn is adjusted to the inclination of the sides of the pouncing cylinder.

5. In combination with the pouncing-cylinder and the supporting-horn for the hat, the horizontal treadle-lever and adjusting-screw, whereby the supporting-horn is adjusted vertically to various sizes of pouncing-cylinders, or various thicknesses of hat-bodies.

97,179. — EDWIN R. EMBRY, Richmond, Ky.—*Churn.*—November 23, 1869.

Claim. — The dasher D, formed with spirally-curved blades or wings, in combination with the detachable breakers, when constructed and operating as herein shown and described.

97,180.—EPHRAIM C. EVENS, Forrest Hill, Ind.—*Liniment.*—November 23, 1869.

Claim. — A liniment, composed of the within-described ingredients, and substantially in the proportions specified.

97,181.—JOHN O. FAIRBAIRN, Milwaukee, Wis.—*Dinner-Pail.*—November 23, 1869.

Claim. — 1. A dinner-pail, consisting of the compartments B, C, and D, and cover E, all constructed as herein described, so that they may be arranged upon each other, or compactly folded up, as shown and set forth.

2. The compartments B, C, and D, and cover E, provided with the hooks *k*, in combination with the cord or chain *d*, when constructed so as to be arranged as herein shown and described, and for the purpose set forth.

97,182. — LEVI S. FALES, New York, N. Y., assignor to THE AMERICAN FERTILIZER COMPANY.—*Mode of Recovering the Spent Acid from Oil-Refineries.*—November 23, 1869.

Claim.—The within-described method of purifying or recovering the spent acid of oil-refineries, &c., by

means of the ammoniacal liquors from gas-works, either with or without the use of the sulphate of soda, ammonia, or potash, substantially as herein set forth.

97,183.—E. L. FOREMAN, Rantoul, Ill., assignor to EDWARD FOREMAN, same place.—*Ditcher and Grader.*—November 23, 1869; antedated November 15, 1869.

Claim.—The arrangement of the hinged side B and plow A upon the frame, as shown and described, when said parts A B are formed of sheet-metal, curved as shown, and extend beneath the wood-work to which the plates are attached, substantially as set forth.

97,184.—WARREN GALE, Peekskill, N. Y.—*Vegetable-Cutter.*—November 23, 1869.

Claim.—1. In a vegetable-slicer, a cylinder, made whole or in sections, of any suitable form, when provided with a straight knife fastened across the cylinder, with an opening between the knife and cylinder to govern the thickness of the slice, and with a depression or space on the cylinder, below the knife, made wider at its back part, so the slices will pass under the knife, and be discharged without going into the cylinder, substantially as described.

2. In a vegetable-slicer, a cylinder, of any suitable form, made with an outside metal surface, when said cylinder is armed with one or more knives, of any suitable form, and is also made with a space between said knife and metallic surface, made wider at its back part, substantially as described.

3. A cylinder of a vegetable-slicer, composed of detachable sections, and attaching the knives to said sections, in such manner that the knife, or knives, and sections can be removed without disturbing the other parts of the cylinder, substantially as described.

4. So constructing the detachable sections of the cylinder, that a space will be left between the sections and the knives, which shall be wider at its back than its front, substantially as and for the purpose set forth.

5. Providing the detachable sections of a cylinder in a vegetable-slicer with a bend or projection, at or near its end, to which the knife is attached, and also with a projection, extending around the cylinder, substantially as and for the purpose described.

6. The combination of the cylinder A, constructed substantially as herein set forth, with the hopper H, and arranged in the frame F, in such a manner that the vegetables will only come in contact with about one-fourth of the circumference of the cylinder, substantially as described.

7. In a vegetable-slicer, a detachable throat-piece, P, in combination with a detachable section, D D, so the throat-piece can be removed without removing the section, substantially as described.

8. A vegetable-slicer, constructed with a detachable section, D, to which the knife, or knives, or cutters, of whatever form, are attached, in combination with a slotted head-piece, G, to which the section is fastened, all substantially as and for the purpose set forth.

97,185.—MERRITT GALLY, Rochester, N. Y., assignor to ALLEN P. CARPENTER, same place.—*Printing-Press.*—November 23, 1869.

Claim.—1. In a printing-press, such a construction of the ways in or on which the wheels or guides of the inking-rollers run, as shall raise such inking-rollers free from the distributing-cylinder or cylinders when approaching or leaving the same, substantially as and for the purpose described.

2. The traverse-cam C, whether attached to the crank-pin as a cap or forming part of the crank-wheel when used in connection with the stud or pulley G, for the purpose set forth.

3. The positively-moving lever L, the lever K, and connection M, combined for the purpose of giving motion to the inking-rollers, arms, or lever *s*, substantially as described.

4. The lever N *g*, combined with the connection M, for the purpose of disconnecting the levers L K, substantially as explained.

5. The latch P, combined with the levers L K, for the purpose of holding lever K and hook-connection M in position for reconnection, and preventing the release of lever N at an improper time, substantially as specified.

6. The wedge or sleeve $i\ i^2$, pin, trunnion, or journal I, box or bearing M^8, and adjusting-bar T, combined substantially as and for the purpose set forth.

7. The set-latch L^2 W, combined with a handle, V, as and for the object explained.

8. In combination with such set-latch, the projection or bar T, of the wedge or sleeve $i\ i^2$, as and for the end specified.

9. The use of rubber packing, or other elastic material, for the purpose of relieving the cut-off of the ink-fountain from the direct pressure of the set-screws, substantially as set forth.

10. The additional lug S, placed on the lever-projection of support R, in combination with the flange Y, as and for the purpose described.

11. The type-bed B, inclined backward at any angle between the vertical and forty-five degrees, in combination with the vibrating, rocking, or oscillating platen A, constructed substantially as herein set forth.

97,186.—JOSEPH GARDNER, Jr., Boston, Mass.—*Indicator for Mainspring of Watches.*—November 23, 1869.

Claim.—As a means of determining the degree of tension of the mainspring of a time-piece, the organization and arrangement of the tubular arbor and the rod *g*, the pawl *i*, the toothed wheel *k*, spring-catch *r*, or its equivalent, and the index-pointer and scale, the stop-pawl being accessories to such parts, and the whole operating in manner and for the purposes herein shown and explained.

97,187.—HIRAM GARY, Croton, N. J.—*Loose-Grain Fork.*—November 23, 1869.

Claim.—The tongue or spring A, constructed either of wood or metal, for loose-grain forks, secured to the stale or handle, as herein described, for the purposes set forth.

97,188.—A. S. GEAR, New Haven, Conn.—*Molding-Machine.*—November 23, 1869.

Claim.—1. In combination with the driving-shaft C and jointed swinging frame G and I arranged thereon, carrying the cutter-spindle L, the table A, and pattern P, arranged so as to clamp the work W upon said table, and so that the said spindle may be moved over the surface of the work, as described, guided by the said pattern, substantially as and for the purposes set forth.

2. In combination with the above, the adjusting-lever E, operating so as to vary the elevation of the spindle L, substantially as set forth.

97,189.—WILLIAM W. GLENTWORTH, Philadelphia, Pa., and WILLIAM H. GANDEY, Lambertville, N. J.—*Paper Felt or Wadding.*—November 23, 1869.

Claim.—1. The paper felt, produced in the manner and by the process substantially as above described.

2. The process, substantially as herein described, for producing our new manufacture, by taking the material up on the making-cylinder, while in the condition of half stuff, and subsequently drying it with little or no pressure.

97,190.—LOUIS GODDU, Boston, Mass., assignor to ELMER TOWNSEND, same place.—*Machine for Nailing Shoe-Soles with Wire.*—November 23, 1869.

Claim.—1. The arrangement, as well as the combination of the hand-lever E, and its operative spring *k*, with the stock A, and the mechanism for advancing the wire, the said mechanism consisting of the pawl *i*, the ratchet *g*, and the feed-wheel D, arranged in and applied to the stock, and the wire passage thereof, as explained.

2. The combination of the stop *p*, and its adjusting-lever F, and rack G, with the stock A, and the hand-lever E, applied to the feeding mechanism, as set forth.

3. The arrangement of the transferrer C with the stock A and the shank B of the nail-driver carrier, in manner so as to be moved in one direction by the said shank while descending, as set forth, the move-

ment of said transferrer in the opposite direction being effected by a spring, or its equivalent.

4. The arrangement of the movable knife-carrier or lever H with the stock A and the shank B of the nail-driver carrier, in manner so as to be moved in one direction by the said shank while descending, as set forth, the movement of the said knife-lever in the opposite direction being effected by a spring, or its equivalent.

97,191.—Louis Goddu, Boston, Mass., assignor to Elmer Townsend, same place.—*Machine for Nailing Shoe-Soles with Wire.*—November 23, 1869.

Claim.—The combination of the cammed projection or arm G, or its equivalent, with the shank B of the nail-driver *a*, and with other mechanism, substantially as described, or its equivalent, for feeding the strip of nail-wire along, the whole being so constructed, that during each downward movement of the said shank, the percussive force or blow employed for effecting such movement shall put in operation the feeding-mechanism, so as to cause the wire to be fed forward, as explained.

97,192.—Louis Goddu, Boston, Mass., assignor to Elmer Townsend, same place.—*Machine for Nailing Shoe-Soles with Wire.*—November 23, 1869.

Claim.—1. The combination, as well as the arrangement, substantially as described, of the stationary cutter *w*, the movable cutter *x*, the transferrer *b'*, their concentric fulcra or shafts *z a'*, the slotted tails *c' i*[1] thereof, the movable "T-piece" M, and its operative cam-wheel E, the whole being applied to the stock or frame, and connected with mechanism for advancing the wire, severing it, and driving it, all substantially as specified.

2. The arrangement of the slide-gauge *r*, as set forth, with the handle B of the stock A, and with the stop-pin *s* of the pawl-lever of the wire-feeding mechanism.

3. The combination and arrangement of the slide-gauge *r*, as set forth, its stops *u u*, and operative spring *v*, with the stock A and its handle B, and the stop *s* and operative lever *o* of the wire-feeding mechanism.

97,193.—John B. Hall, Cheshire, N. Y.—*Animal-Power.*—November 23, 1869.

Claim.—The arrangement of the loose eye *b*, bearing *a*, and removable and adjustable bar C, when employed in connection with the tread-wheel B and friction-wheel E, in the manner and for the purpose specified.

97,194.—Randolph Hayden, Middletown, Conn., assignor to himself and James C. Ferrel, same place.—*Shutter-Fastening.*—November 23, 1869.

Claim.—In a blind-fastener, the combination of a double fastening-hook, *a a*, hinged upon one fulcrum, *b*, with an actuating-spring, *g*, and screw cylindrical case, substantially as set forth.

97,195.—Horace P. Hayward, Fitchburgh, Mass., assignor to himself, Henry C. Mahurin, Ira Holt, Levi Sherwin, Luther J. Brown, and Charles N. Wilson, same place.—*Mode of Cutting Shoes.*—November 23, 1869.

Claim.—1. The main piece of a shoe-upper, cut in the manner shown in Fig. 1; that is, the lacing-slit commencing at *h*, in the center line of the upper, and running at an angle thereto, substantially as described.

2. A boot or shoe, having its upper formed of one main piece *a*, and the small goring-piece *l*, when the main piece is cut with the lacing-slit, commencing at *h* in the center line of piece *a*, and running at an angle thereto, substantially as described.

97,196.—Alexander Inglis, Indianapolis, Ind., assignor to himself, Charles W. Tyer, and John Inglis, same place.—*Lock.*—November 23, 1869.

Claim.—The combination, with the separate key-holes *g* and *h*, of the bolt C, with three notches on its upper and lower edges, guard I, tumbler D, and spring *f*, whereby the bolt may be thrown out by one turn of the inside key, the door locked, and the outside key-hole left open, and by two turns of said inside key the outside key-hole may be closed, all substantially as specified.

97,197.—John Jacobs, Oneida, Ill.—*Neck-Yoke.*—November 23, 1869.

Claim.—1. The longitudinally-grooved bolt B, provided with the clip C, in which the leather holdback D is secured, substantially as shown and described.

2. The plate or washer E, provided with lugs or projections *a a*, and pins *b b*, substantially as and for the purposes herein set forth.

3. The combination and arrangement of the yoke A, bolt B, clip C, holdback D, plates or washers E G, and nut H, all substantially as and for the purposes herein set forth.

97,198.—Alva F. Jennings, Fredonia, N. Y.—*Braid-Holder.*—November 23, 1869; antedated November 11, 1869.

Claim.—The holder A, made in one piece of wire, so bent as to form spring sides, with retaining stops, all constructed and operating in the manner and for the purpose set forth.

97,199.—Alfred J. Johnson, Louisville, Ky., assignor of one-half his right to James Wilheim, same place.—*Evaporating-Pan for Sorghum-Juice.*—November 23, 1869.

Claim.—1. Sugar-pans, made with a cast-iron bottom and wooden sides, substantially as and for the purpose herein described.

2. The herein-described method of preventing leakage, by securing the wooden sides of the pans between ribs *a a*, cast with the bottom, and provided with packing, all substantially as set forth.

3. The bottoms, cast with depressions *c d*, and the gate, with lip *i*, sinking into the depression *c*, substantially as described, for the purpose specified.

4. The finishing pan, constructed with the inclined depression *h*, covered channel *o*, and gate *p*, all substantially as described.

97,200.—Daniel Keethler, Mount Oreb, Ohio.—*Corn-Planter.*—November 23, 1869.

Claim.—1. The flanged segmental plates D E F, secured to the sides of the furrowing-wheels B B', in such manner as to have radial adjustment thereon, substantially as described.

2. In combination with the furrowing-wheels B and seed-tubes T, the concave-faced pressure rollers S, and mounted caster-frames R, as described, for the purposes set forth.

3. The combination of parts J K L M N O P Q, serving to operate the seed-slides I, substantially as shown and described.

97,201.—Abraham B. King, Camden, Ohio.—*Cultivator.*—November 23, 1869; antedated November 17, 1869.

Claim.—1. The pivoted shield *f*, in combination with the beam D, as and for the purpose described.

2. The beam D, with its brace *d*, constructed and arranged substantially as described.

3. The break C', in combination with the brace d^1 and projection d^2, arranged and operated as and for the purpose set forth.

4. The plow described, having the weed-break, cultivator, and shield, combined and arranged as described, for the purpose set forth.

97,202.—Francis L. King, Worcester, Mass.—*Boring-Machine.*—November 23, 1869.

Claim.—The revolving brace B, formed with its shoulders, and the washers C C, hand-wheel A, or other similar projection, right and left-hand screws D D, and nuts E E, formed with their projections on their inner faces, in combination with the uprights H H and semicircles F F, all constructed and operating substantially as shown and described, and for the purpose specified.

97,203.—William La Banister and Charles W. Ricker, Charlestown, Mass., assignors to Charles W. Ricker and Samuel S. Wilson, same place.—*Flier for Spinning.*—November 23, 1869.

Claim.—The combination of the head A, foot B, uprights C C, and bosses or projections D D, when said projections are formed in one piece with the up-

rights, and said uprights are oval above, and semicircular below said projections, substantially as and for the purposes herein set forth.

97,204.—BENJAMIN S. LAWSON, New York, N. Y.—*Car-Replacer.*—November 23, 1869.

Claim.—The portable frog, herein described, having flanches C and D, beveled base H and projecting portion I, constructed and arranged to operate as specified.

97,205.—JOHN LERCH, Uhlersville, Pa.—*Combined Harrow and Cultivator.*—November 23, 1869.

Claim.—1. The arrangement, in front of the harrow-teeth *f f*, of inclined scrapers *g*, as set forth.

2. The scrapers so combined with a flanged plate, *j*, secured to the former, as to be adjustable thereon.

3. The lifters *h*, constructed and applied to the frame of the implement, substantially as set forth.

4. The combination of the said lifters with the innermost adjustable cultivator-teeth.

97,206.—FRANK MARQUARD, Newburyport, Mass.—*Composition Boot and Shoe Heel.*—November 23, 1869.

Claim.—1. The above-described composition, made of the materials and in the manner substantially as hereinbefore described.

2. As an improved manufacture of my invention, a heel or other article, when made of such composition, by the use of the mold and heat and pressure, as set forth.

97,207.—GEORGE MARTZ, Pottsville, Pa.—*Coal-Car and Track.*—November 23, 1869.

Claim.—1. A motive-truck, so constructed and adapted to the coal-car that its platform shall serve as a cover to the car.

2. A coal-car and motive-truck, constructed and adapted to each other, so as to automatically connect and disconnect themselves, substantially as and for the purpose specified.

3. The described arrangement of coal-car and motive-truck with each other, and with the tracks *a b*, which are constructed as described, whereby the car is propelled forward by means of the motive-truck, substantially as and for the purpose set forth.

97,208.—CHARLES MAUS, Danville, Pa.—*Car-Coupling.*—November 23, 1869.

Claim.—1. The arrangement, upon the side of the draw-head B, of the tube C, coupling-pin D, and spring *a*, in combination with drop E, all constructed and operating substantially as and for the purposes herein set forth.

2. The combination and arrangement of the draw-head B, tube C, pin D, spring *a*, drop E, guide H, block I, and spring *b*, all substantially as and for the purposes herein set forth.

97,209.—SEYMOUR MAY and JOHN HOOPER, Waterloo, N. Y.—*Cable-Slide.*—November 23, 1869.

Claim.—The arrangement of the wooden block D, forming the frictional surface of the bars, when combined with the double guide-tongues C C, on opposite sides, for steadying the same, the whole operating in the manner and for the purpose specified.

97,210.—WILLIAM MCCONNELL, Clarksville, N. J.—*Molding-Machine.*—November 23, 1869.

Claim.—The disk H, uprights J, arm K, adjustable wrist L, and bearings *o o*, in combination with the shaft or spindle D, substantially in the manner and for the purposes herein set forth.

97,211.—LEWIS MICHAELS, Cincinnati, Ohio.—*Locomotive Head-Light.*—November 23, 1869.

Claim.—As a new article of manufacture, the piece or casting A, *a ai aii aiii aiv, av, avi, avii*, for the purpose herein designated.

97,212.—JOSEPH T. MIDDLETON, Harveysburgh, Ohio, assignor to himself and M. M. Harvey, same place.—*Car-Coupling.*—November 23, 1869.

Claim.—1. The link A, having the upturned points or horns B B′ *b*, the apertures C, and stud F, all arranged as shown and described.

2. The detent I, constructed with arms J K, projecting forward, and arms L L′, projecting backward, and adapted to operate substantially as herein described.

3. The combination of the detent I, link N, crank O *o*, rock shaft P, and weighted lever Q *q* S, as described.

97,213.—HENRY MILLER, Roadside, Va., assignor to himself, S. P. H. MILLER, J. G. H. MILLER, H. H. MILLER, and J. H. KITE.—*Shovel-Plow Plate and Points.*—November 23, 1869.

Claim.—1. The mold A, having a face concave lengthwise, and plane crosswise, and having seats at its ends, substantially as and for the purpose set forth.

2. The combination of the mold A, having seats at its ends, with the removable reversible points A′ A″, substantially in manner and for purpose described.

97,214.—JAMES MONTGOMERY, New York, N. Y.—*Inhaling-Apparatus.*—November 23, 1869.

Claim.—The "portable inhaling-apparatus," composed of a box fitted at each end with covers, and with wire-gauze or perforated bottoms, and a sponge or equivalent material for holding the medical agent to be inclosed, all constructed as and for the purposes set forth.

97,215.—M. H. MOSMAN, Waterbury, Conn.—*Buffer for Inserting Coiled Wire around the Edges of Lamp-Deflectors.*—November 23, 1869.

Claim.—The buff or buffer A, when constructed substantially as described, for operation, essentially as and for the purpose or purposes herein set forth.

97,216.—CHARLES D. NEWTON, Troy, N. Y.—*Cooking-Range.*—November 23, 1869.

Claim.—The employment of the movable fender I, provided with the hooks *i* and *i*, upon the front of a cooking-stove or range, substantially as and for the purpose specified.

97,217.—MILTON V. NOBLES, Elmira, N. Y.—*Gridiron.*—November 23, 1869.

Claim.—The improved sectional gridiron herein described, provided with handles filled with mortar of gypsum, and having loop *c* and tongue *s*, substantially as specified.

97,218.—M. V. NOBLES, Elmira, N. Y.—*Device for Forming the Shed in Weaving Wire.*—November 23, 1869.

Claim.—The wire-weaving machine herein described, having, in combination with the spring-treadles *l l′*, the removable arc *d′*, with rings *c* and guard-plates *e*, and the elevating-ares D D′, provided with the rods *b b′* and rings *a a′*, all constructed and arranged to operate as specified.

97,219.—AARON B. NOTT, Fairhaven, Mass.—*Kitchen-Sink.*—November 23, 1869.

Claim.—1. The flanged pipe F, held in place and secured tightly by means of the ring D and screw-cap C, substantially as described.

2. Ring D, constructed as described, and fitted upon a lip, *i*, rising from the depression E, in combination with a perforated screw-cap and its annular rib *c′*, substantially as described.

3. The strainer B, constructed with a curtain, *b′*, so as to form a stench-trap in the depression E, substantially as described.

97,220.—NELSON ORCUTT, Syracuse, N. Y., assignor to DAVID D. GREGORY, same place.—*Manufacture of Soap.*—November 23, 1869.

Claim.—1. The improvement in soap-making herein described, consisting in uniting glue or gelatine to soap-compounds, by means of starch, treated substantially as described.

2. The new article of soap, made by the combination of alkali fats or rosin, and gelatine and starch, substantially as described.

97,221.—ELISHA S. ORMSBY, New York, N. Y.—*Machine for Printing and Embossing Paper-Hangings.*—November 23, 1869.

Claim.—1. The combination of the sizing-rollers

b c, embossing-rollers *n l*, and printing-rollers *m n n*, when the same are arranged and operate substantially as herein described.

2. In combination with the above, the bronzing-apparatus *d e f g h*, when arranged substantially as herein shown and described, between the rollers *k l*, *b c*.

3. The arrangement of the sizing-rollers *b c*, embossing-rollers *h l*, printing cylinder *m*, and rollers *n n*, and the bronzing-apparatus *d e f g h*, all operating substantially as herein described.

4. A printing and embossing machine for paper and other materials, consisting of a rotary size-printing apparatus, *c d*, a rotary embossing-apparatus, *k l*, and a rotary water-color printing-apparatus, *m n*, substantially in the manner shown and described.

97,222.—ENOCH OSGOOD, Boston, Mass.—*Machine for Hulling Rice, Coffee, &c.*—November 23, 1869.

Claim.—1. The cone or roller C, herein described, when constructed with yielding surfaces of thin metal plates, *d*, or their equivalent, set edgewise, arranged and applied as described, and resting upon or against a rubber bed, in the manner and for the purpose substantially as herein set forth.

2. The cone or roller C, herein described, when constructed with a yielding surface of rubber and cloth, or leather, set edgewise, substantially as and for the purpose herein set forth.

3. The cone or roller C, herein described, with a yielding surface of metal pins passing through a perforated metal plate, and resting upon or against a rubber bed, substantially as and for the purposes herein set forth.

4. The combination of the cone C, herein described, with the shell A, having an unyielding serrated surface, *a*, and yielding surfaces H, and brush I, constructed in the manner and for the purpose substantially as herein set forth.

5. The fan G, constructed of plates of thin sheet-metal, having slots through them, forming, when bent, mortises and corresponding tenons, and held together by a pin or arbor, substantially as herein set forth.

97,223.—ENOCH OSGOOD, Boston, Mass.—*Hoisting-Apparatus and Derrick.*—November 23, 1869.

Claim.—1. The traveling of the hoisting-gears over racks, or their equivalent, for the purpose of hoisting or driving machinery, and for other purposes, arranged substantially as and for the purposes herein set forth.

2. The shifting-apparatus to common derrick, substantially as and for the purpose herein set forth.

97,224.—JOHN H. PHILLIPS, Washington, D. C.—*Construction of Railway.*—November 23, 1869.

Claim.—The wrought-iron tie-bar *d*, in combination with the rail, and bed-block A, constructed and arranged as and for the purpose specified.

97,225.—W. E. PRALL, Washington, D. C.—*Steam Water-Elevator.*—November 23, 1869.

Claim.—The combination of a steam-generator, A, a hot-water cylinder, D, siphon-pipes E and F, and a tubular condenser, when constructed and arranged substantially as set forth.

97,226.—W. E. PRALL, Washington, D. C.—*Steam Water-Elevator.*—November 23, 1869.

Claim.—The within-described arrangement of the pipes K and L, substantially as and for the purpose specified.

97,227.—FRANZ PROCKERT, New York, N. Y.—*Lock.*—November 23, 1869.

Claim.—1. In a door-lock, in which the bolt is thrown to two different distances, a series of tumblers in combination with an adjusting-piece, J, for setting the tumblers, to allow the locking or throwing of the bolt B into its secondary or double outermost position, all substantially as and for the purposes herein set forth.

2. The tumblers M M^1 M^2 *m*, adjusting-piece J, cam-lever G, acting spring F, and knob-device D D′, combined and arranged as represented, relatively to each other, and to a bolt, B B^1 B^2, adapted to be thrown out to two different distances, according as it is allowed to move out with or without setting the tumblers, all substantially as and for the purposes herein set forth.

97,228.—HENRY REYNOLDS, New Haven, Conn., assignor to REYNOLDS AND COMPANY, same place.—*Low-Water Indicator.*—November 23, 1869; antedated November 12, 1869.

Claim.—In a low-water detector, constructed as described, the arrangement of the two cross-heads B and E, with the rods *a* and *b*, each cut with a right and left-hand thread, and the cross-heads tapped accordingly, as herein specified.

97,229.—JOHN W. RICKETTS, Charleston, Ill.—*Corn-Planter.*—November 23, 1869; antedated November 13, 1869.

Claim.—1. A corn-planter, arranged upon a frame, and supported upon driving-wheels O O when said wheels are connected to a crank-axle B, which forms the furrows by said wheels, and operates the dropping-mechanism, substantially as set forth.

2. The arrangement of the frame A, wheels O O, crank axle B, bifurcated rod K, boxes E E, slides L L, shovels N, and rollers I, the several parts being constructed to operate substantially as specified.

97,230.—CÆSAR A. RODNEY, Wilmington, Del.—*Machine for Making Wood-Screws.*—November 23, 1869.

Claim.—1. The combination of the reciprocating feed-box D, containing the mechanism for clamping the wire, and the mechanism for clamping the wire above the feed-box, by which the wire is suspended, and drawn through the feed-box when released by the latter, substantially as set forth.

2. The combination of the feed-box D, bar D^1, rod D^2, collars d^2, and perforated plate D^3, respectively, constructed substantially as and for the purpose set forth.

3. The combination of the pointed bar D^2 and plates E and E^1, arranged to operate substantially as and for the purpose set forth.

4. The wheel B^9, constructed with projections b^3 and b^4, of different altitudes, in combination with the feed-box substantially as set forth.

5. The shear F, with a perforated head *f*, in combination with the cam F^2 and the clamps for holding the end of the wire D^4 against the lower end of the wire which has been cut from the coil, and is retained in the hole f^2, substantially as set forth.

6. The shear *f*, when so constructed that the length of the hole f^2 shall be equal to the throw of the elevating-mechanism, which projects the length of wire necessary to form a headed screw-blank.

7. The wheel G, when so constructed that its hub F^2 shall form a cam for operating the shear F, substantially as described.

8. The wheel G, in combination with the mechanism for clamping the screw-blank, and with the mechanism for giving to it an intermittent motion, substantially as set forth.

9. The combination of the wheel H and stud-pin, bell crank lever G^7, rod G^6, rock-shaft G^5, clutch G^4, and pinion G^3, with the intermediate wheels for giving the intermittent motion to the wheel G, substantially as described.

10. The clutching-mechanism attached to the wheel G, consisting of the rollers G^1 and jaws G^2 G^3, by which the blank is held, while subjected to the successive operations of heading and finishing, substantially as set forth.

11. In combination with the wheel G, an upper plate K, which forms bearings for the journals of the rollers G^1, substantially as set forth.

12. The plate K and wheel G, when constructed with swells K^2, to form bearings for the journals of the rollers G^1, and when those on the wheel are arranged to sweep cuttings from the grooves in the bed-plate I, substantially as set forth.

13. In combination with the rollers G^1, a stationary jaw, G^3, and an oscillating jaw, G^2, the latter having an arm, g^5, which, by the action of a cam-plate, I^1, may be made to compress or release the screw-blank, substantially as and for the purpose set forth.

14. The jaws G^2 and G^3, when constructed with

slots, to permit the action of the cutters S^1 upon the screw-blank.

15. The rollers G^1 when beveled upon their edges, to give form to the under side of the head of the screw, substantially as set forth.

16. The blocks I^4 and Q^1, in the plates I and Q, for compressing the journals of the roller, substantially as and for the purpose set forth.

17. The shaft L, when used for supporting the blank, and having both a vertically-reciprocating and rotary motion, in combination with a device for upsetting the head, substantially as and for the purpose set forth.

18. The combination of the shaft L, the toggle-joint, with the cam b^5, in the wheel B^9, and the intermediate connecting parts, substantially as set forth.

19. The arrangement of the reciprocating shaft L, pinion L^1, and wheel L^2, upon the shaft B and toggle-joint and cross-head L^3, so as to give a continuous rotary and intermittent reciprocating motion to said shaft L, substantially as set forth.

20. The combination of the pinions M^5 and M^4, upset M, toggle-joint M^1 M^2, eccentric h^1, and spring M^3, for giving a continuous rotary and intermittent reciprocating motion to the upset M, substantially as and for the purpose set forth.

21. The combination of the shafts L and M, when each has both a rotary and reciprocating motion, and respectively constructed with indentations *l* and *m*, substantially as and for the purpose set forth.

22. The combination of the shafts L and M and rollers G^1, when the former compress the head of the blank upon the latter, and at the same time give to it a rotary motion, substantially as set forth.

23. The combination, in a screw-cutting machine, of mechanism for causing the blanks to revolve, with other mechanism for compressing the head at the same time, substantially in the manner set forth.

24. The combination of the wheel G with a projection, g^4, and the bolts N^1, oscillating frame N, cam-plate N^2, slide N^8, and pointed rod N^3, for throwing up the blank, substantially as and for the purpose set forth.

25. In combination with the oscillating frame N, slide N^8, and rod N^3, the rod N^4, for tripping the rod N^3, when the rod N^4 encounters the frame, substantially as set forth.

26. The combination of the frame N, spring N^7, and levers N^5 and N^6, for detaching the bolt N^1 from the projection g^4, and causing the frame to return to its original position, substantially as set forth.

27. The hollow revolving arbor O, containing the cutters *o* o^1, for turning off the top and edge of the head of the blank, substantially as set forth.

28. The combination of the arbor O, rod O^2, oscillating yoke O^3, grooved collar O^4, and yoke O^5, connected with the cam O^8, for bringing the revolving cutters into action upon the head of the screw-blank, substantially in the manner set forth.

29. In combination with the cam O^8, lever O^7, and yoke-plate O^5, the adjustable connecting-screw O^9, arranged substantially as and for the purpose set forth.

30. The combination of the hollow tapering-pointed arbor O, bevel-pivoted stock O^1, and cutters *o* o^1, substantially as and for the purpose set forth.

31. The arrangement of the shaft B, sliding bevel-wheel P^3, bevel-wheel P^2, mandrel P^1, saw P, and reciprocating frame P^4, substantially as and for the purpose set forth.

32. The combination of the reciprocating frame P^4, carrying the saw P, and the adjustable rod P^5, lever P^6, connecting-rod P^7, and toggle-joint M^1 M^2, substantially as and for the purpose set forth.

33. The combination of the cam R^3 and spring R^2, for giving a reciprocating motion to a screw-driver, R, which turns the screw-blank, and a corresponding cam, b^1, which simultaneously raises and lowers the blank while subjected to the action of cutters forming the thread, substantially as set forth.

34. The combination of the screw-driver R, block R^4, well Q^1, jaws r^4, and springs r^2, when respectively constructed and arranged to operate substantially as set forth.

35. The cutters S^1 and stocks S, in combination with the adjustable connecting-plates T and cam U, substantially as set forth.

36. The connecting plates T, when held in place by a button U^1, or equivalent device, and pivoted at *t*, in grooves in the wheel G and plate K, so as to permit their displacement to swing the cutters outside of the periphery of the wheel and plate, substantially as set forth.

37. In combination with the cam U, rock-shaft U^2, and arm U^3, the elevator V, and arm V^1, when the elevator is attached to the wheel, and revolves with it, substantially in the manner set forth.

38. In combination with the elevator V, the rods V^4 and V^5, and tripping-arm V^8, attached to the rock-shaft V^9, arranged to operate substantially as and for the purpose set forth.

39. The combination of the plate X, sliding-plate X^1, ratchet X^2, pawls X^3 and X^4, for giving a gradually-increasing motion to the rod W, which operates the rock-shaft, and through it, by intervening mechanism, the cutters for regulating the feed of the latter, substantially as set forth.

40. The combination of the reciprocating feed-box D, to which is attached the cam-track D^7, the oscillating plate X, and suitable intermediate mechanism for controlling the action of the cutters, according to the form of the track, substantially as set forth.

41. The well Q^4, when constructed with an opening to receive a reciprocating pan, Y, and with depressions Q^6, to permit the fall of the screw from the jaws of the driver, substantially as set forth.

42. The combination of the pan Y, pin Y^5, sliding extension Y^7, lever Y^6, rod Y^2, and reciprocating plate Y^3, operated by the cam R^3, substantially in the manner and for the purpose set forth.

43. In such a machine the combination of the following groups of elements: a feed-mechanism which feeds the wire to be cut into lengths proper to form a blank; a revolving wheel which carries the wire after being cut off, and has an intermittent motion during the pauses in which the blank is; by successive operations, submitted to the action of mechanism, by which the head is upset and trimmed, the nick in the head cut, and the thread formed, and the screw finally delivered from the machine in a completed state, substantially as set forth.

97,231.—JOHN B. ROOT, New York, N. Y.—*Reciprocating Steam-Engine.*—November 23, 1869; antedated November 12, 1869.

Claim.—1. The combination of the internally-projecting cylindrical sleeve C, operating as an interior guide to the piston E, and trunk D, with the cylinder A, and external trunk-guide B, at the opposite end of said cylinder, substantially as specified.

2. The connection of the pitman or rod F with the trunk D of the piston, by ball-and-socket joint, through a ball-formation *c*, on the end of the rod, made to fit half or partial sockets J K, arranged within the trunk, and the one of which is made loosely or freely adjustable therein, essentially as shown and described.

3. The combination with the half socket K, arranged to loosely or freely fit a screw-thread *e*, in the trunk, of the follower G, to the packing *b*, made adjustable by a nut *m*, and screw-pin or projection *n*, from said half socket as a bearing or base, substantially as specified.

4. The lower half box J, constructed and arranged as described, with an oblong slot, S, through it, for play of the pitman, essentially as herein set forth.

97,232.—JACOB RUMMEL, Jr., New Middletown, Ohio, assignor to himself and F. V. FLOOR, same place.—*Method of Renovating the Cutting-Edges of Harvester-Guards.*—November 23, 1869.

Claim.—The method, herein described, of renovating harvester-guards.

97,233.—JACOB RUPERTUS and THOMAS R. WRIGHT, Philadelphia, Pa.—*Sewing-Machine.*—November 23, 1869.

Claim.—1. A sewing-machine, in which the shuttle is caused by the mechanism herein described, or any equivalent to the same, to pass twice through the loop of needle-thread, and once through a loop of its own thread, during one complete movement of the needle, all substantially as set forth.

2. The combination of the cog-wheels *c c'*, proportioned and operating as described, with the shuttle traveling in a vertical annular race, as specified.

3. The hooked arms G and G′, acted on by suitable springs, and so arranged in the path of the shuttle, that they shall be turned and operated by the same, substantially in the manner described.

4. The plate g', having projections h h', and traveling in a circle, operating in combination with a shuttle, F, having openings i i, and traveling in an annular race, substantially as described.

5. The tubular slotted guard I, inclosing the needle-bar, and constructed and operated by the arm C and spring m, as described.

6. The spring-rod J, having a vertical and a turning motion, in combination with the lugs s and r, and the arm C, and operating as described.

7. The combination of the lugs s, arm P, and pin r', of the spring-rod J, when the whole are arranged for joint operation, substantially as herein set forth.

97,234.—Frederick J. Seymour, Wolcottville, Conn.—*Machine for Spinning Tubes of Sheet-Metal.*—November 23, 1869.

Claim.—1. The slides g h, carrying the tools m n n, and actuated simultaneously by the lever k, or its equivalent, in combination with a former, revolved and sustaining the article that is being operated upon, substantially as set forth.

2. The shape or pattern, o, and adjustable stops p and q, in combination with the aforesaid slides and tools, substantially as and for the purposes set forth.

97,235.—Canceled.

97,236.—John Shelly, Saint Louis, Mo., assignor to John J. Grimsley, same place.—*Side-Saddle Tree.*—November 23, 1869.

Claim.—As a new article of manufacture, a side-saddle tree, having the side-bars and seat made separate and then united, substantially as and for the purpose shown and specified.

97,237.—Edwin Sheppard, Philadelphia, Pa.—*Steam-Generator.*—November 23, 1869.

Claim.—The horizontal pipes or chambers a, connected by large tubes b and small tubes b', arranged substantially as described.

97,238.—William H. Shock, Baltimore, Md.—*Spring Turnbuckle for Wire Rigging.*—November 23, 1869.

Claim.—The apparatus, consisting of the tubular case A, having the screw-rod D and stirrup C, secured thereto, and provided with the bolt B, having the rubber springs or disks b fastened thereon, all constructed and arranged to operate substantially as and for the purpose set forth.

97,239.—W. S. Shoemaker, Towsontown, Md., and E. H. Shoemaker, Columbus, Ohio.—*Railroad-Spike.*—November 23, 1869.

Claim.—1. A railroad-spike, having a tapered portion, c, a rounded shoulder e, and a double-beveled entering-end, f, substantially as described.

2. The tapered sides c, parallel sides d, shoulder c, and double-beveled entering-end f, with or without the fins g, substantially as described.

3. As a new and improved article of manufacture, a railroad-spike, constructed as herein shown and described.

97,240.—William Simpson and Alfred Gardner, Ilford, England.—*Mechanism for Converting Reciprocating Motion into Rotary Motion.*—November 23, 1869.

Claim.—The double parallel tie and guide-rods D and E, embracing the circular-grooved boss I, upon the axis of the eccentric plate C, or the shaft G, as its equivalent, in combination with the parallel cross-heads A B, arranged to bear against the periphery of said eccentric C, throughout its revolution, at diametrically opposite points thereof, and with suitable piston-rods or pitmen, H, connected to said cross-heads, all substantially as herein set forth.

97,241.—H. Julius Smith, Boston, Mass.—*Electric Fuse.*—November 23, 1869.

Claim.—1. Securing the ends of the insulated wires within the shell of the fuse by a disk, substantially as described.

2. Uniting the two parallel insulated wires by a non-conducting thread, substantially as described, to allow the wires to be separated, as specified.

97,242.—A. Lewis Spear, Flint, Mich., assignor to himself, John Stephens, Jr., and Royal L. Lewis, same place.—*Railway-Car Coupling.*—November 23, 1869.

Claim.—The coupling-bolt C, made of a single piece, with its head arrow-shaped, its rear end heaviest on its under side, and provided with a neck, in combination with the frame A, having a vertical oblong flaring head, a bearing cross-piece, G, with a hinged locking cross-piece, G′, all constructed and arranged as herein described.

97,243.—James B. Speed, Louisville, Ky.—*Lime-Kiln.*—November 23, 1869.

Claim.—1. The distributer C, to be placed over the mouth of the kiln, when constructed substantially as and for the purpose specified.

2. The combination and arrangement of the kiln A, distributer C, and car B, substantially as and for the purpose set forth.

97,244.—John A. Straight, Albion, N. Y.—*Plate for Artificial Teeth.*—November 23, 1869.

Claim.—The combination of the hard base-plate A, for the roof of the mouth, and the soft elastic edge B on the rear part of the same, substantially as and for the purpose described.

97,245.—Esau D. Taylor and David Cohn, Hornellsville, N. Y.—*Clothes-Mangle.*—November 23, 1869.

Claim.—The arrangement of the crowning guide-table or base B, the angular journal-box frames C C, and a series of calender-rollers a a a', all combined to operate as and for the purposes herein set forth.

97,246.—Nathan Thompson, Brooklyn, E. D., N. Y.—*Lantern.*—November 23, 1869; antedated November 10, 1869.

Claim.—The combination, with the cage-ring D, having claws or clamps a a, of the outwardly bent-over rim B, to the base part A, with its turned down portions or depressions b b, intermediate clipping edges or inclines f f, stops c c, and suitable apertures or formations for locking the cage, by means of a spring-bolt or other fastening, substantially as specified.

97,247.—Howard Tilden, Boston, Mass.—*Gas-Machine.*—November 23, 1869.

Claim.—1. The combination of the cylinder A, the chamber D, and the gas-holder H, substantially as and for the purposes specified and set forth.

2. The combination and arrangement of the chamber D, the basin B, the tube F, and the hydrocarbon-vessel E, as and to operate as described and illustrated.

3. The telescopic gas-conduit, leading from hydrocarbon-vessel E to gas-holder H, formed by the manner of arranging and combining the pipes G and I.

97,248.—Robert Tompkins, Clarksville, Tenn.—*Animal-Trap.*—November 23, 1869.

Claim.—The cylinder A, provided with the partitions a'' and combined with the standards a a', arms b b', rib c, and stops c' b'', in connection with the box D, in the manner and for the purpose set forth.

97,249.—Elmer Townsend, Boston, and Louis Goddu, Lowell, Mass.—*Machine for Nailing Shoe-Soles with Wire.*—November 23, 1869.

Claim.—1. The combination of the mechanism for regulating the length of the nail (to be cut) to the thickness of a sole at the place where such nail is to be driven, such mechanism being the stop-slide I and the lever i, with the mechanism for feeding the nail-strip along, the mechanism for severing each nail from the strip, and the mechanism for driving such nail, so cut off, into a sole, the whole being substantially as hereinbefore specified.

2. The arrangement and combination of the slot c^2 and the spring k with the stop-slide I and the lever i, combined with a nailing-machine or mechanism, substantially as explained.

97,250. — HENRY B. VERRIE and DANIEL G WIGHTMAN, North Kingston, R. I.—*Car-Coupling.* —November 23, 1869.

Claim. — The drum A, bunter *a*, the disks D D^2, the rack P, the arm *h*, and eatches *k* k^2, in combination with the key or coupling-shaft G, and link C, all arranged and operating substantially as and for the purposes described and set forth.

97,251.—DAVID WALDHAUER, New York, N. Y. —*Harness.*—November 23, 1869.

Claim.—1. The clamps *b*, attached to the saddle, and supporting the shafts, substantially as described.

2. The sleeve C, working on the shaft, in combination with the clamps *b*, substantially as set forth.

3. The projection *f* on the sleeve, in combination with metallic traces or draught-rods, substantially as described.

4. The oblong slots in the lugs of the whiffletree, to operate in combination with the metallic traces or draught-rods substantially as set forth.

5. The shaft-band *c*, sliding through loops *l* on the body-band B, in combination with the clamps *b*, substantially as described.

6. The detaching-catch *k*, in combination with the whiffletree, the metallic traces, and sleeves C, substantially as set forth.

97,252. — BENJAMIN WALTON, Farisburgh, Ill. —*Dumping-Machine.*—November 23, 1869.

Claim.—A dumping-device, having bin A, doors B and C, levers E and K, standards F, G, and H, and spring *s*, constructed and arranged substantially as specified.

97,253. — JOHN WEEKS, Buffalo, N. Y.—*Scale-Beam.* — November 23, 1869; antedated November 9, 1869.

Claim. — 1. The combination, in a weighing-machine, of two or more scale-beams A G, when the numbers thereon form a progressive series from one to the other, so as to operate as one continued scale, substantially as and for the purpose hereinbefore set forth.

2. The saddles H H, constructed as described, when arranged with the scale-beams A F G, substantially in the manner and for the purpose hereinbefore set forth.

97,254.—DANIEL WESTLEY, Corry, Pa., assignor to himself and E. W. BUSS, same place. — *Machine for Polishing Wood.*—November 23, 1869.

Claim.—1. The reciprocating gate C, constructed and arranged to operate substantially as shown and described, and for the purpose set forth.

2. The supporting-frame E E^1 E^2, constructed substantially as shown, in combination with the carrying-frame or gate C.

97,255.—JOHN WETTSTEIN, Baltimore, Md., assignor to himself and JOHN THOMAS HENNAMAN, same place.—*Cigar-Machine.*—November 23, 1869.

Claim.—1. The combination, with the filler-strip forming and feeding-devices C D E E′ F, filler lump, severing-knife I *i*′, and mold L L′ M M′ N, of the lump-receiver B′, arranged and employed substantially as represented and described, for the purpose set forth.

2. The knife I *i*′, constructed of rotary form, and arranged to sever the filler-lumps by oblique or diagonal cuts, for the purposes set forth.

3. The combined feed-operating pinion and knife I, constructed and adapted to operate substantially as set forth.

4. The combination of the supporting-points or rollers L L′ and M M′ respectively, movable and fixed belts or lining N, lever S, and weights O, substantially as represented and described.

5. In combination with the vertical mold, composed of supporting-points or rollers L L′ and M M′, respectively, movable and fixed, and belts or lining N, weighted and operated as described, the guide-slot R serving to support the two sides of the lining independent of the supporting-points to form the bottom of the mold, as shown.

6. In combination with belt or belts N, and rollers or supporting-points L L′ M M′, the weight or weights O, applied to said belt or belts, substantially as described, for the purpose set forth.

7. In combination with the belt or belts N and rollers or supporting-points L L′ M M′, forming the mold, the regulator V V *v v*, constructed and employed substantially as represented and described, for the purposes set forth.

8. The combination, with the belt or belts N, rollers or supporting-points L L′ M M′, and sliding rod U′, for opening and closing the mold, of the lever O′, substantially as and for the purpose set forth.

9. In combination with the movable rollers or supporting-points L L′, mounted in separate pivoted frames T T′, as described, the cam U adapted to operate said frames, substantially in the manner described.

10. In combination with the mold N L L′, M M′, constructed substantially as described, the header W, provided with the bell-shaped matrix w^4, and slot w^5, substantially as and for the purpose set forth.

11. In combination with the mold N L L′ M M′, constructed substantially as described, the header W, provided with the slot w^5 and sockets w^3 w^3 for the reception of the upper rollers or supporting-points L M, as set forth.

12. The header W, and supporting-stud or pin X, combined and arranged substantially as described, and adapted to be simultaneously advanced and retracted, substantially as set forth.

13. The combination, with the header W, of the pin Y′, substantially as and for the purpose set forth.

14. In combination with the mold or rolling-apparatus, constructed substantially as described, the rounded plate Y, substantially as and for the purpose set forth.

97,256.—HENRY H. WHEELER and OLIVER H. REED, Lowell, Mass.—*Shuttle-Spindle.*— November 23, 1869.

Claim.—The actuating-pin *c*, constructed as described, with a beveled lower end, and applied to the head *b*, forward of the pivot *g*, in combination with the spring *a*, provided with the beveled end, and with the top plate *d*, in the manner and for the purpose set forth.

97,257.—A. R. WIGGS, Iuka, Miss.—*Combined Cotton and Corn Planter.*—November 23, 1869.

Claim.—1. In combination with the harrow-frame A, the heel B, plow-point C, hopper D, toothed shaft *q*, shaft *d*, (provided with teeth *m* and *f*, and opening *t*,) and concave roller *u*, constructed and arranged to operate as herein described.

2. The hopper D, when provided with the block H, in combination with the shaft *d*, having teeth *f* and opening *t*, concave roller *u*, heel B, and plow-point C, constructed and arranged to operate, in connection with the harrow-frame A, as herein described, for the purpose specified.

97,258.—JUDSON E. YAGER, Barboursville, Va. —*Curry-Comb.*—November 23, 1869.

Claim.—The curry-comb, consisting of the handle A running through the plates and blocks, the bent plates B B, serrated, and provided with sockets for the reception of the handle, the blocks C C, arm D, and screw-nut E, the whole constructed and arranged substantially as described.

97,259.—J. M. WATSON, Sharon, Mass.—*Plant-Protector.*—November 23, 1869.

Claim.—1. A plant-protector frame, composed of the hoop *a*, and bows *b* and *e*, such bows being pivoted together, and the former pivoted to the hoop, and the whole being combined and operating as explained.

2. In combination with the above, the gauze covering, or shield, and the elastic band or loop, the whole arranged and operating substantially as described.

97,260.—WILLIAM WICKERSHAM, Boston, Mass. —*Wire for Fastening Soles to Shoes, &c.*—November 23, 1869.

Claim.—As an article of manufacture, wire made round or oval in its cross-section, with a succession of indentations around it, having its prominent portions rounded, making its diameter successively larger and smaller, without angular projections, substantially in the manner and for the purpose set forth.

97,261.—Frederick Wittram, San Francisco, Cal.—*Device for Releasing Standing Rigging.*—November 23, 1869.

Claim.—The combination and arrangement of devices, as herein described, or any equivalent means, by which two or more shrouds, or other parts of standing rigging, can be simultaneously released or "let go," as specified.

97,262.—Cyrus S. Moore, Erie, Pa.—*Lubricating-Compound.*—November 23, 1869.

Claim.—1. The mode, herein described, of producing a lubricating-oil from the residuum left after refining petroleum.

2. The composition of matter, herein described, as a new article of manufacture.

97,263.—James C. Anderson, Webster, Pa.—*Sash-Balance.*—November 30, 1869.

Claim.—The combination of the conical-formed cylinder D, having within its largest end the cup G, to retain and hold the spring F, with the adjustable plate *h'*, and the shaft C, in the manner and for the purpose herein set forth.

97,264.—Lawrence Angster, Newark, N. J.—*Refrigerator for Condensing Vapors from Fermenting-Vats in Breweries.*—November 30, 1869.

Claim.—A brewers' refrigerator, provided with ice and fermentation chambers E O, condensers G K, pipes P P R, and vault S, constructed, arranged, and operating substantially as described and set forth.

97,265.—Charles W. Armstrong, Detroit, Mich., assignor to himself and Thomas H. Armstrong, same place.—*Compress.*—November 30, 1869.

Claim.—As a new article of manufacture, the compress A, divided into the chambers *b* and *c*, by means of the diaphragm B, and provided with suitable inlet and outlet openings, when constructed, arranged, and operating substantially as set forth and shown.

97,266.—Joseph Banigan, Smithfield, assignor to Woonsocket Rubber Company, Woonsocket, R. I.—*Vulcanizing-Press.*—November 30, 1869.

Claim.—1. The application of gas for heating the bed and platen of a vulcanizing-press, substantially as set forth.

2. The combination, with the bed of a vulcanizing-press, of a number of gas-jets, substantially as and for the purpose set forth.

3. The combination, with the platen of a vulcanizing-press, of a number of gas-jets, substantially as and for the purpose set forth.

97,267.—Albert R. Baxter, Peck Post-Office, Mich.—*Logging-Sled.*—November 30, 1869.

Claim.—1. In logging-sleds, the double reach F, provided with cross-bar *e*, and connecting the bolster D with the forward bend of the rear sled, when constructed, arranged, and operating as and for the purpose set forth.

2. In logging-sleds, securing the double-tree G to the sand-board E, in connection with the tongue and roll *f*, for the purposes specified.

3. The adjustable chucks H, upon the bolsters, when constructed and operating as and for the purposes described.

4. The chain *i*, link *j*, hook or pin *k*, and ring *m*, in connection with the chucks and bolsters, for the purposes set forth.

5. The construction of the runners *a*, provided with concave shoes, benches *b*, raves *c*, bolsters C D, sand-board E, reach F, roll and tongue *f*, chucks H, chains *i*, links *j*, hook or pin *k*, and ring *m*, when constructed and arranged substantially as herein set forth and described.

97,268.—William Gibson Bell, Charlestown, Mass.—*Mode of Curing Bacon, Hams, and Shoulders.*—November 30, 1869.

Claim.—As an improved article of manufacture, a ham or leg, treated by the processes of boning and curing, or boning, curing, and smoking it, substantially as hereinbefore explained.

97,269.—Harrison Berdan and John Bantly, Wayne, Mich.—*Ventilating Window-Blind.*—November 30, 1869.

Claim.—1. Providing the upper stationary section B with an interior screen, C, in the manner and for the purpose set forth.

2. In combination with the foregoing, the sliding, movable slatted blind D, arranged and operating substantially as and for the purposes specified.

97,270.—Charles Bradway, Maquoketa, Iowa.—*Fastening for Bedsteads.*—November 30, 1869.

Claim.—The construction of the metallic fastening A, with its inclined dovetail mortises between the side flanges E E, and double-tapered center aperture B, as herein described, and for the purposes set forth.

97,271.—George V. Bunker, Yankton, Dakota Territory.—*Lamp-Extinguisher.*—November 30, 1869.

Claim.—The two pieces of metal, as herein described, for the purpose of extinguishing the light of kerosene-oil lamps, or any other lamp to which it may be applied.

97,272.—Charles Canfield and Henderson Willard, Grand Rapids, Mich.—*Device for Clearing Land of Stumps.*—November 30, 1869; antedated November 18, 1869.

Claim.—The metallic cup, constructed substantially as described, and for the purpose set forth.

97,273.—John B. Catey, Williamsburgh, Ind.—*Combined Roller and Cultivator.*—November 30, 1869.

Claim.—1. In combination with the frame A, the adjustable bearing-rollers B and C, which serve to regulate the depth penetrated by the teeth, and also assist in pulverizing the soil, substantially as described.

2. In combination with the above, the draught-rods M M, link O, and standard P, substantially as described.

3. In combination with the frame A, and rollers B and C, the adjusting-blocks 1, 2, 3, and plates E, when constructed and arranged substantially in the manner and for the purpose set forth.

97,274.—Edward S. Cavnah and David Yeagley, Bourbon, Ind.—*Pump.*—November 30, 1869.

Claim.—In combination with the cylinder A, and pipe, tube, stock, or water-passage, extending upward therefrom, the openings D F in the heads of the cylinder, and the openings *g* in the plunger, when said openings are controlled by the circular valves *a d h*, operating in the manner and for the purpose described and represented.

97,275.—Lorenzo D. Cogswell, Lowell, Mass.—*Fruit-Picker.*—November 30, 1869.

Claim.—1. The movable cutters *m* and *n*, and continuous spring *w*, in combination with the receiver *a*, when operating as described and specified.

2. The arrangement and construction of the cutters *m* and *n*, continuous spring *w*, rims *b* and *c*, receiver *a*, guide *o*, and adjustable hinged joint, all when combined and operating as described and specified.

97,276.—Francis L. Daniels, Boston, Mass.—*Dust-Pan.*—November 30, 1869.

Claim.—The combination of the circular trough and the inclined curved lip, at one end thereof, with the body of the pan, substantially as and for the purposes specified.

97,277.—Major E. Davis, Rome, Ga.—*Combined Revolving Hoe and Cotton-Cultivator.*—November 30, 1869.

Claim.—The herein-described construction of the gear-wheel E F, revolving hoes G, supporting-wheels H, and shares I I', when arranged and combined with the main wheels C, frame B, and shaft D, as specified

97,278.—David L. De Golyer, Chicago, Ill.—*Wood Pavement.*—November 30, 1869.

Claim.—A pavement, composed of wooden blocks, saturated with any known material, and by any known process, for preventing rot or decay, set on end upon a proper foundation, with spaces, interstices, or cells between them, filled with self-cementing gravel, or broken stone, as above described, without the admixture of tar, or any other pitchy material, or artificial cement.

97,279.—AUGUST DIETZ, New York, N. Y., assignor to FRANK N. HOPKINS, Baltimore, Md.—*Machine for the Manufacture of Artificial Fuel, and for Compressing Conglomerate Substances into Compact Masses.*—November 30, 1869.

Claim.—1. The endless chain of bottomless molds M, jointed or connected together, and constructed and arranged so as to work over polygonal rollers R R′, with a view to thus discharge by the cogs or pistons *e e*, substantially in the manner as and for the purpose herein set forth.

2. The regulating-gate P, fitted to the hopper F, and adjusted by the screw V, or its equivalent, in combination with the agitator *a*, and the filling or charging devices *a′ a′*, all constructed and arranged substantially as set forth.

3. The presser I, constructed substantially as shown, in connection with the endless chain of molds M, constructed and arranged for joint operation, substantially as herein shown and described.

4. The endless resting or bearing band N, when used in combination with the endless chain of molds M, for the purpose specified.

5. The projections *e*, on the roller R′, when applied to an endless chain of molds M, to discharge the compressed substance therefrom, substantially as and for the purpose set forth.

6. The combination of the endless chain of molds M, presser I, and the resting or bearing band N, all arranged for joint operation, substantially as and for the purpose specified.

97,280.—EVERD C. DODGE, Edgecomb, Me.—*Boring-Machine.*—November 30, 1869; antedated November 13, 1869.

Claim.—1. The combination of the pivoted fingers D D, the bars E, having the inclines *b* and the tubes A, also provided with inclines *b*, substantially as described, for the purpose specified.

2. The adjustable tool-holding carriage I, and adjustable frame B C, in combination with the tubes A, having the pivoted fingers D and bars E, substantially as described, for the purpose specified.

3. The tool-holder H, in combination with the toothed bar K, having the wedge-shaped bridges , formed between some of its teeth, and with the sliding clutch-pinion *g*, substantially as described for the purpose specified.

97,281.—JOHN R. DREW, San Francisco, Cal.—*Pitch-Board.*—November 30, 1869.

Claim.—The above-described pitch-board, for stairs, formed of the two parts A and B, connected by slides C, when said parts are respectively provided with extension-pieces E E and F F, and the whole device is constructed and arranged to operate substantially as set forth.

97,282.—F. R. DUFOUR, Vevay, Ind.—*Hay-Elevator.*—November 30, 1869.

Claim.—The arrangement, in combination with the horse-power B C D, of the hoisting-rope *b*, hook *c*, pulleys *d e f*, and crank E, having pulleys *g* and *h*, substantially as shown and described.

97,283.—CLEAVELAND F. DUNDERDALE, New York, N. Y.—*Apparatus for Carbureting Air.*—November 30, 1869.

Claim.—1. The tube herein described and shown, attached to the lower side of chamber C, so constructed and arranged that its lower open end shall extend downward below the flame of the burner, substantially as and for the purpose specified.

2. In combination with an air-carbureter, constructed as described, the corrugated lens-chimney I, constructed and arranged substantially as described.

97,284.—CLEAVELAND F. DUNDERDALE, New York, N. Y.—*Apparatus for Producing Illuminating-Gas.*—November 30, 1869.

Claim.—1. The combination of a blowing-wheel, wet gas-meter, or a similar device for forcing air and carbureting it at the same time, with a reservoir attached to supply a given quantity automatically of hydrocarbon-liquid, as herein described and shown.

2. The combination of reservoir C, valves E, floats H, mixer L, valve M, compartment F, holes G, sifter I, strata of hydrocarbon-liquid floating on surface of water, with each other, and with a wet gas-meter or air-blowing wheel of similar device, substantially as herein shown and described, and for the purposes set forth.

97,285.—H. F. EBERTS and JOHN FANNING, Detroit, Mich.; said EBERTS assigns his right to said FANNING.—*Gas-Machine for Carbureting Air.*—November 30, 1869.

Claim.—1. The combination of the carbureting-chamber A, provided with the shelves C and with the opening *a*, the blower D, the spur-wheel E, the blast-pipe *d*, the eduction-pipe B, provided with an air-cock, the gasometer F, provided with the main *f*, the standard *j*, the pulleys *i*, the cord *h*, and the weight *g*, when constructed, arranged, and operating as and for the purposes above set forth.

2. In carbureting-chambers, providing the eduction-pipe with an air-cock, through which atmospheric air may be drawn by raising the gasometer, for the purpose of increasing the illuminating power of the gas.

97,286.—JACOB EDSON, Boston, Mass.—*Boot-Crimper Screw.*—November 30, 1869.

Claim.—The combination of the screw *a*, nut *b*, crimpers *c*, having a number of square cavities on their outside, with the points *k k*, inside the India-rubber springs *e e*, all combined and acting together with the house *d*, as fully set forth and described.

97,287.—JOSEPH ENTHOFFER, Washington, D. C.—*Plate-Printing for Colors.*—November 30, 1869.

Claim.—1. The mode of printing chromos from engraved plates, by the use of gauges on the register A, substantially as set forth.

2. In combination with the above, the mode of holding the margin of the paper during the process of changing the plates.

97,288.—SAMUEL FREET, Upper Strasburgh, Pa.—*Gate.*—November 30, 1869.

Claim.—The movable brace A, mortised rail C, and latch-rails E E, constructed, arranged, and combined as shown and described.

97,289.—PETER GANTZ, Albany, N. Y., assignor to himself and MARTIN FRYER, same place.—*Bracket for Conductors.*—November 30, 1869.

Claim.—1. In a bracket for conductor-pipes, the clasping-arms *a a*, pivoted to the spike A, substantially as and for the purpose set forth.

2. The binding-piece *g*, provided with the hole *c′*, and secured in the manner substantially as and for the purpose set forth.

3. In combination with the heels of the clasping-arms *a a*, the wedging-key *f*, holes *c* and *c′*, substantially as and for the purpose set forth.

97,290.—JOHN H. GARRIGAN, Sacramento, Cal., and FRANCIS L. HALL, Reno, Nevada.—*Faucet-Attachment to Cans.*—November 30, 1869.

Claim.—In combination with a faucet-pipe or other tube, the combination of the hollow screw B, the oval head C having an oval projection, D, and the oval, hollowed-out, or concave flange or cap G, substantially as and for the purpose set forth.

97,291.—R. D. GRANGER, Providence, R. I.—*Cooking-Range.*—November 30, 1869.

Claim.—1. The magazine, in combination with elevated ovens, substantially as set forth.

2. The location of the magazine between the flues to the elevated ovens.

3. The construction of the front fire-box with the grate *a*, for removing the cinders, ashes, &c., in combination with a magazine, as herein recited.

4. In a range of the general construction herein shown, the arrangement herein set forth of the horizontal-sliding plate or grate, between the fuel, below

the bottom of the magazine or fuel-reservoir, and the fuel in the dumping-grate, as and for the purposes recited.

5. The air-pipes *n*, and their location and application, substantially as described.

6. The arrangement of the magazine in relation to the ovens herein described, by which the top of the magazine projects beyond the oven-front or line of the ovens, for the purposes herein set forth.

97,292.—William Hall and Emanuel J. Bennett, Boston, Mass.—*Machine for Forming Cigars and Plug-Tobacco.*—November 30, 1869.

Claim.—1. Combining, with the plunger D^6, the hinge-piece *d*, and the flexible apron *d'*, working substantially as described, and for the purpose set orth.

2. The combination of the plungers C^1 C^2, the valve C^3, and bent arm C^4, operating substantially as described, and for the purpose set forth.

3. The valve Q, operating substantially as described, and for the purpose set forth.

4. The combination of the automatic mold O O^1 O^2, &c., with the endless chain or belt N^5, working substantially as described, and for the purpose set forth.

97,293.—L. B. Harberger, Philadelphia, Pa.—*Fruit-Jar.*—November 30, 1869.

Claim.—The locking-piece, constructed with ears *g g*, and the central bearing-projection *h*, in connection with the cover B and the inclined grooves *a*, in the inner face of the mouth or neck of a jar, substantially as and for the purpose described.

97,294.—E. K. Haynes, Boston, Mass.—*Lamp-Shade.*—November 30, 1869.

Claim.—A lamp-shade and reflector, made in the form and manner described, for the purpose specified.

97,295.—Charles Birmingham Hogg, Boston, Mass.—*Pad or Housing for Harness-Saddles.*—November 30, 1869.

Claim.—The arrangement and combination of the spring *c* with the pad A and its loops B, the whole being substantially as described.

97,296.—Marcus L. Horton, Windsor, Vt.—*Boiler or other Furnace.*—November 30, 1869.

Claim.—1. The combination and arrangement of the channeled partition B, the chamber C, the receiving-conduit or space F, the two hollow grates D D, and the chamber or space G surrounding them, and opening into the central chamber C, as set forth, the whole being constructed substantially as explained.

2. The tubular grate-bars, with the male and female branches extending from them, constructed and arranged as specified.

97,297.—Stephen Inman, Rockford, Ill.—*Brick-Mold.*—November 30, 1869.

Claim.—1. The combination of the longitudinal turning-rods B with the transverse rods *b b*, when operated as described, for the purpose set forth.

2. The combination of the mold A, followers *a a a*, rods *b b* B B, and handles b^2, in the manner described, for the purpose set forth.

3. The follower described, consisting of the face D, with vibrating pins *d'*, in combination with the slotted backing E, as described, for the purpose set forth.

97,298.—Melvin Jincks, Wallace, N. Y.—*Lamp-Burner.*—November 30, 1869.

Claim.—1. A lamp-burner, having an additional tube alongside of the wick-tube, when said additional tube is provided with an automatic cleaner, substantially for the purposes herein set forth.

2. The forked lever *f*, pivoted within the tube *b*, and operated by means of the worm *i*, substantially as and for the purposes herein set forth.

3. The combination of the wick-tube *a*, additional tube *b*, shaft *e*, pinions *d d*, worm *i*, and forked lever *f*, all substantially as and for the purposes herein set forth.

4. So constructing and arranging the wick-raiser, consisting of twisted wheel or worm *i*, shaft *e*, and pinions *d d*, that the wick will move from side to side, as it is turned up or down, substantially as described.

5. The combination of the perforated base A with wick-tube *a*, additional tube *b*, and the wick-raising and cleaning mechanism, as herein described, tube *g*, and cone B, all constructed and operating substantially in the manner and for the purposes herein set forth.

6. The combination of the perforated base A with wick-tube *a*, additional tube *b*, and the wick-raising and cleaning mechanism, as herein described, tube *g*, cone B, and a suitable number of spring-catches C C, all constructed and operating substantially in the manner and for the purposes herein set forth.

97,299.—Joseph G. Knapp, Madison, Wis.—*Steam-Plow.*—November 30, 1869.

Claim.—1. A machine for plowing or cultivating the soil, having its mechanism so arranged as to propel the machine, and operate the plows alternately, at intervals, substantially as described.

2. The combination of the toggle-joint R R' with the sliding gate E and crank *r*, when said parts are arranged to operate in connection with the frame A of a machine mounted on wheels, substantially as set forth.

3. Arranging a plow, N, in connection with an intermittently forward-moving machine, in such a manner that said plow shall move to and fro in the arc of a circle, horizontally, substantially as described.

4. The combination of the mechanism, consisting of the shaft *a*, wheel F, shaft *n*, mounted in the sleeve *t*, and carrying the wheels G and H, and the wheel J, with its partial row of teeth and the guards *b*, all arranged as set forth, for operating the plows.

97,300.—Leander W. Langdon, Northampton, Mass.—*Applying Steam-Power to Street-Railway Cars.*—November 30, 1869.

Claim.—1. A street-railway steam passenger-car, having a boiler at each end, arranged to balance the car, and operating in connection or independently, as set forth.

2. In a street-railway steam passenger-car, having the described arrangement of boilers, the arrangement of the propelling-engine beneath the car and between the pairs of wheels, as and for the purpose set forth.

3. A street-railway steam passenger-car, provided with condensers F F, one or both, arranged upon or within the roof, and in combination with water-tanks E, arranged beneath the seats, and with proper pipe-connections between them, as and for the purposes set forth.

4. In a street-railway steam passenger-car, having the described arrangement of boilers and engines, the double reversing-apparatus, with the reverse-lever, or equivalent device, arranged at each end of the car, as set forth.

5. In like combination, the throttle-valves, and their operating-connections arranged at each end of the car, as set forth.

6. In the described steam street-car, the independent pump, arranged to operate as set forth.

7. The pipe *f'*, connecting the condenser F with the smoke-stack, as set forth.

97,301.—Cook C. Lawrence and James Lewis, Marengo, Mich.—*Rest for Carriage-Tops.*—November 30, 1869.

Claim.—The arm-rests D, furnished with concave seats *d*, and flaring side *l*, when constructed and arranged substantially as shown and described, and adjustably fitted on the prop-irons B of a shifting or stationary carriage-seat rail, substantially as and for the purpose set forth.

97,302.—C. Leffingwell, Zanesville, Ohio, assignor to himself, H. Blandy, and F. Blandy, same place.—*Head-Block for Saw-Mills.*—November 30, 1869.

Claim.—The arrangement of the levers I I K, double-faced ratchet-wheels H, and pawls J, in the manner shown and described, and for the purpose specified.

97,303.—HIRAM L. LOCKWOOD, Denmark, Iowa.—*Railway-Car Coupling.*—November 30, 1869.

Claim.—The coupling-pin B, notched as shown at B′, in combination with the slide A, constructed as described, for the purposes set forth.

97,304.—MOSES LOEB, Chicago, Ill.—*Curtain-Fixture.*—November 30, 1869.

Claim.—1. The plate E, arranged on the outer end of the bracket E′, so as to project at right angles on either side, as herein described, and for the purpose set forth.

2. The curtain-fixture, provided with bracket E and its plate L, cord F, adjustable bar H, with its roller I and socket M, in combination with grooved pulley G, roller D, constructed and arranged as shown and described.

97,305.—WILLIAM B. MACK, Detroit, Mich.—*Steam-Generator.*—November 30, 1869; antedated November 11, 1869.

Claim.—The circulator-attachment above described, the inner space of which is divided into communicating compartments by the divisional bars or stays, for the purpose of causing the water to circulate backward and forward, in its passage from the inlet-pipe or pipes to the delivery-pipe, substantially as shown.

97,306.—DAVID MANUEL, Dedham, Mass.—*Foundation for Spring-Bed Bottoms.*—November 30, 1869.

Claim.—The combination of rails B B B with the springs D D D′ D′, braces E E E E, and the spiral springs and bed-frame A A, in the manner and for the purpose as described.

97,307.—STEPHEN MARTIN, Detroit, Mich.—*Fire-Place.*—November 30, 1869.

Claim.—The chambers B, lined with tin, provided with cold-air pipe D and hot-air conductors E, in combination with grate-recess C, provided with corrugated cast-metal back H and sides F, provided with ears G, when constructed and arranged to operate as and for the purpose set forth.

97,308.—BERNARD MCENALLY and EDWARD FARRELL, Detroit, Mich.—*Tool for Molding Dovetails.*—November 30, 1869; antedated November 13, 1869.

Claim.—The arrangement of the lugs B, the arms C and D, the cross-bars E, the cross-heads F, the thumb-levers G, the bifurcated arm H, the set-screws I, and the springs J, in connection with the frame A, when constructed and operating as and for the purpose above described.

97,309.—T. M. MITCHELL, Philadelphia, Pa.—*Press for Compacting the Waste Particles of Coal into Blocks for Fuel.*—November 30, 1869.

Claim.—The combination of the overhead lever N, the yoked arm L, the eccentric *e′*, and the main shaft E, the said parts being constructed and arranged to operate together, substantially as set forth and described, for the purpose of raising and lowering the gates M M, in the manner described.

97,310.—SAMUEL NEWMAN, Cleveland, Ohio, assignor to himself and JOHN NEWMAN.—*Stave-Machine.*—November 30, 1869.

Claim.—A stave-sawing machine, having alternating segmental saws C C′, frame H, dogs J, sliding tables I I′, and frame A, all the parts being constructed and arranged in the manner substantially as described, and for the purpose set forth.

97,311.—J. H. PATTEE, Monmouth, Ill.—*Vapor-Burner.*—November 30, 1869; antedated November 20, 1869.

Claim.—1. The combination of the vaporizing-chamber A with the pipe C, when the chamber A surrounds the pipe C, in a manner to bring the oil from the reservoir in direct contact with the pipe C, as and for the purpose set forth.

2. The hollow pipe H, combined with and operating between the pipes C and Y, for the purpose of regulating the admission of the air into the pipe C, as and for the purpose set forth.

3. The globe J, with flange L and jets S S S, combined with the pipe C, substantially as described and for the purpose set forth.

97,312.—W. P. POWERS, North La Crosse, Wis.—*Metal Belting.*—November 30, 1869; antedated November 24, 1869.

Claim.—1. Constructing a metal belt by twisting the ends of each link around the base of each succeeding link, substantially as described.

2. The Z-shaped wires *a*, twisted around the centers of each base of the links, substantially in the manner and for the purpose described.

3. The wires *c c*, twisted as described, in combination with Z-shaped wires *a*, substantially in the manner and for the purpose described.

97,313.—TURNER C. PURINGTON, Lincoln, Cal.—*Grape-Crusher and Stem-Separator.*—November 30, 1869.

Claim.—The beater T, lever D, pivoted toothed segments A, and B B B, when constructed, arranged, and operating together as and for the purpose herein set forth.

97,314.—TURNER C. PURINGTON, Lincoln, assignor to himself and ANTOINE MAYOUX, Marysville, Cal.—*Chair-Spring.*—November 30, 1869.

Claim.—In combination with the spiral spring, the nut A, provided with an inner screw-thread B, outer incline-groove D, and shoulder C, substantially as and for the purpose set forth.

97,315.—P. H. RANDOLPH, Leavenworth City, Kansas.—*Baby-Walker.*—November 30, 1869; antedated November 13, 1869.

Claim.—The padded seat E, in combination with the adjustable straps F and annular rod B, arranged and hung as described, for the purpose specified.

97,316.—ANDREW ROGERS, Worcester, Mass.—*Snow-Guard for Roofs.*—November 30, 1869.

Claim.—The standard A, formed, as described, of twisted bar, adapted to the slating and boards of the roof, and fitted with bars B B B, all as described.

97,317.—J. S. ROWELL, Beaver Dam, Wis.—*Seeder.*—November 30, 1869.

Claim.—The sliding shell-cylinder C, constructed with radial slots, and arranged upon the feed-cylinder F and shaft B, so that the adjustment is effected by the horizontal movement of the shell C, while the feed-wheel F remains stationary as regards the case H. M.

97,318.—ALFRED G. SAFFORD, Saint Albans, Vt.—*Telegraph-Insulator.*—November 30, 1869; antedated November 17, 1869.

Claim.—1. Extended covering-caps B, in combination with the insulators of air-line telegraphs, when said caps are so formed and secured as to cover and fully inclose the insulators independently thereof, substantially as and for the purpose herein set forth.

2. A line-supporting hook, A, combined with and dependent from a barrel-insulator, substantially as and for the purpose herein set forth.

97,319.—ALEXANDER SHAW, Monmouth, Ill.—*Cultivator.*—November 30, 1869; antedated November 22, 1869.

Claim.—The cutter C, with series of holes *c c c*, for regulating the depth, when combined with the mold-boards A, point B, handles L, bow J, and the plate D, substantially as described, and for the purpose set forth.

97,320.—FRANKLIN SIMMONS, New Orleans, La., assignor to H. DUDLEY COLEMAN, same place.—*Machine for Dressing Millstones.*—November 30, 1869.

Claim.—1. The shaft B, when provided with the hollow arm L, the bar M, the brackets or clamps N N′, and the other necessary appliances connected with it, as herein described, in combination with the shafts K and V, when the latter are provided with gears J X Y W, the platform O, block P, axles *e e′ e″ e‴*, and wheels *d*, when all the parts are constructed, arranged, and operate substantially as herein specified, for the purpose set forth.

2. The above combination, in combination with the frame R, the wheels S, and the curved rails T T′, substantially as herein described, for the purpose set forth.

3. The last above-mentioned combination, in combination with a frame, A, and any suitable motor for operating the machine, as herein described.

97,321.—D. N. Smith, Boston, Mass.—*Stove Stand.*—November 30, 1869; antedated November 27, 1869.

Claim.—The griddle E, with rod B, and platform C D, and foot A, for the purpose as specified.

97,322.—Stephen J. Smith, Farmington, N. Y.—*Hay-Rack for Wagons.*—November 30, 1869.

Claim.—The within-described hay-rack, consisting of the parts a a^1 a^2, bars b b b, and side-boards B B, in combination with the body A, when said body and rack are secured together by means of loops c c and staples i i, all arranged as and for the purpose set forth.

97,323.—W. Smith, San Francisco, Cal.—*Water-Closet Pan.*—November 30, 1869.

Claim.—1. A water-closet receiver, having the inward and outward projecting flange A, in combination with the pan C, in the manner described.

2. The lapped joint F F, constructed so that the pan can be taken out and replaced through the opening in said joint, substantially as described.

3. The pan C, secured to the shaft D, with the screws i i, socket e, and arm g, as and for the purpose set forth.

97,324.—Robert Spear, New Haven, Conn.—*Governor.*—November 30, 1869.

Claim.—1. The case A, constructed as described, so as to form the chamber B, having inlet C and outlet D, the cylinder E, and chamber G, substantially as and for the purposes herein set forth.

2. In combination with the case A, constructed as described, the cover H and cap I, forming the chamber W, substantially as and for the purposes herein set forth.

3. In combination with the case A, cover H, and cap I, the piston-rod J, piston K, and valve L, all constructed as described, and arranged to operate substantially in the manner and for the purposes herein set forth.

4. The arrangement of the semicircular guide-bars P P, piston-rod J, beam M, connecting-bars N N, levers O O, and weights R R, all substantially as and for the purposes herein set forth.

5. The elastic cover a, secured to the piston-rod J by the thumb-screw b, or other suitable means, and operating substantially as and for the purposes herein set forth.

6. The arrangement of the pipes S and T, whereby the steam or fluid is conducted from the boiler or power-source to the chambers G and W, substantially as and for the purposes herein set forth.

7. The entrance to the chamber B, formed in the shape of an inverted cone, in combination with the valve L, operating substantially as and for the purpose described.

97,325.—Alfred Stevens, Georgetown, assignor to Josiah Starling, Manheigan, Me.—*Machine for Puttying Seams of Vessels.*—November 30, 1869.

Claim.—1. The part G, which carries the scraper, finishing-smoother, and refuse-box, when connected to the main part A by means of pivoted links, substantially as herein described and shown, for the purpose specified.

2. In a seam-puttying machine, the spring attached to the lever F, and pressing on the block G, substantially as described, for the purpose set forth.

3. The seam-puttying machine herein described, composed of the part A, with rounded ends, and a receiving-cavity of the form described, the gauge, adjustable tires, followers E E, with levers F, and springs, the presser D, part G, with refuse-box, scraper, and finishing-smoother, and the pivoted links i, and spring k, all combined and arranged to operate substantially as herein shown and described.

97,326.—L. A. Sunderland, Madison, Ohio.—*Can-Handle.*—November 30, 1869.

Claim.—The round shank B, having the lugs c d, plate A, the handle C, constructed and arranged as described, and for the purpose set forth.

97,327.—Enoch B. Turner, Providence, R. I.—*Horseshoe-Blank.*—November 30, 1869; antedated November 13, 1869.

Claim.—A projecting rib or notch, placed on the inner edge of the creased surface of the blank, to mark its middle, and to indicate the point at which it is to be bent, substantially as described.

97,328.—Harmon Vanbuskirk, Vienna, Mich.—*Carpenters' Plow.*—November 30, 1869; antedated November 24, 1869.

Claim.—The right and left-hand screw D, when used in the construction of carpenters' plow-planes, as herein described, in combination with stock A and guide B, all operating substantially as herein set forth.

97,329.—Zadock Washburn, Hopedale, assignor to Hopedale Furnace Company, Milford, Mass.—*Railway-Car Wheel.*—November 30, 1869.

Claim.—The improved manufacture, as described, consisting of a cast-iron wheel or body thereof, and a rolled or hammered cast-steel tire or re-enforce combined or welded together by the process of heating the re-enforce, and applying to it a welding-composition, and subsequently raising it to a welding-temperature, and finally casting against its inner surface the cast-iron body, as specified.

97,330.—Orin Weeman, Lynn, Mass.—*Channel-Opener for Boot and Shoe Sewing-Machines.*—November 30, 1869.

Claim.—1. The spring-arm B, attached to the presser-foot of a sewing-machine, as shown, and having shoulder or point c, and share or mold-piece d H, substantially as herein set forth.

2. A channel-opener, formed by the combination of spring-arm B, shoulder or point c, share or mold-piece d H, substantially as set forth.

3. The combination of the above-described channel-opener and the presser-foot A, substantially as set forth.

97,331.—Philo S. White, Providence, R. I.—*Fastening for Neck-Ties.*—November 30, 1869; antedated November 24, 1869.

Claim.—The improved neck-tie fastening herein described, consisting of the wire yoke C, in combination with the perforated plates A and B, all constructed and arranged substantially as shown, for he purpose specified.

97,332.—Mahlon J. Woodruff, New Britain, Conn., assignor to Russell and Erwin Manufacturing Company, same place.—*Latch.*—November 30, 1869.

Claim.—The combination of a swivel-jointed spindle, whose two portions, A and B, are of unequal size, with a divided hub, C D, cast separately from the spindle, when such spindle and hub are arranged in the lock, so that the former cannot be pushed through the latter from the outside of the door to which such lock is applied, substantially as herein described.

97,333.—E. H. Woodward, New York, N. Y.—*Tile or Slab for Flooring and Wainscoting, and for the Manufacture of Furniture.*—November 30, 1869.

Claim.—A slab or tile, formed of sheets of material, laid together as specified, and cut off so as to present the ends of the layers at the surface of such tile or slab, as specified.

97,334.—William L. Yantis, Brownsville, Mo.—*Railway-Switch.*—November 30, 1869.

Claim.—The block C C′, constructed substantially as described, in combination with the rod D and the rails of the main and switch track, all arranged and operating substantially as and for the purpose specified.

97,335. — W. N. ABBOTT, Boston, Mass., assignor to himself, G. W. BOYLE, and F. N. TERRENT, Baltimore, Md. — *Lubricating Compound.*— November 30, 1869.

Claim.—A lubricant for machinery, composed of the ingredients, in the proportions and manner substantially as herein described.

97,336. — JOSEPH ALBERT, Munich, Bavaria.— *Printing Photographs.*—November 30, 1869.

Claim.—1. The process of preparing photographic plates, for printing with fatty inks, by subjecting a film of chrome-gelatine, or other suitable material, spread upon glass, or other transparent substance, to the action of the light upon the surface in contact therewith, while protecting the outer surface from such action, and subsequently applying thereto a second or sensitive film, to receive the photographing image, substantially as herein set forth.

2. The employment of glass plates, for the printing of photographic pictures in fatty inks, when prepared by the process herein described.

97,337. — C. C. ANSLEY, Americus, Ga.—*Plow.* —November 30, 1869.

Claim. — 1. The hinge E F, constructed as described, in combination with the standard C and beam A, substantially as herein shown and described, and for the purpose set forth.

2. The brace-rod G, having a screw-thread cut upon each end, and adjustably secured to the beam A and standard C, by the nuts g^1 g^2 g^3 g^4, substantially as herein shown and described, and for the purpose set forth.

3. An improved plow, formed by the combination of the beam A, standard C, hinge E F, brace-rod and nuts G g^1 g^2 g^3 g^4, and handles H I J, with each other, substantially as herein shown and described, and for the purpose set forth.

97,338. — B. W. ARNOLD, Des Moines, Iowa.— *School-Desk and Seat.*—November 30, 1869.

Claim. — 1. A hinged seat, B, having recess H therein, in combination with a bracket, having pivot-pin E, forming a part thereof, both being constructed and operating together as described.

2. The part D of the desk, jointed to the end-frames, so as to slide in the direction of the axis of the joints, arranged to clutch with the end-frames, and provided with the spring M, and either with the lever N, or not, substantially as specified.

97,339. — L. AUGUSTUS ASPINWALL, Albany, N. Y. — *Machine for Planting Potatoes.* — November 30, 1869.

Claim. — 1. A spear or spears, provided with trips.

2. Operating the trips, substantially as described.

3. The V-shaped concave C, constructed and used in the manner described.

4. Swinging the plow and coverers from the main frame, substantially as described and for the purpose set forth.

97,340.—SYLVESTER M. BAILEY, Cottage Grove, Minn.— *Velocipede.*—November 30, 1869.

Claim.—1. The pivoted sail and sun-protector G, arranged on a velocipede, substantially as and for the purpose herein shown and described.

2. The arrangement of the crank-axle J, and steering-post, in the manner described, to admit of their use for steering or propelling purposes.

97,341. — JOSEPH BARKER, Chicago, Ill., assignor to himself, A. L. BROWN, and T. H. BROWN, same place.—*Middlings Separator.* — November 30, 1869; antedated November 17, 1869.

Claim.—1. The combination of the case K, provided with a partition, L, and fan M N, with the partition *d*, pipes E G E′ F F′, and case B, provided with sieves 1, 2, 3, 4, 5, &c., as set forth.

2. The discharge-pipe T U V, provided with a perforated covering *b*, back-board X, and sieve W, in combination with the case K and fan M N, as described.

97,342. — ELISHA TRASK BARLOW, San Francisco, Cal.—*Anchor.*—November 30, 1869.

Claim.—1. The shanks C C, secured together at one end by the crown-pieces B, and at the opposite end by the metal plates D, substantially as and for the purpose herein described.

2. In combination with the flukes A of an anchor, the crown-pieces B, attached to the oppositely-moving shanks C, substantially as and for the purpose herein described.

3. Constructing an anchor with the two shanks C C, which, by their opposite longitudinal movement, shall move the flukes to the proper position for taking hold of the ground, substantially as herein set forth.

97,343.—G. T. BEAUREGARD, New Orleans, La. —*Machinery for Propelling Cars.*—November 30, 1869.

Claim.—1. The combination, with a car or other vehicle, or a boat or other vessel, and a constantly moving cord A, suspended above or at the side of the car or vessel to be propelled, of the reciprocating block E′, clamping-jaws E, right and left-threaded screw-piston H, and spring K, substantially as specified.

2. The combination of the cord A and clamping-jaws of the elevating-roller, cranked shaft P, and operating-cord R, substantially as specified.

3. The combination, with the clamping-jaws E and operating-screw L, of the pulleys M and operating-cord, arranged substantially as specified.

4. The arrangements of the suspending-brackets C and the brackets G, for carrying the clutch above the cord, substantially as specified.

97,344. — MAX E. BEROLZHEIMER, New York, N. Y.—*Canceling-Punch.*—November 30, 1869.

Claim. — A series of adjustable punches, constructed and operating together, as and for the purpose described.

97,345. — BENJAMIN BISSELL, New London, N. Y.—*Liniment for the Treatment of Neuralgia, Rheumatism, &c.*—November 30, 1869.

Claim.—The manufacture of a compound, which I denominate "Magnetic Balm," of the ingredients, in the proportions and for the purposes set forth as above.

97,346. — EDOUARD BOURQUIN, New York, N. Y.—*Stem-Winding Watch.*—November 30, 1869.

Claim.—1. The disk *m* on the arbor G, and the pin *n*, on said disk, in combination with the notched curved plate *o′*, which carries the thicker portion *o*, and moves eccentric to the arbor, substantially as herein shown and described, so that the winding-action will be arrested by the edge of the disk *m*, substantially as herein shown and described.

2. The V-shaped spring I, arranged to lock the escapement-regulator, and also the hair spring stud *p*, substantially as herein shown and described.

97,347. — ROBERT BOYD and JAMES C. HART, Rochester, N. Y.—*Hot-Air Furnace.*—November 30, 1869.

Claim.—1. A draught-opening and flue N, arranged over the entrance-way to the ash-pit of the furnace, and communicating with flues G′ G′ formed on either side of said entrance-way, in combination with an air-space, H, extending under the bottom of the ash-pit, and a flue-chamber, G, completely surrounding the same, and from whence the heated draught is discharged under the grate-bars of the furnace, all substantially in the manner herein set forth.

2. The side draught-openings M M, communicating directly with said side-flues, G′, and combined with the said lower air-space H, and encircling chamber G, substantially as herein described.

3. The chamber G, completely inclosing the sides of the ash-pit A, when combined with the air-space H below, and provided with a series of suitable inlet-apertures, W W, below, and discharge-vents above, substantially as herein described.

4. The graduated damper having the edges of one or more of the plates, (either stationary or movable,) controlling the admission of air, serrated, substantially as herein described.

97,348.—E. K. Breckinridge, West Meriden Conn.—*Window-Button.*—November 30, 1869.

Claim.—The projection *a* on the keeper-plate C, combined with the corresponding recess *d* in the lever-plate, constructed and arranged so as to operate substantially as described.

97,349.—Catherine Bruner, Marshall. Mo.—*Preserving Eggs and other Articles.*—November 30, 1869.

Claim.—For preserving eggs, when prepared as above described, and preserving other articles from frost in freezing weather, the use of flax-seed, substantially as described.

97,350.—John C. Bryant and Andrew W. Turner, Gardner, Mass.—*Machine for Turning Wooden Ware.*—November 30, 1869.

Claim.—In combination with the foundation A, the slides C C′, bearing the cutters B, the guide *m*, and the levers E and I, arranged and operating substantially as described, for the purposes set forth.

97,351.—O. C. Burdict, Providence, R. I.—*Bolt-Heading Machine.*—November 30, 1869.

Claim.—The combination of the upsetting-die M, with the swaging-dies *f f* and *f′ f′*, when the said die M is arranged so as to pass between the swaging-dies, so as to upset the head, in the manner substantially as set forth.

97,352.—P. Burns, Indiana, Pa.—*Plow.*—November 30, 1869.

Claim.—The construction of the mold-boards, land-sides, and points or shoulders of cast-metal plows in three separate sections, as herein described, for connecting together, by bolts and nuts, when the mold-board is provided with the notch H and V-groove L, and the point or spreader, with the projections fitting therein, all substantially as specified.

97,353.—A. S. Cameron, New York, N. Y.—*Sectional Steam-Generator.*—November 30, 1869.

Claim.—1. The arrangement of flat surfaces on the heads A, bearing against soft-metal rings placed into grooves in the adjoining surfaces, so as to allow said heads to accommodate themselves to the expansion and contraction of the tubes, without rendering the joints leaky, substantially as described.

2. The rims *c*, on the heads A′, in combination with the soft-metal rings interposed between two adjoining-heads, substantially as set forth.

97,354.—A. S. Cameron, New York, N. Y.—*Lubricator.*—November 30, 1869.

Claim.—1. The reservoir B, cast solid with the valve-chest A, or with a part thereof, and provided with a closely-fitting cover or plug, *b*, and with an aperture, *d*, leading into the valve-chest, substantially as described.

2. The mud-box *c*, forming a part of the reservoir B, cast solid with the valve-chest A, or a portion thereof, substantially as set forth.

3. The stop-valve *e*, in combination with the reservoir B, cast solid with the steam-chest A, or a part thereof, substantially as described.

97,355.—Joel T. Case, Barkhamstead, Conn.—*Water-Wheel.*—November 30, 1869.

Claim.—1. The bonnet gate-ring *c*, constructed as described, arranged over corresponding openings a^1, upon a cone-shaped cover *a′*, for admitting, cutting off, or regulating the flow of water, substantially as set forth.

2. The combination of the screw *m*, angle-lever *h*, connection *j*, with the ring *c*, substantially as and for the purpose set forth.

3. The combination of the wheel B with the case *a a′* and ring *c*, substantially as set forth.

4. The slitted step D, in combination with key L and bridge H, substantially as and for the purpose set forth.

97,356.—Cyrus Chambers, Jr., Philadelphia, Pa.—*Cut-Off for Brick-Machines.*—November 30, 1869; antedated November 20, 1869.

Claim.—1. The box for catching the particles of dirt from the severing-knife, when used in combination with the cut-off, constructed as described.

2. The open corner B, in combination with the opening O, constructed as and for the purpose set forth.

3. The combination of the knife-edge of the bottom plate with the straight knife *s* upon the lower part of the curved side-guide N, when constructed as and for the purpose set forth.

97,357.—Thomas E. Chandler, Indianapolis, Ind.—*Saw-Mill.*—November 30, 1869.

Claim.—The arrangement, herein described, of levers P S, shaft I, and hollow shaft I′, in connection with levers O, pawls H H′, ratchet G, and pinion D, for actuating the knees B, as set forth.

97,358.—Eben Simpson Chase, Eau Claire, Wis.—*Lamp-Chimney.*—November 30, 1869.

Claim.—The herein-described sectional chimney, composed of two or more sections A A, formed with circumferential shoulders at the top and bottom, and with projections and recesses, and held together by the flexible bands B B, substantially as specified.

97,359.—George P. Cole, Hudson, Mich.—*Neck-Yoke.*—November 30, 1869.

Claim.—1. Securing the eye-bolt of a neck-yoke to the yoke itself, by means of the ferrules and the nuts embedded in the yoke, substantially as herein set forth.

2. The combination of the yoke A, metal bands *a a*, eye-bolts *b b*, and nuts *e e*, all constructed substantially as and for the purposes herein set forth.

3. The combination of the yoke A, eye-bolts *b b*, nuts *e e*, staples *c*, rings B B, rollers *d d*, and pole-ring D, all constructed and connected substantially as described, and for the purposes set forth.

97,360.—Edward Conley, Cincinnati, Ohio.—*Music-Stand.*—November 30, 1869.

Claim.—The music and book stand, consisting of the tubular support A, stem B, arc *e*, pivoted plate C, candle-support E, and leaf D, swiveled thereto by pin *g*, all arranged and combined as herein shown and described.

97,361.—Silas Cook, Magnolia, assignor to himself and Henry Ford, Sioux City, Iowa.—*Automatic Boiler-Feeder.*—November 30, 1869.

Claim.—1. The combination of the exhaust-port of an engine with the pipes P N, heating-chamber B, and water-chamber D, to heat the water, preparatory to conveying it into the boiler, as set forth.

2. The combination of water-chamber D, chamber *z*, having aperture *a*, and chamber Y, to raise the valve-float B′ at the time specified, and for the purpose set forth.

3. The combination of a boiler, and eduction-pipe *m*, attached thereto, near the desired water-line, with a chest U, valve V, port *f*, and chamber Y, to depress the valve-float and let in a supply of water to the boiler at the time needed, and in the manner set forth.

4. The float B′, operated in the manner described, in combination with the shaft C′, arm J′, and weighted wheel K′, having pins *r r′ s s′* thereon, to operate the valve-gear, in the manner specified.

97,362.—George W. Cretors and Enos Hoover, Clinton County, Ind.—*Weather-Strip.*—November 30, 1869.

Claim.—The weather-strip A, in combination with the spring *m*, bar *a a*, bent levers *b b*, and covering D, all constructed and arranged substantially as described.

97,363.—A. P. Critchlow, Northampton, Mass.—*Button.*—November 30, 1869.

Claim.—A button, having a diametrical groove in its back, and a pin, *b*, arranged transversely thereto, to form a thread-holding eye, as described and shown.

97,364.—W. A. Crocker, Norfolk, Va.—*Peanut-Picker.*—November 30, 1869.

Claim.—1. The combination, with the chain-carrier, constructed as described, of the permanent screens E and H, substantially as specified.

2. The combination, with the carrier and screen

H and E, arranged as described, of the discharge-wheel A, substantially as specified.

3. The combination of the chain-carrier, screens E and H, and the scouring-reel Q, and permanent wire-screen shell P thereof, substantially as specified.

4. The combination, with the carrier, screens E H, scouring-reel Q, and permanent screen P, of the fan-blower G, substantially as specified.

97,365.—JOHN GALLEMORE DALE and EDWARD MILNER, Warrington, England.—*Mode of Producing White-Lead.*—November 30, 1869.

Claim.—The manufacture of carbonate of lead, by the action of acid carbonates of the alkalies on litharge, hydrated oxides of lead, and insoluble basic salts of lead, either by direct addition, as described in our first part, or indirectly by the mixture of the lead oxides, &c., with the caustic alkalies or their monocarbonate or acid salts, and their conversion into bicarbonates during the time they are in contact with the litharge, hydrated oxides, or insoluble basic salts of lead.

97,366.—D. F. DODGE, Lowville, N. Y.—*Two-way Cocks.*—November 30, 1869.

Claim.—The plug F, having two apertures, *a b*, and arranged in a case, A, to connect either one of two supply pipes with the suction-pipe of a pump, substantially as herein shown and described, and for the purpose specified.

97,367.—J. P. DORMAN, Galesburgh, Ill.—*Arbor or Fence-Post.*—November 30, 1869; antedated November 25, 1869.

Claim.—1. The base or point A, with arms B B′, to which the post E is secured by bolts C C and band D, substantially as described, and for the purpose set forth.

2. The plate J, rings F, with arms H and ring Z, combined and operating with the point A, with its arms B B′, bolts C C, and band D, for the purpose of securing the post E against withdrawal or oscillation, substantially as described, and for the purpose set forth.

97,368.—A. F. DUCKWITZ, New York, N. Y.—*Combined Rake, Weeder, and Smoother.*—November 30, 1869.

Claim.—The implement formed by the combination, with the bar or back B, of the teeth A and cutter C, said parts being constructed and arranged as shown and described.

97,369.—SAMUEL G. DUGDALE, Richmond, Ind.—*Clothes-Sprinkler.*—November 30, 1869.

Claim.—The vessel A, water-chamber B, sponge C, or its equivalent, partition *f*, valve *d*, and holes *g g*, when arranged in the manner and for the purpose above set forth.

97,370.—ELLIS EVES, Millville, Pa.—*Support for Elliptic Springs.*—November 30, 1869.

Claim.—The combination of the extended rod D, bent in an oblique manner at its front, and the post E, with the springs A B, and wagon-bottom C, all substantially as shown and described.

97,371.—JOHN FAIRCLOUGH, Saint Joseph, Mo.—*Feed-Water Heater.*—November 30, 1869.

Claim.—The combination of two heaters, A and B, and any number of filtering-vessels, K, when connected and arranged, substantially in the manner specified.

97,372.—JOHN FAIRCLOUGH, Saint Joseph, Mo.—*Boiler-Flue Cleaner.*—November 30, 1869.

Claim.—The metallic pipes D F K, and nozzle L, so jointed together, and to the dome B of the boiler, that they may be compactly folded back upon the latter, out of the way, and so that the steam may be discharged into the ends of the flues at any desired angle, as specified.

97,373.—JOHN FAIRCLOUGH, Saint Joseph, Mo.—*Millstone-Dress.*—November 30, 1869.

Claim.—1. The furrows *a*, describing tangential lines at their inner ends, and thence curving slightly toward the periphery, where they terminate in radial lines, as and for the purpose set forth.

2. In combination with the furrows *a*, as described, the short furrows *c*, formed in the ribs between *a a*, and made of corresponding form throughout their length, as shown.

97,374.—MOSES G. FARMER, Salem, Mass, assignor to THE AMERICAN COMPOUND TELEGRAPH-WIRE COMPANY, New York City.—*Submarine-Telegraph Cable.*—November 30, 1869.

Claim.—1. As an article of manufacture, an improved submarine-telegraph cable, consisting of a strengthening-core conductor, and insulator, surrounded by a jute or hempen buoy, arranged, one upon the other, in the order specified.

2. The method of constructing submarine-telegraph cables, by winding spirally about a tenacious steel strengthening-core a ribbon of copper, to form the electrical conductor, and by surrounding the compound metallic wire thus formed with any suitable insulator, and this with some buoyant material, all in the manner specified.

97,375.—J. N. FARNHAM, Hartford, Conn., assignor to WOVEN-WIRE MATTRESS COMPANY, same place.—*Bedstead-Frame.*—November 30, 1869.

Claim.—1. The inclined double-end bars C, of a bedstead-frame, arranged substantially as and for the purpose herein shown and described.

2. The standards B, arranged longitudinally adjustable on the side-bars of a bedstead-frame, to permit the inclined side-bars to be set a suitable distance apart, as set forth.

97,376.—O. L. FENNER, Rochester, N. Y.—*Bench-Clamp.*—November 30, 1869.

Claim.—An improved screw-stock, for the movable jaw of a clamp, with a base, E E, ears *a b*, and removable fastening-yoke F, the said parts being constructed, combined, and adjusted to the bench, in the manner described.

97,377.—JAMES FERGUSON, Huntley Grove, Ill.—*Cultivator.*—November 30, 1869.

Claim.—1. The beams D′, when provided with joints *d d²* at front and rear, as described, for the purpose set forth.

2. The standard H, bar I, and spring *h′*, when constructed substantially as described, for the purpose set forth.

3. The standard H, bar I, and spring *h′*, when combined with the beams D′, substantially as and for the purpose set forth.

4. The machine described, consisting of the frame A *a a a′*, wheels B B, pole C, beams D D′, shovels L, rock-shaft E, hand-lever F, standard H, bar I, spring *h′*, the whole being combined and arranged as described.

97,378.—E. L. FOREMAN, Ranteul, Ill., assignor to EDWARD FOREMAN, same place.—*Road-Grader.*—November 30, 1869.

Claim.—The combination and arrangement of the sides A A, with steel bars C C, cross-bar B, braces D D, tongue E, lever F, knee G, and bar H, all substantially as shown and described.

97,379.—H. G. FOUGEN and A. C. FOUGEN, Cape Girardeau, Mo.—*Egg-Beater.*—November 30, 1869.

Claim.—The combination of the platform A, handle B, shaft C, weighted cross-arms D E, cord G, and mixer F, with each other, substantially as herein shown and described, and for the purpose set forth.

97,380.—JOHN V. B. FRANCE, Boscobel, Wis.—*Combined Seeder, Roller, and Drag.*—November 30, 1869.

Claim.—1. A combined seeder, roller, and drag, arranged and operating substantially as herein shown and described.

2. The seed-frame E, when fastened, by means of two bolts *b c*, to the roller-frame, and partly supported on a caster-wheel, so that it can, by removing one bolt, be swung back of the roller, substantially as herein shown and described.

97,381.—LOUIS FRÜHINSFELD, Newark, N. J.—*Hinge.*—November 30, 1869.

Claim.—As a new article of manufacture, the hinge A, composed of two pieces only, B being cast entire with pintle and screw-bolts, and C of malleable iron, bent around B, all as and for the purpose specified.

97,382.—AARON FULLER, Marietta, Ohio.—*Pump.*—November 30, 1869.

Claim.—The piston *c*, constructed as described, and provided with the ring-packing *c'*, when used in connection with the cylinder D, and combined with the rod *a*, working in the sleeve *a'*, as described, for the purpose set forth.

97,383.—SAMUEL M. FULTON and WILLIAM M. FULTON, Pittsburgh, Pa.—*Rotary Bell-Head.*—November 30, 1869.

Claim.—The annular flanged cavity in the crown-piece of the bell, around the central hole for the clapper-bolt, for the reception of the heads of the bolts, by which the crown of the bell is attached to the yoke, and is thus rendered capable of being rotated, relatively to the yoke, substantially as hereinbefore described.

97,384.—WARREN GALE, Peekskill, N. Y.—*Feed-Cutter.*—November 30, 1869.

Claim.—1. In the construction of feed-cutters, a slotted knife-shaft, constructed with a space between the rings or caps *b b*, that hold the knives *a a a* in place, and the journal-boxes *d d*, in which the shaft runs, so when the rings, or either of them, are released, they can be moved on the shaft, so as to release the knives, so they can be removed or replaced without removing the shaft or journal-boxes, substantially as described.

2. A slotted knife-shaft, provided with knives beveled on the back side, and provided with caps or rings of unequal diameter, so the knives cannot be reversed, substantially as described.

97,385.—PERRY G. GARDINER, New York, N. Y.—*Packer for Railway-Car Springs.*—November 30, 1869.

Claim.—1. The holding and securing the spiral spring, for packing, by means of a cylindrical shell or holder, divided in halves, and provided with the interior female-screw thread, or the points or studs to hold the coils and prevent their being pressed together under the pressure of the filling or packing process, arranged and operating substantially as described.

2. The removable and adjustable hollow cylinder or filler G, in combination with the holder and spring, arranged and operating substantially in the manner and for the purposes described.

3. The combination of follower or plunger with the filler and holder and spring, constructed, arranged, and operating substantially as described.

97,386.—F. J. GARDNER, Washington, N. C.—*Bed-Spring.*—November 30, 1869.

Claim.—An improved bed-spring, formed by the combination of the three springs or slats, A C D, and pins or standards B with each other, substantially as herein shown and described, and for the purpose set forth.

97,387.—REDMAN GAY, Richmond, Va.—*Fire-Box.*—November 30, 1869.

Claim.—In combination with the flanged pipe C, secured, as described, to the inner sheet of the fire-box A, the stay-rod D, conical plates E E, provided with slots *f f*, and the hand-hole plates *h h*, all substantially as and for the purposes herein set forth.

97,388.—JAMES R. GILBERT, Wootens, Ga.—*Plow.*—November 30, 1869.

Claim.—1. The plow-foot C, constructed as described, of the wooden beam *a* and iron bar *b*, secured to the beam A, and regulated by means of the nuts *c c*, substantially as and for the purposes herein set forth.

2. In combination with the plow-foot C, constructed as described, the subsoil-share D, substantially as and for the purposes herein set forth.

3. The plow-foot C and the double foot E, so constructed as to be interchangeable with each other, as specified.

97,389.—WALTER W. GILBERT, New York, N. Y.—*Steam-Pump.*—November 30, 1869; antedated November 24, 1869.

Claim.—1. An elongated piston arranged relatively to the ports *a b* of the steam-actuated valve, and provided with the exhaust-passages *e f*, also arranged relatively to the said ports, *a b*, all substantially as specified.

2. The cylindrical pump-valves A B, and concave-slotted seats C D, arranged substantially as specified.

97,390.—KINGSTON GODDARD, Richmond, N. Y.—*Mode of Constructing Water-Pitchers and other Vessels.*—November 30, 1869.

Claim.—An improved ice-pitcher, or other vessel, formed by electro-plating, with one or more metals, a body made of wood or other suitable non-conducting material, substantially as herein shown and described, and for the purpose set forth.

97,391.—HENRY E. GRAHAM and RICHARD D. CHILD, Boston, Mass.—*Combined Watch-Key and Toothpick.*—November 30, 1869; antedated November 24, 1869.

Claim.—1. A combined watch-key, H, and toothpick G, when the latter slides within the winding-tube of the former, substantially as and for the purpose set forth.

2. The projection E, for containing a pencil, combined with the watch-key H and toothpick G, when they are formed as above described.

97,392.—W. D. GUSEMAN and E. C. BRIGHT, Morgantown, West Va.—*Insulator for Telegraph-Wires.*—November 30, 1869.

Claim.—1. The narrow ridge or point in the insulator, formed by the grooves, or a groove extending downward from the wire-aperture, on which ridge the wire rests, substantially as described.

2. The sloping grooves, (one or more in number,) extending from the wire-aperture, for discharging the water and forming a ridge for the wire to rest on, substantially as described.

3. The insulator A, constructed with the aperture C and slot D, arranged at an angle with each other, as shown, either with or without a cap to protect it from the weather.

97,393.—E. R. HALL and WILLIAM H. TOWN, Syracuse, N. Y.—*Sawing-Machine.*—November 30, 1869.

Claim.—1. In combination with the pendent guide M, slide-bar H, and pitman *z*, the adjustable right-angled lever V, constructed and arranged to operate as specified.

2. The arrangement herein shown, of the double-rim annular wheel K, pinions *l*, and *u*, crank-shaft *s'*, and crank L, for operating a crosscut-saw, as specified.

3. The sawing-machine, herein described, having the pinions *l* and *u* gearing with the double-rim annular wheel K, crank-shaft *s'*, pitman *r*, right-angled lever V, adjustable pitman *z*, sliding bar H, and pendent sliding guide M, with lifting-lever F and spring-catch S, all constructed and arranged to operate a crosscut-saw, as specified.

97,394.—W. N. HAMILTON, Odessa, Del.—*Grain-Drill.*—November 30, 1869.

Claim.—1. A cast-iron bottom for the seed-boxes of grain-drills, formed substantially as shown and described.

2. The metallic bottom, when cast with a cut-off projection or lip at each discharge-opening, substantially as shown and set forth.

3. The combination of the cut-off projection or lip cast on the bottom of the seed-box, and formed as specified, with the slotted adjusting-slide, substantially as herein described.

4. The employment, in combination with the adjusting and cut-off slides, of the frames or holders, applied and secured to the bottom of the seed-box at the discharge-openings, under the arrangement described, so that the slides, while held in and maintained by said holders, shall be free to slide back and forth upon each other, as and for the purposes set forth.

5. The combination of the hinged seed-box, with

the large open spouts supported upon the frame of the machine, and arranged under and at suitable distance from the discharge-apertures in the feed-box, substantially as and for the purposes shown and set forth.

97,395.—JAMES R. HAMMOND, Sedalia, Mo.—*Combined Hay-Rake, Thrasher, Loader, and Stacker.*—November 30, 1869.

Claim.—1. An improved hay-rake and loader, formed by the combination of the frame A, wheels B, inner frame C, wheels and shaft D E, teeth or fingers F, guard-bar G, and carrier M N, with each other, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the gleaner H I, arm J, and catch-bar K, with the frames C and A, rake-teeth or fingers F, and carrier M, substantially as herein shown and described, and for the purpose set forth.

3. The thrashing-device R S S′ T U, in combination with the frame and carrier of a hay-rake and loader, substantially as herein shown and described, and for the purpose set forth.

4. The combination of the hopper or guide Z, screen A′, and seed-box B′, with the frame C, carrier M, and thrashing-device R S S′ T U, of a hay-rake and loader, substantially as herein shown and described, and for the purpose set forth.

5. The combination of the looped ropes G′ and detachable pole F′, with the rack D′, substantially as herein shown and described, and for the purpose set forth.

6. The combination of the truck-rack D′ E′, looped ropes G′, and detachable pole F, with the frame C and carrier M of the hay-rake and loader, substantially as herein shown and described, and for the purpose set forth.

97,396.—H. W. HARKNESS, New Britain, Conn., assignor to himself and ANDREW TURNBULL, same place.—*Lantern.*—November 30, 1869.

Claim.—The metal rings *b b*, cast in one piece, having the part *b′*, in combination with the segmental hinged part *b′*, guard *c*, and supporting-wire *d*, substantially as set forth.

97,397.—B. F. HERR, Livingston, Ala.—*Paper-File.*—November 30, 1869.

Claim.—1. The arrangement of the slotted springs D D, so as to work over the pins E to protect the former against lateral displacement, and to make them direct and uniform in their vertical action, as and for the purpose specified.

2. The arrangement of the several hooks B at the points specified, and with inclined recesses as shown and described, so that they may not only hold the file together, but retain the springs in subjection when the file is opened, all as shown and described.

97,398.—GEORGE W. HERRING, Bangor, Me.—*Auger-Handle.*—November 30, 1869; antedated November 27, 1869.

Claim.—The arrangement, on the handle A, of the collar C, slotted washer or ring E, pins *b b*, and nut D, all constructed and operating substantially as and for the purposes herein set forth.

97,399.—DANIEL M. HOLMES, Watkins, N. Y.—*Instrument for Pulling Weeds.*—November 30, 1869.

Claim.—As a new article of manufacture, the herein-described instrument, consisting of serrated and longitudinally-grooved jaws, oblique shanks, and handles parallel, or nearly so, to the plane of the blades, as described.

97,400.—JOHN DOUGLAS HOPKINS, London, England.—*Sash-Balance.*—November 30, 1869; patented in England, November 20, 1868.

Claim.—The combination of the balanced sashes *a b*, the winding-cords and the winding-drums, with the weights *p p*, substantially as and for the purpose described.

97,401.—CHARLES H. HORNE, Astoria, Oregon.—*Belly-Band Fastener.*—November 30, 1869.

Claim.—An improved sinch or belly-band fastener A, B, D, E, F, constructed and operating in connection with the strap or lattigo C, substantially as herein shown and described, and for the purpose set forth.

97,402.—HENRY HOWARD, Springfield, Mass.—*Combined Stove and Water-Heater.*—November 30, 1869; antedated November 20, 1869.

Claim.—1. The boiler F, constructed with partition 8 and aperture 9, substantially as herein described.

2. The dumping-grate E, composed of a series of separate bars *u u*, &c., connected laterally by a dovetail device, and secured at one end by a rod, V, as herein specified.

3. The stove-cover *r*, provided with a continuous groove *s′*, as herein specified.

4. The removable fire-box or lining G, made of any suitable material, in combination with the boiler F, substantially as herein specified.

5. The radiator H, provided with two connection-apertures o^1 o^2, and connecting-bolt *n′*, arranged, with reference to pipes *n* and *o*, as herein specified.

6. The series of heating-pipes 1, 2, &c., when constructed and arranged, with reference to pipes *n* and *o*, and to the boiler F, as herein specified.

7. The central partition *y′*, in combination with the funnel B, horizontally-sliding damper *d*, oven and casings C C′ C″, as herein specified.

97,403.—CHARLES H. HUDSON, New York, N. Y.—*Extension-Crib and Bedstead.*—November 30, 1869.

Claim.—1. The bedstead described, capable of both lateral and longitudinal extension, substantially as set forth.

2. The sliding or rolling guard, for barring the progress of a child in any given direction, constructed and operating substantially as set forth.

3. The combination of the two parts V and W, forming an extensible guard, substantially as and for the purpose specified.

97,404.—WILLIAM HUFFMAN, Oshkosh, Wis.—*Paddle-Wheel.*—November 30, 1869.

Claim.—1. Duplex helical floats, Fig. 5, in combination with lining *b* and flanges *a a*, provided with air-passages *e e*, in either flanges or floats, or both.

2. The air-passages *e e*, provided with flanges *e′ e′*, in combination with paddle-wheels, substantially as and for the purposes set forth.

97,405.—CHARLES HUGHES, Yng Flor De Cuba, Colen, Cuba.—*Steam-Condenser.*—November 30, 1869.

Claim.—1. The condensing-vessel A and the annular tank B, inclosing the condenser, arranged substantially as described.

2. In combination with the condenser A, the perforated ring-pipe G, arranged substantially as described.

97,406.—CHARLES HUGHES, Yng Flor De Cuba, Colen, Cuba.—*Condenser-Valve.*—November 30, 1869.

Claim.—The valve C, constructed, arranged, and operating substantially as herein shown and described.

97,407.—LEWIS B. HUNT, Leverett, Mass.—*Railroad-Car Wheel.*—November 30, 1869.

Claim.—1. The combination, with the hub D, fixed to the axle, and a sliding rim A, of the series of independent elastic cylinders, arranged in the space between said two parts, and operating as herein described.

2. A wheel, consisting of two similar flanged cylinders B C D, connected together, and firmly keyed to the axle, in combination with the sliding rim A, having a space between them, receiving the elastic cylindrical packing E, and with the packing F interposed between the flanges of the hub and the sides of the rim, the whole operating together as and for the purpose herein described.

97,408.—JOHN C. JOHNSON, Golconda, Ill.—*Wagon-Skein.*—November 30, 1869.

Claim.—The combination and arrangement of a wrought-iron or steel skein, B, with a wooden axle-

tree, A, secured by an iron hurter-band or collar, *c*, and the iron bolt *d*, with the combination of the nut E, with the bolt *b* passing through the box C, secured by the iron ring D, and the solid end of the axle-tree A, in the manner and for the purposes herein specified.

97,409.—P. C. JOHNSON, Central City, Colorado Territory, assignor to MARY JOHNSON, same place. —*Clothes-Line.*—November 30, 1869.

Claim.—The double pulley or carriage D, with its pulleys *e e*, in combination with the knot *d*, cord A, posts B and C, and pivoted holders *h*, with their pulleys *a a*, as shown and described.

97,410.—WILLIAM C. JOHNSON, Fort Madison, Iowa, assignor to himself and AARON JOHNSON, same place.—*Railway-Car Coupling.*—November 30, 1869.

Claim.—1. The slides B, moving back and forth in the top of the bumpers, and having their front ends extending out beyond the bumpers, as described, in combination with the arms C, when used substantially as set forth.

2. In combination with the slides B and arms C, the spring D, when used substantially as shown.

97,411.—WILLIS H. JOHNSON, Springfield, Ill. —*Velocipede.* — November 30, 1869; antedated November 27, 1869.

Claim.—1. The carriage C, constructed and arranged with the oval-shaped circular side-pieces *e e*, and cross-beams *f f*, grooved wheels *d d d*, driving-wheel F, connecting-belt *g*, cranks *h h*, stirrups *i i*, and seat E, substantially in the manner herein described, and for the purposes set forth.

2. The combination of the carriage C, constructed as described, with the braced wheel A, also constructed as described, substantially as and for the purposes set forth.

97,412. — JOSEPH JOHNSTON, Chicago, Ill.—*Weather-Strip.*—November 30, 1869.

Claim.—A weather-strip, made of rubber cloth, or other suitable material, folded and sewed together, and applied substantially as shown and described.

97,413.—JACOB KLINGENSMITH, Warren, Ohio. —*Churn.*—November 30, 1869.

Claim. — The arrangement of the double cranks with the jointed links J J′, provided with thumb-screws or nuts, in combination with the sectional dasher and churn, operating conjointly in the manner and by the means substantially as described.

97,414.—L. W. LANGDON, Northampton, Mass., assignor to himself and EDWIN R. LOCKE, Keene, N. H.—*Stove-Damper.*—November 30, 1869.

Claim.—1. The employment of a tube, B, in such a manner that its expansion and contraction shall operate to open and close the valve, substantially as herein described.

2. The adjusting-lever P, when connected to an automatic heat-regulator, placed inside the pipe, substantially as herein described.

3. The combination of the ring A, tube B, valve C, rod D, lever F, casting E, and lever P, all operating substantially as herein described.

4. In combination with the above, the indicator O, arranged substantially as herein set forth.

97,415.—CHARLES E. LEWIS, Northfield, Vt.—*Device for Grinding Saw-Gummer Burrs.*—November 30, 1869.

Claim.—The frame A and wheels b^1, in combination with the pivoted arm B, longitudinally-adjustable carriage B, screw E, nuts *e*, and wheel A^1, the whole arranged and operating substantially as set forth.

97,416.—SAMUEL H. LINTAN, Burrows, Ind.—*Harrow.*—November 30, 1869.

Claim.— A harrow, provided with one series of perpendicular teeth in front, another series behind, and a series of clod-crushers in the middle, so that the clods may be brought to the surface by the first, crushed or mashed by the second, and pulled to pieces or pulverized by the third, all as shown and described.

97,417.—ALSON A. LOTHROP, Nepouset, Mass. —*Metallic Solution for Coating Iron and Steel.*—November 30, 1869.

Claim.—A solution, composed of the ingredients set forth, for coating iron or steel.

97,418.—HENRY ALEXANDER LYMAN, Cheapside, London, England, assignor to THOMPSON, LANGDON AND COMPANY, New York City.—*Corset.*—November 30, 1869.

Claim.—A corset, composed of the pieces A B C D, shaped and fitted together in the manner described.

97,419.—L. J. MARCY, Newport, R. I.—*Photographic Printing-Apparatus.*—November 30, 1869.

Claim. — 1. A photographic printing-apparatus, consisting of a lamp and printing-frame, arranged and operating together substantially as described.

2. The lamp A, provided with a curved wick-tube, substantially as and for the purpose described.

3. The case B of the lamp, when provided with a slotted diaphragm, substantially as herein shown and described.

4. The inclined perforated plates *b b*, formed on the lamp, for the purpose of steadying the flame, as set forth.

5. The changeable perforated slides C, or their equivalent, arranged and operating substantially as and for the purpose herein shown and described.

6. The printing-frame F, made substantially as described, to carry the negative and the sensitive plate, as described.

97,420.—THOMAS F. MAYHEW, Port Norris, N. J.—*Oyster-Dredge.*—November 30, 1869.

Claim.—1. The use, in an oyster-dredge, of a bag, *f*, of wire gauze, or its equivalent, for the purpose specified.

2. The guards or fenders *i i*, arranged, in respect to the bag *f*, substantially in the manner described.

3. The tooth-bar B and the bag *f*, and its frame, so hinged to the bars A A of the dredge, and so connected to the same by chains *m m*, or their equivalents, that the said tooth-bar and bag may be tilted, for the purpose of emptying the latter, substantially as herein set forth.

4. A frame for oyster-dredges, consisting of two bars A A, connected together, and hinged to the tooth-bar B, substantially in the manner described.

97,421.—CHARLES A. MAYNARD, Saint Louis, Mo.—*Velocipede.*—November 30, 1869.

Claim.—The combination of the levers F H with the seat and foot support, and with the straps or bolts *j p h*, collars K, ratchet-wheels *m*, springs *l*, catches *n o*, and main wheels I, all combined and operating substantially as herein shown and described.

97,422.—R. Y. MCCONNELL and GEORGE PRINGLE, Rochester, N. Y.—*Street-Sprinkler.*—November 30, 1869.

Claim.—1. The sprinkler E, constructed, as described, of hydraulic tubing or gas-pipe, and provided with one row of holes, drilled a little above the center, and closer around the circle and at the ends than in the center, substantially as and for the purposes herein set forth.

2. The sprinkler E, taking the water in at each end, thereby giving the pressure at the side where it is wanted, substantially as herein set forth.

3. The flexible tubes D D, connected to the water-tank by means of a supplementary block, C, secured to the bottom of the tank, substantially as herein set forth.

4. The double valves, placed inside of the water-tank, so as to be able to let on water at either side, or together, at pleasure, substantially as herein set forth.

5. The screws H H, in the ends of the sprinkler E, for the purpose of cleaning, substantially as herein set forth.

6. The combination and arrangement of the bottom A, valves B B, supplementary blocks C, flexible tubes D D, sprinkler E, joints G G, and screws H H, all constructed as described, and operating substantially as and for the purposes herein set forth.

97,423. — WILLIAM MCFARLAND, Williamsburgh, N. Y.—*Safe.*—November 30, 1869.

Claim.—A burglar-proof safe, composed of outer shell A, inner ribbed or serrated shell B C, and angular plates E, constructed, arranged, and fitted together in the manner described.

97,424.—MATTHEW MCMILLIAN, Caney, Ark.—*Cotton-Seed Planter.*—November 30, 1869.

Claim.—An improved cotton-seed planter, formed by the combination of the block A, opener B, grooved roller D, band E, dropping-cylinder F, spout G, and coverer H, with each other, said parts being constructed, arranged, and operating substantially as herein shown and described, and for the purpose set forth.

97,425.—DANIEL E. MCSHERRY, Dayton, Ohio.—*Dropping-Device for Seeding-Machines.*—November 30, 1869.

Claim.—1. The cap E, constructed with a concavo-convex curtain, *e*, and with its anterior edge *z* in or in rear of a vertical plane intersecting the axis of shaft C, substantially as and for the purposes described.

2. While not claiming broadly a cap to a rotary seed-dropping wheel, I do claim so constructing the curtain *e*, of such a cap, that it will lie closely to the back of a spirally-grooved wheel, D, and prevent the escape of seeds over such wheel through its spiral grooves, substantially as and for the purposes described.

97,426.—RUFUS S. MERRILL, Cambridge, Mass.—*Printing-Type.*—November 30, 1869.

Claim.—A hollow printing-type, as a new manufacture

97,427.—M. W. MONTGOMERY and E. H. VOTAW, Springfield, Mass.—*Sad-Iron.*—November 30, 1869.

Claim.—An improved detachable sad-iron handle, formed by the combination of the pivoted bars B, handle C, having cams or inclines formed upon one or both ends, and spring D, with each other, as herein shown and described, and for the purpose set forth.

97,428.—JOEL MOULTON, Boston, Mass.—*Mode of Covering Elastic Rolls.*—November 30, 1869.

Claim.—The mode of covering elastic rolls hereinbefore explained, that is to say, in first depositing the thin tubular covering or casing within the receiver *a*, next placing over it the roll, and smearing one or both with cement, and then depressing the roll within the casing by means of the plunger *c*, the whole being arranged and operating in manner as hereinbefore explained.

97,429. — NELSON NEWMAN, Springfield, Ill.—*Corn-Harvester.*—November 30, 1869.

Claim.—1. A cutter, having a reciprocating movement, in which the position of the same is changed at each end of the stroke by a partial revolution of the cutter-bar upon its axis, so that said cutter advances and returns in different paths, substantially as described.

2. The devices used for changing and controlling the position, radially, of the cutter E, consisting of the guides N and O, the rod *e*, and the springs *n* and *o*, all combined substantially as shown, and for the purpose specified.

3. The means employed for imparting a reciprocating motion to the cutter E, consisting of the rod F, the link G, the bar H, the shaft I, the crank K, the gear-wheel M, and the pinion L, in combination with the cutting-devices herein described, substantially as and for the purpose specified.

4. The means employed for securing the doors R in a horizontal position, and releasing the same therefrom when desired, consisting of the bars T, provided with the beveled portions *u* and *u'*, the spiral springs *t*, the pin *x'*, the catch U, and the lever V, all combined substantially as described, and for the purpose shown.

5. In combination with the securing and releasing devices above named, the means employed for forming and depositing the shock, consisting of the traps or doors R, the spring-gates *s*, and the forked rod Y, substantially as shown and described.

97,430.—ROBERT NICHOLSON, Pleasantville, Pa.—*Wrench.*—November 30, 1869.

Claim.—1. The combination, with the open wrench, of the detent-spring, operating as set forth.

2. The combination, with the wrench, of the detent-spring, its guide-pin, and recess, all constructed to operate as set forth.

3. The combination of the wrench with the pivoted supporting-band, as set forth.

4. The combination of the wrench, the pivoted supporting-band, and the detent-spring, substantially as set forth.

97,431.—WILLIAM R. OATLEY, Rochester, N. Y.—*Stove-Leg.*—November 30, 1869.

Claim.—1. The dovetailed lug *d*, in combination with the slotted flange of the leg A, for the purpose set forth.

2. In combination with the side lugs *b*, the central lug *d*, arranged to act conjointly, for the purposes set forth.

97,432. — GEORGE S. ORMSBY, Xenia, Ohio.—*Map-Drawing Apparatus.*—November 30, 1869.

Claim. — 1. A graduated frame, A, for slate or black-board, provided with the parallel spaces *a b c d e*, suitably marked, for indicating the proper positions of parallels and meridians on maps to be drawn, combined with the arm B constructed with centers as described; also, with the center at N A, either with or without the projections at that point, substantially as set forth.

2. The combination of the frame A, constructed as described, its arms and centers as described, and the compound rulers for making the lines of longitude, substantially as set forth.

3. The graduated circular frame, constructed as described, for drawing the hemispheres, combined with the adjustable arm, with fixed centers for the parallels and meridians, substantially as set forth.

97,433.—JOSHUA T. OWEN, Philadelphia, Pa.—*Railway-Car Wheel.*—November 30, 1869.

Claim.—A car-wheel, constructed substantially as set forth.

97,434. — JOHN OWENS, Salford, England. — *Method of Weaving Fabrics.*—November 30, 1869.

Claim.—The method above described of weaving pile or other fabrics, namely, by forming the pile or face-surface of the fabric from the weft alone, interlocked with the warp, as set forth, so that the weft-face appears only on the face, being protected and secured by the back-weft, and each warp-thread serving to hold a pile-weft and form a cutting-race, in the manner specified.

97,435.—CHARLES PAGE, Boston, Mass.—*Tuck-Creasing Mechanism for Sewing-Machines.* — November 30, 1869.

Claim.—1. The combination and arrangement of the tuck-marker with the presser-foot, and the grooved wheels disposed therein, as set forth.

2. The rotary tuck-marker, provided with the screw-arbor, in combination with the presser and the grooved rotary rear wheel, having an internal screw-thread, by means of which the marker is secured in position and rotated, all as set forth.

97,436.—JOSEPH B. PEDRICK, Columbus, Ind.—*Gauge for Weather-Boarding.*—November 30, 1869.

Claim.—The combination of the mortised bar A, extensions F and L, hook C, slide D, spring M, block B, and points *e* and T, all constructed as described, in the manner and for the purposes herein set forth.

97,437.—JOHN G. PERRY, Kingston, R. I.—*Hay-Tedder.*—November 30, 1869.

Claim.—1. The combination of the thills, the loose driving-wheels, the revolving main shaft, its bevel-wheel, the revolving disk, the revolving ring, the cranked rock-shafts carrying the teeth and the cam-groove, all constructed and operating substantially as set forth.

2. The combination of the revolving disk, the revolving ring, the cranked rock-shaft carrying the teeth, the fixed disk, and the cam-groove, all constructed and operating as set forth.

3. In a hay-tedder, the cam-groove L, in combination with the cranked rock-shafts K, these parts being constructed to operate as and for the purposes specified.

97,438.—JOHN G. PERRY, Kingston, R. I.—*Hay-Tedder.*—November 30, 1869.

Claim.—1. The combination of two parallel rotating cranked shafts, with stocks carrying the rake-teeth, all constructed to operate substantially as set forth.

2. The combination of the stocks, and their parallel cranked shafts, with the adjustable disks, mounted on the axles of the driving-wheels, all these parts being constructed for joint operation, as set forth.

3. The combination of the adjustable disks, the crank-shaft F, and the shipping-mechanism, mounted on the disks, and constructed as set forth.

4. The combination of the recessed driving-wheels, the gearing, the adjustable disks, and the cranked shaft F, all these parts being constructed and operating as set forth.

97,439.—GEORGE M. PETTEE, Detroit, Mich.—*Composition for Cleaning Millstones.*—November 30, 1869.

Claim.—The composition made of the ingredients in the manner herein specified, and applied for dressing millstones, as set forth.

97,440.—JOHN L. PIPER, Pittsburgh, Pa.—*Turn-Table.*—November 30, 1869.

Claim.—1. The arrangement, in a pier which supports the turn-table at or near its center, of a series of spherical balls within a confining-cap or rim, *c*, substantially as described.

2. A series of flat circular disks or cylindrical balls, arranged to operate on the one side or edge against the main pivoting-stem, and on the other against a shoulder in the revolving cap or other equivalent device, substantially as described.

97,441.—HAMILTON PRAY, Sharon, Conn.—*Operating Grindstones.*—November 30, 1869.

Claim.—A grinding-apparatus, composed of grindstone A, bench-timbers B C, hinged pedals D, crank-disks G, connecting-rod F, rest I, and shaft J, all constructed and arranged, with respect to one another, in the manner described.

97,442.—PASCAL A. QUINAN, Baltimore, Md.—*Sailing-Vessel for Storing and Transporting Petroleum and other Oils.*—November 30, 1869.

Claim.—1. The combination of the hull A, deck C, fore and aft vertical bulkhead D, transverse bulkheads E E E, with the water-reservoir F, provision-hold S, hatchway *b*, fresh-water pump *a*, all constructed and arranged, and for the purpose described.

2. The combination of the oil-reservoirs T with the bilge-pumps B, floating register *f*, register-pipe *g*, the circular holes *c*, with the screw-caps *c*, with the hull A and deck C, all constructed and arranged, and for the purpose described.

3. The escape-pipe *d* and valve *e*, as fitted to mast, with valve *e* as screwed into tubular iron mast, all constructed and arranged, and for the purpose described.

4. The safety iron transport, or sailing oil-vessel, with the parts A B C D E F S T *a b c d e f g h*, all combined, arranged, and constructed substantially as and for the purpose described.

97,443.—DAVID REYNOLDS, Rockford, Ill.—*Holder for Check-Reins.*—November 30, 1869.

Claim.—1. A lever, supporting the terret-bar, when pivoted above the line of the draught of the check-rein, and operated by means of the driving-rein, in the manner described, for the purpose set forth.

2. The device described, consisting of the lever A, bearing-arm B, standard *c*, and terret-bar D, when combined as described, for the purpose set forth.

97,444.—REUBEN M. REYNOLDS, Oakville, Mich.—*Lifting-Jack.*—November 30, 1869.

Claim.—The lifting-jack herein described, having posts A, B, and D, staple H, lever K, block S, and bent rod R, constructed and arranged to operate substantially as specified.

97,445.—VAN BUREN RYERSON, New York, N. Y.—*Machine for Pulverizing Ores and Rock.*—November 30, 1869.

Claim.—1. The combination of the two cases, with their rotating beaters, by means of connecting-pipes from or near the center of the first, and delivering to the second, between the center and the periphery, substantially as described, the first case being provided with a feeding-tube and the last with discharge-pipes, when all these parts are constructed and arranged as described.

2. The arrangement of the two beater-wheels D D′, in combination with the arrangement of the feeding-tube *l*, and the two pipes *m m*, for the passage of the material from the inside of the first to the inside of the second case, when constructed and arranged substantially as shown, and for the purpose specified.

3. Making the faces of the beaters each of a separate plate, secured by a bolt, or equivalent means, to projecting flanches on the rotating disks D D′, when constructed and arranged substantially as described, so that they can be readily replaced when worn.

97,446.—JOHN M. SHAW, Water Valley, Miss.—*Seed-Planter.*—November 30, 1869.

Claim.—1. The iron plate A, constructed and operating substantially as herein shown and described, and for the purpose set forth.

2. The combination of the slotted opener B, with the concaved plate A, substantially as herein shown and described, and the purpose set forth.

3. The combination of the hopper D with the plate A, substantially as herein shown and described, and for the purpose set forth.

4. The combination of the toothed wheel C, toothed wheel E, and stirrer-pins F, with the hopper D and plate A, substantially as herein shown and described, and for the purposes set forth.

5. Arranging the stirrer-pins F in a circle, to adapt them to serve as a pulley for the carrier-belt I, substantially as herein shown and described.

6. The combination of the bar G and pin or pins H with the hopper D and wheel E, substantially as herein shown and described, and for the purpose set forth.

7. The combination of the carrier-belt I K and conductor-spout L, with the hopper D, stirrer-pins F, wheels E and C, and plate A, substantially as herein shown and described, and for the purpose set forth.

8. The combination of the cutter M with the plate A, substantially as herein shown and described, and for the purpose set forth.

97,447.—JOHN SILSBY, New York, N. Y.—*Sewer.*—November 30, 1869.

Claim.—1. The mud-box D, sunk into the bottom of the tunnel B, and connecting at one end with the main sewer-pipe A, and at the opposite end with the house-connection C, substantially as shown and described.

2. The mud-box E, in combination with the main sewer-pipe A, substantially as set forth.

97,448.—JOHN SILSBY, New York, N. Y.—*Exterior Casing for Sewer, Gas, and Water Pipes.*—November 30, 1869.

Claim.—The arrangement of a tube, A, containing two compartments, one compartment to form the house-connection of the sewer-pipe, and the other compartment to form a case, to inclose the house-connections for the gas and water pipes, substantially as shown and described.

97,449.—SAMUEL G. SIMPSON, Mill Creek, Pa.—*Horse Hay-Fork.*—November 30, 1869.

Claim.—A hay-fork, consisting of the tines A A, shank B, yoke D, bent bar F, having eye K, spring-catch G H, and perforated bent bar L M, all combined, constructed, and arranged in the manner described.

97,450.—W. H. SINGER, Pittsburgh, Pa.—*Machine for Rolling Metals.*—November 30, 1869.

Claim.—The tapering rolls B′ B′, combined with the sliding rest C, substantially in the manner and for the purpose set forth.

97,451.—W. H. SINGER, Pittsburgh, Pa.—*Plate for Blanks of Cultivator-Teeth.*—November 30, 1869.

Claim.—As an article of manufacture, the rolled plate herein described, tapering from the center to the edges on one or both sides, and suited to be the material whence blanks for cultivator-teeth, plow-shovels, &c., may be cut.

97,452.—GEORGE SMITH, Omaha, Nebr.—*Clapboard-Gauge.*—November 30, 1869.

Claim.—The clapboard-gauge and holder, as herein described, consisting of the single graduated bar B, formed with the offset at its upper end, and provided with the spur E, sliding clip C, and lever D, all constructed and arranged as set forth.

97,453. — CHARLES P. SNOW, Freeport, Ill. — *Lamp-Trimmer and Extinguisher.*—November 30, 1869.

Claim. — The lamp-trimmer and extinguisher herein described, having springing plate B, with cutting-ledge *b'* and levers C, constructed and arranged to operate substantially as specified.

97,454.—DANIEL SPILL, Paradise Terrace, Hackney, England.—*Dissolving Xyloidine for Use in the Arts.*—November 30, 1869.

Claim.—The preparation and use of solvents of xyloidine, such as have been before described, so as to render xyloidine more easy of conversion into compounds containing xyloidine, which are suitable for applications in the arts, and for industrial purposes.

97,455. — AUGUSTUS STANLEY, New Britain, Conn.— *Bit-Stock.*—November 30, 1869; antedated November 20, 1869.

Claim.—As a new article of manufacture, the herein-described brace, consisting of the head B, body A, socket *a*, inverted pawl *b*, arms *h h*, spring *c*, and pivot *i*, the whole constructed and arranged substantially as shown and described, and for the purposes set forth.

97,456.—MONROE STANNARD, Hartford, Conn.—*Steam Slide-Valve.*—November 30, 1869.

Claim.—1. The combination, with the described balance-valve, of anti-friction rolls, substantially as hereinbefore set forth.

2. The combination of the ring *n*, the steam-communications *o*, and the yielding packing *m*, with the piston *d* and cylinder *e* of a balance-valve, substantially as above specified.

97,457.—AMOS STEVENS, Fitchburgh, Mass., assignor to himself and HENRY C. MAHURIN.—*Apparatus for Generating and Carbureting Illuminating-Gas.*—November, 30, 1869.

Claim.—1. The combination of two hydrogen-gas generators, in such a manner that the exhaustion of one brings the other automatically and instantaneously into action, by means of a partially-revolving gas-cock, with shaft and arms, operated by wheel and weight, or equivalents, substantially as herein set forth.

2. The double cone-shaped tank, placed in the center of the gasometer, with the pipe L' coiled around the top, by which the gas is passed up through the water, as herein set forth.

97,458.— WILLIAM A. SWEET, Syracuse, N. Y. —*Elliptic Spring.*—November 30, 1869.

Claim.—The combination, in an elliptic spring, of the concave washers *t t* and rivet C, when clamping the outer leaf of springs, whose curls are formed substantially as described.

97,459.—A. AGNEW THOMSON, Newburgh, Pa. —*Medical Compound.*—November 30, 1869.

Claim.—The sirup above described, composed of the ingredients named, each being in proportion specified, and all being prepared and mixed in the manner set forth.

97,460.—ORSON O. THWING, Martinsville, Ind. —*Truss.*—November 30, 1869.

Claim. — The combination of the inelastic metal clasp, encircling the ilium only, the astringent pressure-pad, and the elastic band, all these parts being constructed as set forth, for the purposes specified.

97,461.—GEORGE W. TOWNSEND, Galesburgh, Mich.—*Stump-Extractor.*—November 30, 1869.

Claim.—1. Placing the frame upon the rollers B, when arranged in the manner and for the purpose specified.

2. The double-crank axle I, when provided with a large and a small wheel, K and L, substantially as and for the purpose specified.

3. The manner of placing the wheel C upon the bar D, so that it can be tilted from one side to the other, substantially as set forth.

4. The wheel C, in combination with the lever E and spring F, when used in the manner specified.

5. The manner of attaching draught-rod G to the axle H, in the manner and for the purpose specified.

6. In combination with the double-crank axle I, the two bars M and lever O, when used substantially as specified.

7. The arrangement and combination of the wheels C, K, and L, lever E, crank-axle I, bars M, slide N, and spring F, when all are used to form a machine in the manner and for the purpose described.

97,462.—FRANCIS C. VIBERT, Hockanum, Conn. —*Fruit-Slicer.*—November 30, 1869.

Claim.—The upright oscillating frame-work F, and follower G, in combination with a reciprocating fruit-holder D, operated by gearing K, crank L, connecting-rod M, and table A, with double-edge cutter C, constructed and arranged as herein described, and for the purpose set forth.

97,463.— GUSTAVUS WEDEKIND, Philadelphia, Pa.—*Lamp-Shade.*—November 30, 1869.

Claim.—A shade, of argentine paper, the interior or reflecting surface of which is embossed according to any ornamental design, the overlapping edges of the paper being secured together by metallic buttons, all substantially as set forth.

97,464.—J. W. WESTON and M. H. WESTON, Windsor, Ill. — *Ditching-Machine.*— November 30, 1869.

Claim.—An improved ditching-machine, formed by the combination of the mold-board A, landside B, cross-bars or beams C, caster-wheel G H, lever I, and guide-bar J, with each other, said parts being constructed, arranged, and operating substantially as herein shown and described, and for the purposes set forth.

97,465.—A. W. WILKINS and S. T. ESKRIDGE, Rome, Ga.—*Expanding-Plow.*—November 30, 1869.

Claim.—1. Adjustably supporting the lower ends of the plow-standards C, by means of the brace-rods E, nuts *e'*, rods or bolts F, nuts *f'*, and brackets G, said parts being constructed, arranged, and operating substantially as herein shown and described, and for the purposes set forth.

2. The combination of the rods and nuts D *d'*, rods and nuts E *e'*, rods and nuts F *f'*, and brackets G, with each other and with the beam A and standards C of the plow, substantially as herein shown and described, and for the purpose set forth.

97,466.—GEORGE HENRY WILSON, London, England, assignor to HENRY WILLIAM DEE and LOUIS DEE, same place. — *Watch-Winding Attachment.* — November 30, 1869.

Claim.—1. The rotating disk, forming part of the ordinary hinged or swinging back or cap of a watch, and the medium for winding the watch, as described.

2. In combination with the rotating back, as described, the toothed friction-plate *d*, as and for the purpose set forth.

3. In combination with a projecting plate or disk, *x*, whereby the hand can be set and adjusted, a detent *u*, spring *v*, and projecting arm *w*, as shown in Fig. 11, arranged and acting in the manner and for the purpose herein described.

4. A snail-piece, 8, with stop 12, on the main-spring arbor, in combination with a bearing-spring, *q*, with stop 13, (Figs. 13 and 14,) as and for the purpose described.

97,467.—THOMAS WILSON, Garton, England.— *Combined Planter and Cultivator.*—November 30, 1869.

Claim.—1. The adjustable cultivator *r*, planter *s*, and coverers *r' s'*, when arranged as and for the purposes described.

2. The cam *i'*, in combination with the lever *u'*, for the purposes specified.

3. The lever *v*, for the purposes as herein described.

4. The adjustable slides *q q* and *p' p'*, in combination with the sweeps *o' o'*, for the purposes as described.

5. In combination with the planter *s*, the cylinders *m m'* and *n n'*, all when arranged and combined as described.

6. In combination with the cultivator *r* and coverer *r'*, the shaft *f'* with pins *g g*, and the scoops *j' j'* with spout *k*, combined and arranged as described.

97,468. — NICKOLAS ZINS, Evansville, Ind.—*Bedstead-Fastening.*—November 30, 1869.

Claim.—A bed-fastening, A, having two or more bolt-holes, two beveled flanges a^1, and two inclined projections, a^2, each of said parts being arranged, with respect to the other, as set forth.

97,469. — HENRY G. DAYTON, Dayton, Ohio.—*Compound for Disinfecting and Deodorizing.*—November 30, 1869.

Claim.—The within-described compound.

97,470.—DAVID ADAMSON, New York, N. Y.—*Lubricator.*—December 7, 1869.

Claim.—A lubricator-cup, containing a piston, and connected with a steam-supply pipe, through which steam can be brought to bear upon said piston, as set forth.

97,471. — JAMES L. ALBERTSON, New London, Conn. — *Baling-Press.* — December 7, 1869; antedated November 25, 1869.

Claim.—1. The pedestal A, provided with two plates or flanges, and forming the connection and support between the press-frame and the ground, when used in combination with the gear-wheel C, revolving about it, and transmitting the power applied to other machinery for working the press, all arranged substantially as described.

2. In combination with the above arrangement, the vertical screws D D' and pinions B B', arranged and operating substantially as described.

97,472. — HENRY ASHFIELD, Chicago, Ill. — *Safety-Valve.*—December 7, 1869.

Claim.—1. The valve I, constructed as shown and described, and operating as and for the purpose set forth.

2. In combination with the valve I, and rigidly attached to its outer upper part, the jacket V, constructed as shown and described, and operating as and for the purpose set forth.

3. In connection with the valve I, and attached to it, the valve-stem Q, playing loosely in the sleeve M, supported by the brace B, and provided with the head R, all constructed as shown and described, and operating as and for the purpose set forth.

4. In combination with the sleeve M, the washer N, when constructed as shown and described, and operating as and for the purpose set forth.

5. In combination with the sleeve M, the nut L, the washer N, and the spiral spring K, when constructed as shown and described, and operating as and for the purpose set forth.

6. The braces B, cast into and with the valve-seat plate, as shown and described, and for the purpose set forth.

97,473.—W. F. BEECHER, Morristown, N. Y.—*Steam-Generator Smoke-Stack.*—December 7, 1869; antedated November 24, 1869.

Claim.—1. The arrangement of the walls D E and pipe A, in combination with space *a* and an exhaust-pipe, G, which extends above the plane of said dampers, substantially as described.

2. In combination with such arrangement, the diaphragm C, located over space *a*, and arranged above the lower end of pipe A, substantially as described.

3. The crown-plate B and diaphragm C, arranged above the lower end of pipe A, and above space *a* and inner wall E, substantially as described.

97,474. — GOTTLIEB BEER, Grafton, Wis. — *Snow-Plow.*—December 7, 1869.

Claim.—The combination of the sled A, frame C, backward-projecting tongue B, and shaft E, with the swinging point D, and adjustable wings F F, all arranged to form a snow-plow, substantially as herein shown and described.

97,475. — HARRISON BLACKBURN, Bedford County, Pa.—*Construction of Preserving-Houses.*—December 7, 1869; antedated November 20, 1869.

Claim.—The combination, in an ice-house, of the case A, the ice-room B, provided with the doors D D, for putting in the ice, and obtaining access to the case A, respectively, and false partition E, and the packing-room F, with door 2, substantially as shown and set forth.

97,476.—JEROME B. BROWN, Lowell, Mass., assignor to himself and NELSON F. LIBBY, same place. —*Planing-Machine.*—December 7, 1869.

Claim.—The arrangement of the elastic pressers *f f f f*, in combination with the endless platform *n'*, with sunk beds *n n*, all when arranged and operating as described.

97,477. — EDWARD CARD, Pawtucket, R. I.—*Stove-Grate.*—December 7, 1869.

Claim.—1. A spiral or auger-shaped bar, either movable or stationary.

2. A "right-and-left hand" spiral bar, which turns or revolves the other bars on either side.

3. A grate, formed of spiral or auger-shaped parallel bars, all as shown, and operating substantially as described.

97,478. — WHEELER CASE, Russia, assignor to himself and JAMES H. READ, Jr., Utica, N. Y.—*Boot-Jack.*—December 7, 1869; antedated November 27, 1869.

Claim.—A boot-jack, having a loop, B, and rest A, hinged at the center, or thereabout, constructed and adapted for use as herein shown and described.

97,479.—A. MORRELL CORY, New Providence, N. J. — *Buggy-Top.* — December 7, 1869; antedate November 20, 1869.

Claim. —1. The base C, or its equivalent, permanent in its relation to the top, movable with the top on an axis, G, in its relation to the body or seat, the posts G, and the bars B, or their equivalents, substantially as and for the purposes specified.

2. In the support or limitation and action of the top, the tumblers H, connected by the bolt I, also the stops or pawls K, the keys L, the guards Q, and loops S, or their equivalents, substantially as and for the purposes specified.

97,480.—R. A. COWELL, Cleveland, Ohio, assignor to himself and E. N. KEYS, same place.—*Pushing-Jack for Railroad-Cars.* — December 7, 1869.

Claim.—The self-adjusting dogs E F, and head-block B, in combination with the lever A and the walking-staves C D, having the sharp-edge metal feet I and springs *b b*, all arranged as herein set forth.

97,481.—HENRY COWGILL, Fredonia, Del., administrator of the estate of JOHN H. C. COWGILL, deceased. — *Sewing-Machine Table.*— December 7, 1869.

Claim.—1. The combination, with a sewing-machine, of an inclined table or support, substantially as and for the purposes described.

2. The combination, with a sewing-machine, of a table or support that is movable or adjustable to any inclination desired, substantially as and for the purpose described.

3. The combination, with a sewing-machine, of an inclined top or support, and rests for the arms of the operator, substantially as and for the purpose described.

4. The combination, with a sewing-machine, of an adjustable slipper-bar, substantially as and for the purpose described.

5. The combination, with a sewing-machine, of an inclined table or support, and an adjustable slipper-bar, substantially as and for the purpose described.

6. The combination, with a sewing-machine, of an inclined adjustable table or support, an adjustable slipper-bar, and rests for the arms of the operator, substantially as and for the purposes described.

97,482.—HUGH H. CRIGIE, New York, N. Y.—*Basin-Trap.*—December 7, 1869; antedated November 25, 1869.

Claim.—The trap *d*, with the coupling *e* and socket *g*, in combination with the segment *h* and screw *i*, as and for the purposes set forth.

97,483.—BIRAM C. DAVIS, Binghamton, N. Y.—*Post-Office Letter-Box.*—December 7, 1869; antedated November 22, 1869.

Claim.—The combination and arrangement of the series of sliding letter-boxes, having guides B B, with the detent-pawls D and E, and the actuating-pawl F, operated by the sliding door G, substantially as and for the purposes herein described.

97,484.—CALVIN S. DAVIS, Orono, assignor to himself and THOMAS N. EGERY, Bangor, Me.—*Clapboard-Machine.*—December 7, 1869.

Claim.—The combination, with a circular saw, of adjustable sappers *f g*, lying in transverse grooves in the collars, and flush with its surface, and set-screws to hold them to place against the face of the saw, all substantially as shown and described.

97,485.—WALTER DAWSON, Scranton, Pa.—*Safety-Valve.*—December 7, 1869.

Claim.—The combination, with the flat valve and seat, of the inverted socket *e*, and pintle *c*, substantially as herein shown and described.

97,486.—JULIUS DOLLMANN and FREDERICK WILLIAM CLAESSENS, Boston, Mass.—*Compound for Lining Textile Hose.*—December 7, 1869.

Claim.—1. The manufacture of a compound, composed of caoutchouc, gum-asphaltum, and benzine, in proportions as set forth, and prepared in the manner described.

2. The application of the compound for lining textile hose, to make it steam, water, and air tight, substantially as described.

97,487.—WILLIAM DYATT, New York, N. Y.—*Hoisting-Apparatus.*—December 7, 1869.

Claim.—The arrangement of two drums, F and E, in combination with their wheels G and H, worked both simultaneously by a pinion J, placed between said wheels and one continuous rope or chain passing over the double pulley B and pulley C, substantially as and for the purpose hereinbefore set forth.

97,488.—JAMES EDGAR, New York, N. Y.—*Ore-Concentrator and Separator.*—December 7, 1869.

Claim.—The imparting of the vertical motion to said cylinder or other shaped vessel *a a*, which contains the ore, and thereby destroying the adhesion of the particles, and, while in this condition, bringing upon them a pressure of air, which may be supplied by bellows, or pump, or in any other way found convenient.

97,489.—WILLIAM EDSON, Boston, Mass., assignor to E. H. ASHCROFT, same place.—*Elevator.*—December 7, 1869.

Claim.—1. The shafts I, having a series of screws or bosses, R, arranged thereon, substantially as and for the purpose described.

2. In combination with the shafts I, having the bosses R secured thereon, the plates J, having the semicircular grooves, with screw-threads cut therein, said parts being arranged for joint operation, substantially as described.

97,490.—C. A. EDWARDS, Chatfield, Minn.—*Sulky-Plow.*—December 7, 1869.

Claim.—The levers A and B, posts C, C, and D, post E, iron rod F, bed-timber G, axle I, plow-beam J, and chain or rope M, all constructed, combined, and arranged as set forth.

97,491.—A. R. FENNER, Cold Brook, N. Y.—*Saw-Set.*—December 7, 1869.

Claim.—1. The combination, with the jaws A and B, the one of which is extended to form a handle, *b*, of the angle-bar E, constructed and arranged as herein described.

2. The combination of the set-regulating screw *e*, the angle-bar E, the jaws A and B, the levers or handles *b b'*, the strap F, with its screw C, and the spring *c*, essentially as shown and described.

3. The combination of the gauge D with the jaws A B, and angle-bar E, substantially as specified.

97,492.—LEONARD FISCHER, Sonora, Cal.—*Wind-Wheel.*—December 7, 1869.

Claim.—The self-regulating apparatus described, consisting essentially of the shafts S^1 S^2, the miter-gear G G, the vanes *v v' b b'*, and the weighted arm a^2, the whole being combined substantially in the manner and for the purpose described.

97,493.—J. HYDE FISHER, Chicago, Ill.—*Fruit-Box.*—December 7, 1869.

Claim.—A fruit-case, made up of several boxes or sections, when the same are combined, arranged, and secured together in the manner shown and described.

97,494.—CALVIN H. FITCH, Syracuse, N. Y.—*Machine for Polishing Stone.*—December 7, 1869.

Claim.—1. The rubbers E E', attached to a rotary disk or balance-wheel, D, and made adjustable thereon, substantially in the manner and for the purpose herein described.

2. The springs *f f*, interposed between the rubbers E E' and rotary disk or balance-wheel D, in combination with said rubbers and wheel, substantially as herein described, for the purpose set forth.

3. The combination of the triangular frame A *a*, with standards B B *b* and a handle H, horizontal rotary balance-wheel D, with shaft *d*, adjustable rubbers E E', springs *f f*, and gearing C *c*, all constructed and arranged to operate substantially as herein described.

97,495.—BENJAMIN APTHORP GOULD FULLER, West Roxbury, Mass.—*Deodorizing-Apparatus for Water-Closets.*—December 7, 1869.

Claim.—1. The dumping-carriage F, as made with or having the gauge G, the opening *c*, and the door *r*, arranged as described, and as combined with the lid or cover of the seat, by means as set forth, whereby such carriage, by and during the movements of the seat, may be caused to operate as explained.

2. The combination of the index-bar *d'* and its stop *e'*, and the series of holes *f*, with the gauge G and the dumping-carriage, combined with the hopper and seat, so as to operate therewith, substantially as set forth.

3. The combination of the scatterer S with the dumping-carriage and the hopper, applied to the seat and its cover, and arranged to operate therewith, as hereinbefore explained.

97,496.—THEODOTUS GARLICK, Cleveland, Ohio.—*Lightning-Rod and Conductor.*—December 7, 1869.

Claim.—In combination with a lightning-rod, the tube A, as shown and described.

97,497.—JAMES GEE, West New Brighton, N. Y.—*Process of Dyeing Black.*—December 7, 1869.

Claim.—1. Combining the dyeing and sizing processes into single operations, substantially as herein specified.

2. The combination of sulphate of copper and logwood with sizing-material, substantially as herein set forth.

3. The combination of bichromate of potash with sizing-matter, to be used substantially as specified.

97,498.—RUDOLPH GESELBRACHT and FREDERICK FREY, Galena, Ill.—*Latch.*—December 7, 1869.

Claim.—The combination of a keeper, of the form described, with the rigid latch and lifter, as and for the purpose specified.

97,499.—FREDERICK M. GIBSON, Chelsea, Mass.—*Boring-Machine.*—December 7, 1869.

Claim.—1. The combination of the slide-rod *p*

with the puppet B and with the collar *g*, and the spring *f* applied to the puppet, and the mandrel C, substantially in manner and so as to operate therewith, as specified.

2. The combination and arrangement of the auxiliary collar *g'* and its adjustable rings *k l*, and their clamp-screws *m n*, with the stirrup *o* and line *m'*, the puppet B, the mandrel C, and the spring *f*, applied to such puppet and mandrel, as specified.

3. The combination and arrangement of the slide-rod *p*, the puppet B, the two collars *g g'*, the spring *f*, and the line *m'*, the whole being to operate together substantially as explained.

4. In combination with the frame A, the puppet B, and mandrel C, mechanism, substantially as specified, whereby the puppet may be adjusted to and sustained in an inclined position on its frame, as and for the purpose of inclining the mandrel, and enabling it to operate while at any such inclination, so as to bore obliquely into a hub or article when placed on the supporting-disk.

97,500.—Dennis Henry Gleeson, San Leandro, Cal., assignor to himself and Dennis Gannon, same place.—*Gang-Plow.*—December 7, 1869.

Claim.—The combination and arrangement of the parts of my gang-plow, as herein described, this combination and arrangement consisting in attaching the draught-pole E, rigidly to the non-extensible axle of the carrying-wheels, the plow-beams being hung on the fulcrum-bolt D, which passes through the forward standards of the driver's seat and the draught-pole in advance of the axle, and which plow-beams are operated by a roller-shaft and attachments, as shown, the whole of the parts being combined and arranged together, in manner substantially as described, and for the purposes as set forth.

97,501.—J. Y. Goode, Water Valley, Miss.—*Well-Auger.*—December 7, 1869.

Claim.—1. A rod, G, attached to the actuating-stock at one end, extending through the tube, and provided near its extremity with a globe or valve, F, all as and for the purpose specified.

2. The combination of the yoke H, long nut I, (slotted at the top,) projection K, key M, and shoulder N, to regulate the exclusion or admission of air to the space below the auger, all as shown and described.

97,502.—Arthur Francis Gregory and Charles H. Ensign, Bridgeport, Conn.—*Sash-Holder.*—December 7, 1869.

Claim.—The combination of the serrated vibrating lever D, with the pusher E and plate C, respectively provided with the projection *g* and lug *h*, as and for the purpose specified.

97,503.—Abram Hagadorn, Canajoharie, N. Y.—*Coal-Ash Sifter.*—December 7, 1869.

Claim.—The hook E, to hold the sifter firmly while being filled, in combination with sifter A, case B, and covers C D, constructed as shown and described.

97,504.—H. L. Hall, Buffalo, N. Y.—*Ditching-Machine.*—December 7, 1869.

Claim.—1. The combination of the toothed plow A, frames B and F, elevator C, rollers D and E, band L, and drive-wheel J, and the transverse carrier G, with each other, substantially as herein shown and described, and for the purpose set forth.

2. Contracting the base-frame B, in the rear of the plow A, and lower end of the elevator C, substantially as herein shown and described, and for the purpose set forth.

97,505.—Thomas S. Hall, Stamford, assignor to Hall's Patent Electric Railway-Switch and Draw-Bridge Company, New Haven, Conn.—*Electro-Magnetic Railroad-Signal.*—December 7, 1869.

Claim.—1. The lever F, connected with the armature D, substantially as herein shown and described for the purpose of retaining the armature A in contact with its magnet B, as long as the current through the magnet E remains open, as set forth.

2. An electric signal provided with a lever, F, which will keep it displayed automatically after the electric circuit through the magnet which set the signal is broken, as set forth.

97,506.—Joseph Hampson, Newburgh, N. Y.—*Boring-Machine.*—December 7, 1869.

Claim.—1. The bushes N N, with shoulders *n n*, in combination with rods G G', head-stocks B B', gearing M^1 M^2 M^3, and hand-wheel L, for altering simultaneously the distance between centers of the drill-spindles C C, as specified.

2. The bolt H with head H^1 and wing-nut H^2, in combination with the head-stocks B B', for holding the spindle stationary, when set right for use.

3. The drilling-machine, composed of frame A, spindle-head stocks B B', revolving spindles C C, with bits D D, rods G G', with bushes N N, gearing M^1 M^2 M^3, hand-wheel L, bolt H H^1, with nut H^2, all combined for the purpose as specified.

97,507.—J. F. Harly, Kipton Station, Ohio.—*Tuyere.*—December 7, 1869.

Claim.—The herein-described tuyere, consisting of the water-chamber B, ash-box I, valve E, ratchet and pinion *a* and G, and pipes H and J, all constructed and arranged to operate as and for the purpose set forth.

97,508.—Henry Haynsworth, Sumter, S. C.—*Garden-Plow and Marker.*—December 7, 1869.

Claim.—The herein-described improved garden-plow and marker, consisting of the beam A, wheel B, plow D, arm F, and marker G, all combined and arranged substantially as specified.

97,509.—William Holcraft and David McLaughlin, Philadelphia, Pa.—*Steam-Generator Smoke-Stacks.*—December 7, 1869; antedated November 20, 1869.

Claim.—The construction and arrangement of the shell E, in the manner and for the purpose herein set forth.

97,510.—George Hopsen, Bridgeport, Conn.—*Machine for Testing Springs.*—December 7, 1869.

Claim.—The spring-testing machine herein described, having means for inducing and continuing the action of the rapidly-moving surface A' on its counter-surface G', a slowly-moving block, D', and connecting-mechanism, arranged as specified, so as to allow the spring to be strained to various degrees between the blocks C' and D', or their equivalents, and the operation to be conveniently repeated and controlled, all substantially in the manner herein set forth.

97,511.—G. E. Hoyt, Hebron, N. H.—*Clothes-Drier and Stove-Pipe Shelf.*—December 7, 1869.

Claim.—1. The ring A, in combination with the center-piece E, as and for the purpose described.

2. The specific device described, consisting of the ring A, clamps B, rods C, and frame D, when used in connection with a stove-pipe, as and for the purpose set forth.

3. The specific device described, consisting of the ring A, clamps B, rods C, frame D, and center-piece E, when used in connection with a supporting-stand, as and for the purpose described.

97,512.—Edward A. Hyde, Ann Arbor, Mich.—*Shot and Bullet Machine.*—December 7, 1869.

Claim.—1. The rotating wheel D, constructed as described, in combination with the cylinder A, as set forth.

2. In combination with the rotating wheel D, the rim C C, provided with the opening F and the cutting-lip G, substantially as set forth.

97,513.—Benjamin F. Irvine and Thomas A. Hitchcock, North La Crosse, Wis.—*Alarm-Lock.*—December 7, 1869; antedated November 27, 1869.

Claim.—The slotted plate B, with projections *a a'*, arranged to operate in connection with the double bolt A, substantially as and for the purpose set forth.

97,514.—Amos A. Jaqua, New York, N. Y., assignor to himself and David Parker, same place.—*Window-Blind.*—December 7, 1869.

Claim.—1. The sockets *c*, for receiving the ends

of the slats, and for the attachment of the cranks or pinions, in combination with the perforated plate G, substantially as herein described.

2. The combination of the plate G, the pivoted sockets *c c*, arms *h h*, rod C, pinions *s*, and rack *f*, the whole forming an apparatus for adjusting the slats within the stile of the blind, substantially as and for the purpose herein specified.

97,515. — JAMES JENKINSON, Williamsburgh, N. Y.—*Sad-Iron Heater.*—December 7, 1869; antedated December 4, 1869.

Claim.—1. The sad-iron C, having the tapering longitudinal hole directly through it, from heel to point, and provided with the rebate at its base, so as to be applied to a heater, in the manner herein set forth and shown, for the purpose specified.

2. In combination with the above, the detachable handle D *d'*, as herein described, for the purpose specified.

97,516.—JOHN S. JENNINGS, Brooklyn, N. Y.—*Chamber-Pail.*—December 7, 1869.

Claim.—1. A pail, provided with a receiving-chamber and spout, formed of one continuous sheet of metal, and shaped as shown and described.

2. A pail, combining a cover, D, extending over the spout, and a receiving-chamber and spout in one piece, each of said parts being constructed, with respect to the others, in the manner described.

97,517.—WESLEY L. JUKES, New York, N. Y., assignor to himself, FREDERICK MCLEWEE, PRENTICE H. PUTNAM, and BRONSON MURRAY, same place.—*Gas-Burner.*—December 7, 1869.

Claim.—1. The use of the tube *d d*, when composed of any material which will not fuse at the temperature required to fuse glass, in combination with the glass arms *c*, as and for the purposes described.

2. Embedding the inner ends of the tubes or tips *d* in the glass arms *c*, or surrounding the ends of the glass arms *c* with the ends of the tubes or tips *d'*, to form secure and gas-tight joints, as and for the purposes described.

97,518.—JEREMIAH KEITH, Brooklyn, N. Y.—*Sewing-Machine for Sewing Shoes.* — December 7, 1869.

Claim. — 1. The combination with the rotating horn, of the slide E, looper D, and detacher *h*, constructed and operating within the horn F, substantially as herein described, for the purpose specified.

2. The combination of the curved back-piece S, pivoted bar T, and swinging bed V, with the horn F and needle-bar, for the purpose of rotating the needle-bar and horn simultaneously, substantially as herein shown and described.

3. The looper D, in combination with the cam K the frame L, connecting-rod N, pivoted lever *m*, short bar *k*, and sliding bar E, the rod N and lever *m* being connected together by a ball-and-socket joint, *o*, all arranged as herein shown and described, and for operating the looper.

4. In combination with the feed-bar *a* and presser-foot *b*, the lever *c*, slotted plate *d*, rod *j*, and its operating-cam, the cam *e*, bar *f*, and springs *i*, substantially as herein described, for the purpose specified.

97,519.—J. KEITH, Brooklyn, N. Y.— *Detachable Tipping-Bail.*—December 7, 1869.

Claim.— 1. A detachable tipping-device, formed of the hoop or band A and bail D, substantially as and for the purposes described.

2. The spring-ears *e*, in combination with a tipping-bail, substantially as and for the purposes described.

97,520.—MOSES A. KELLER, Littlestown, Pa.—*Shaker for Thrashing-Machines.*—December 7, 1869.

Claim. — 1. The bars F, hung upon the crank-shafts G, and carrying the short cross-bars and downwardly-projecting teeth, when provided with the hooks I, projecting into the discharge-spout of the thrasher, for the purpose of guiding the straw to the shaker, as herein shown and described.

2. The opening C and bars D, arranged and operating in connection with the bottom of the shaker, substantially as herein shown and described, and for the purpose set forth.

97,521.—SAMUEL P. KITTLE, Newark, N. J.—*Spring-Bed.*—December 7, 1869.

Claim.—1. A spiral spring, C, made in the form of a truncated cone, the large end of which is adapted to receive a flexible cover or bed, and the small end a securing-button, in combination with said cover or bed and a securing-button, as and for the purpose specified.

2. The combination, with the frame A, of the angle-blocks F and the braces G, when said braces are secured to the angle-blocks by two or more points or screws, so as to prevent the angle-block from turning upon the brace, as hereinbefore set forth.

3. The construction of the catch I, in such a manner that it shall not only form a stop for the ratchet H, but shall also serve as a brace to support the frame against lateral pressure, as hereinbefore set forth.

97,522.—SAMUEL P. KITTLE, Brooklyn, N. Y.—*Folding-Box Spring-Mattress.*—December 7, 1869.

Claim.—1. The combination, in folding-box spring-mattresses made in three sections, of the hinges E E, as and for the purposes set forth.

2. In folding-box spring-mattresses, the sides of the box of less height in the middle than at the ends, in combination with so placing the springs in such central section that the tops of such springs will project over or stand close against the sides of the box, for the purposes set forth.

3. In folding-box spring-mattresses, so made to allow of one end being elevated to form a bolster, bracing the upper row or series of springs in the body of the mattress, by extending a cord from the upper part of such spring forward and downward to or near the bottom of the bolster-section of the box, as and for the purposes set forth.

4. In combination with folding-box spring-mattresses, the use of the hinge E E, for connecting the different sections of the box, constructed as described.

97,523.—HENRY KLIPERD and BENJAMIN NEWBURY, Clarksville, Ohio. — *Combined Shovel and Tongs.*—December 7, 1869; antedated November 30, 1869.

Claim.—The compound lever B *d c b*, when constructed, arranged, and combined with the shovel A *a*, in the manner and for the purpose herein set forth and described.

97,524. — CHARLES KREBS, West Springfield, Mass.—*Mode of Attaching Seats to Carriages.*—December 7, 1869.

Claim.—The piece B, its lower side *h* fitting and bearing upon the base *e'*, said piece B having thereon the hooked projection *t*, the whole forming a lock or fastening-device for carriage-rails, seats, and extension or high backs to seats, all constructed and operating substantially as herein described and for the purposes specified.

97,525.—PERLEY LAFLIN, Warren, assignor to himself and Z. E. CARY, West Brookfield, Mass.—*Attaching Calks to Horseshoes.*—December 7, 1869.

Claim.—1. The combination with the shoe of the hinged cross-braces which carry the calks, and means, substantially such as herein described, for spreading the ends of said braces or projections on the same against the shoe, substantially as shown and set forth.

2. The combination, with the cross-supporting pieces B B', of a hinged bolt-arm, F, substantially as set forth.

3. The combination, with the cross-supporting braces B B', of a conical clamping-nut and hinged-bolt support, substantially as and for the purposes set forth.

97,526.—J. H. LANE and C. D. HOUSE, Lake Village, N. H.—*Knitting-Machine Needle.*—December 7, 1869.

Claim.— The knitting-machine needle herein described, having elongated openings in the sides, to receive the flattened ends of the pivot on which the latch turns, said pivot being flattened after it is passed through the latch, and the latch and its pivot being secured in place in the shank of the needle, by springing the slot in the shank open.

97,527.—Jacques Laurent, New York, N. Y.—*Machine for Drilling and Preparing Watch-Cases for Springing.*—December 7, 1869.

Claim.—1. The combination of the drills F F′, their holders *m m*, drill-stocks I I′, and sliding-boxes K K′, with the right and left-handed adjusting-screw M, substantially as specified.

2. The combination of the drill G, its holder *n*, the drill-stock J, and horizontal adjusting-screw N, with the adjustable drills F F′, and their holders *m m*, essentially as herein set forth.

3. The combination of the adjustable revolving burr H with the adjustable drills F F′, and G, and their holders, substantially as specified.

4. The combination of the vertically and horizontally-adjustable drills F F′, and G, and their holders, the adjustable rotating burr H, and the horizontally-adjustable bed B, made capable of vertical action, and carrying a suitable die, D, essentially as and for the purpose or purposes herein set forth.

97,528.—Samuel Lenher and Hallam H. Spencer, Philadelphia, Pa.—*Mode of Preparing Paper for Printing Postage and Revenue Stamps.*—December 7, 1869.

Claim.—1. The preparation compounded of the ingredients specified, for the purpose set forth.

2. A preparation for printing postage or revenue stamps upon, and from which the mark of cancellation cannot be effaced without disintegrating such preparation, either by chemical action alone, or by chemical and mechanical action combined, substantially in the manner described.

97,529.—George W. Lewin, Worcester, Mass.—*Base-Burning Stove.*—December 7, 1869.

Claim.—1. The combination, with a base-burning stove, of an oven, B, substantially as and for the purposes set forth.

2. The arrangement of the supply-cylinder F, fire-pot E, ash-pit D, oven B, and hot-air chambers or passages C and *a*, substantially as and for the purposes set forth.

3. The combination and relative arrangement, in a base-burning stove, of a perforated air-chamber, *b*, and oven B, as shown and described.

97,530.—John S. Lewis, Elkport, Iowa.—*Broadcast-Seeder.*—December 7, 1869.

Claim.—1. A broadcast-seeder, having a seed-box, A, adapted to receive the seed continuously from the bag during the operation, substantially as herein described.

2. The combination, with the seed-slide E of a broadcast seeder, of scattering-lips *e′*, arranged and operating as herein set forth.

97,531.—Sylvanus D. Locke, Janesville, Wis.—*Grain-Binder.*—December 7, 1869.

Claim.—1. The combination of the cam-arm D′ with the binding-arms I J, substantially as described.

2. The finger *d* and lever *b′*, for supporting the disengaging-part *b*, substantially as described.

97,532.—Sylvanus D. Locke, Janesville, Wis.—*Grain-Binder.*—December 7, 1869.

Claim.—The arrangement of the cam-arm A, pivoted as described, with the cam-block *c c′*, substantially as and for the purpose described.

97,533.—Sylvanus D. Locke, Janesville, Wis.—*Grain-Binder.*—December 7, 1869.

Claim.—1. The combination of the cam-arm A with the spring *d* and spring-arm B, substantially as described.

2. The combination of the cam-arm A, spring *d*, spring-arm B, and segmental gears *k* and C, for the purpose of producing a yielding or elastic, and, at the same time, a reciprocating movement of a compressing-arm of a grain-binder, substantially as described.

97,534.—Sylvanus D. Locke, Janesville, Wis.—*Grain-Binder.*—December 7, 1869.

Claim.—The combination of a rotary tying or twisting device, circular-moving cutting-mechanism, and reciprocating wire or cord holder, substantially as described.

97,535.—Sylvanus D. Locke, Janesville, Wis.—*Grain-Binder.*—December 7, 1869.

Claim.—The arrangement of the part N, and cutting-device *h*, substantially as described.

97,536.—Sylvanus D. Locke, Janesville, Wis.—*Grain-Binder.*—December 7, 1869.

Claim.—The central bolt *h k*, when used to hold and adjust the rotary parts of the wire-holding and wire-cutting mechanism against the face of the fixed part *m*, substantially as described.

97,537.—John Logan and D. W. Eldredge, Boston, Mass.—*Metallic Cartridge.*—December 7, 1869.

Claim.—1. A cartridge-shell, made of a tube of thin sheet-metal, open-ended, and with one end formed into the flange *b*, and breeched with a separate piece of metal, with which the nipple is integral, when the nipple is exposed, so that it can be capped and recapped, as described.

2. A cartridge-shell, in which the breech-piece is made separate from the tube, when combined with a nipple integral with the breech-piece, and bushed, as described.

3. The flange *c*, projecting inwardly, and combined with a nipple contained in a cavity in the rear end of the shell, for the purpose specified.

97,538.—Arthur Love, Saxonburgh, Pa.—*Portable Fence.*—December 7, 1869; antedated November 22, 1869.

Claim.—A portable fence, consisting of panels having the strips *b*, and triangular piece C, secured thereto, and held together by the notched bars D, all constructed and arranged substantially as shown and described.

97,539.—Patrick Magee, Assumption Parish, La., assignor to Felix Thibodaux, same place.—*Sawing-Machine.*—December 7, 1869.

Claim.—The combination of the frame A A′ and B, with braces G G′, shaft B′, lever C′, link D, cranks C and E, clamp E′, and pitman F, when all the parts are constructed, arranged, and operate as herein described for the purpose set forth.

97,540.—John Jacob Märki, Richmond, Ind.—*Cooler for Beer and other Liquids.*—December 7, 1869.

Claim.—The combination of a series of perforated pans with a series of blowers, operating substantially as described.

97,541.—Godlip Meyer, Cleveland, Ohio, assignor to himself and Jacob Wagner, same place.—*Machine for Wiring Blind-Rods and Slats.*—December 7, 1869.

Claim.—The cog-wheels O R O′, pinions Q S, crank-wheels E G, driving-rods D D′, adjustable feather N, spring *c*, lever I, and foot J, all arranged substantially as described, and for the purpose specified.

97,542.—Henry Miller, Roadside, Va.—*Garden-Implement.*—December 7, 1869.

Claim.—1. In combination with the stock A, the polygonal hollow pins *d*, substantially as set forth.

2. In combination with the stock A, the equilateral triangular hoe *e*, substantially as explained.

97,543.—John C. Mills, Palmyra, N. Y.—*Combined Hay-Rake and Tedder.*—December 7, 1869.

Claim.—A combined hay-rake and tedder, consisting of a rake-bar, C, curved tines G, handle D, and detent-bar N, and the shaft H, having teeth I, supported on the horizontal arms J J′, removable by means of slide O and clip P, and operated by wheel L and pulley M, arranged as described.

97,544.—John H. Mooney, San Francisco, Cal.—*Tuck-Creaser for Sewing-Machines.*—December 7, 1869.

Claim.—1. The arm C, having thereon friction-rollers D D′, and operated by the needle-arm in combination with the conical cam E, substantially as described.

2. The adjustable conical cam, in combination

with the ereasing-arm for regulating the forec of the arm on the fabrie, to form the erease, as desired.

3. The eombination, with the arm C and the roeking ereasing-bar F, of the base-plate A, slotted holding-plate G, and rod H, when all are eonstructed and eombined as and for the purpose set forth.

97,545. — JOHN MÜLLER, Philadelphia, Pa. — *Folding-Bedstead.*—Deeember 7, 1869.

Claim.—1. Forming bearings *b b* and reeesses *a a* in the head and foot pieee of a bedstead or erib, to reeeive the ends of journals c^2 c^3 of the side-pieees C C, as shown and described.

2. The supports D D, provided with pins *d d*, in combination with the bottom E and serews F F, eonstrueted and arranged as herein deseribed, for the purpose speeified.

3. The means, herein deseribed, for uniting the several parts of a bedstead or erib, as deseribed.

97,546.—H. OLNEY, Malone, N. Y., assignor to himself, ROBERT A. DELONG, and LUCIUS R. TOWNSEND, same plaee.—*Rotary Steam-Engine.*—Deeember 7, 1869.

Claim.—1. A rotary engine, eontaining a series of radial cylinders in a revolving frame, the pistons of the said cylinders being all conneeted with a ring on a fixed eccentric, substantially as herein shown and deseribed.

2. The eireular valve L, having the apertures *n* and *o*, to automatically conduet the steam into the outer and inner parts of the eylinders as they arrive at eertain positions, substantially as herein shown and deseribed.

3. The tubular axle C, earrying the eceentrie or erank-pin *g* and the valve-disk L, and made reversible, with its appendages, to reverse the whole maehine, as set forth.

4. The handle *j* and serew *i*, or its equivalent, eombined with the tubular axle C, to loek the same, substantially as deseribed, and to serve to reverse the same, as speeified.

5. The pipes *c d*, eonducting the steam from a revolving steam-chest to the outer and inner ends, respeetively, of the eylinders, substantially as and for the purpose herein shown and deseribed.

97,547.—EMERY PARKER, New Britain, Conn. —*Sheet-Metal Key.*—Deeember 7, 1869.

Claim.—1. Making that part of the jointed shank of a sheet-metal key into which the part holding the key proper folds, corrugated or arehed in the line of its axis, substantially as deseribed, for the purpose speeified.

2. Making the split shank of a sheet-metal key with an intermediate transverse braee, *c*, eorresponding in form to the curvature of the sides, substantially as deseribed, for the purposes specified.

97,548.—JOSEPH PARKIN and JAMES H. SMITH, Cleveland, Ohio.—*Window and Door-Cap Molding.* —Deeember 7, 1869.

Claim.—The metal molding, eonstrueted in the manner above deseribed, as a new artiele of manufaeture.

97,549.—GEORGE S. PIERCE, Wilkesbarre, Pa. —*Device for Forming Boilers.*—December 7, 1869.

Claim.—The shaft A, with its two mortises *m m*, segmental plates B B, with arms *c c*, set-serew S, follower D, with its eap and mortise, and fastened with the thumb-serew T, arranged as described.

97,550. — OLIVER E. PILLARD, New Britain, Conn., assignor to FREDERICK H. NORTH, same plaee.—*Permutation-Lock.*—Deeember 7, 1869.

Claim.—The latch B, when seeured to the ease A, and provided with the slide C, arranged to slide longitudinally with the same, substantially as deseribed.

97,551.—SAWYER PORTER, Leominster, Mass., assignor to himself and LEVI W. PORTER, same plaee.—*Machinery for Making Piano-Forte Cases.*— Deeember 7, 1869.

Claim.—1. The above-explained arrangement of the edges or gauges *l m* of the platform G, with the eutter-wheel E, applied to the frame A, aud so as to operate with sueh platform, substantially in manner as speeified.

2. The eombination of the eoncave eutter-wheel E, its frame B, its operative screw C, the vertieal guides *b b*, and the platform G, formed as set forth, and arranged as deseribed, with the said eutter-wheel and its operative mechanism, the whole being as and for the purpose and to operate as speeified.

97,552. — PERLEY PUTNAM, Laeonia, N. H.— *Railway-Car Wheel and Axle.*—December 7, 1869.

Claim.—1. The splines D D and operating-serews E E, applied to and in eombination with the axle A and wheels B B, substantially as and for the purpose herein speeified.

2. The head *d* on the small end of eaeh spline, in eonneetion with the reeess *e* and shoulder *f* in the wheel, for the purpose set forth.

3. The eeeentric or spring-stop *t* on the spline, eonstrueted and arranged, in eonneetion with the wheel-hub, substantially as and for the purpose herein speeified.

4. The spring-band *r*, in eombination with the spline and wheel-hub, for the purpose herein set forth.

97,553.—WILLIAM O. ROBBINS and CHARLES W. STAFFORD, New York, N. Y.—*Machine for Preparing Paving-Blocks.*—Deeember 7, 1869; antedated November 30, 1869.

Claim.—1. In a maehine for dressing and grooving wooden paving-bloeks, the eombination of the following deviees: first, a rotary eutter for redueing the bloeks to a uniform thiekness; seeond, meehanism for holding the bloeks while being eut; third, meehanism for feeding the bloeks through the maehine; fourth, eutters for eutting erosswise of the grain of the wood, and forming a dovetail groove in the sides of said bloeks; and fifth, eutters 13 for removing the upper angle of said bloeks, the parts being eonstrueted, arranged, and operatiug substantially as and for the purposes set forth.

2. In a maehine for grooving wooden paving-bloeks, the eombination of second, third, and fourth of the before-named deviees, for grooving the sides of pavement-bloeks transversely of the grain of the wood, substantially as and for the purposes set forth.

97,554. — WILLIAM O. ROBBINS and CHARLES W. STAFFORD, New York, N. Y.—*Machinery for Preparing Wooden Blocks for Pavement.*—Deeember 7, 1869.

Claim.—The vertieal eutters and spindles *f i*, and horizontal revolving eutters *t* or *u*, in eombination with the reciproeating earriage *g h k*, all the parts being eonstrueted and arranged to operate substantially as described and for the purposes set forth.

97,555. — N. T. P. ROBERTSON and THOMAS NILES, Fairbury, Ill.—*Compound for Destroying Insects.*—December 7, 1869.

Claim.—A eompound, eomposed of the above-named artieles, in or about the proportions speeified, and used for the purposes herein set forth and deseribed.

97,556.—A. SHELINE and E. BURKE, Edon, Ohio. —*Harvester.*—Deeember 7, 1869.

Claim.—1. The arrangement of the gear-wheels A B, elutehes D, on the driving-shaft C, pinions F G, eountershaft E, eluteh-springs *b*, button C′, and hand-lever, all substantially as speeified.

2. The arrangement of the tubular bearing K, shoe I, pitman-shaft H, and braees M, substantially as speeified.

3. The eombiuation, with the truck and the mower-bar, of the shaft O, arms O^1 O^2, segmental-beveled wheels, shaft P, and lever P^2, when arranged substantially as speeified.

4. The arrangement of the belt S^5, shaft S^4, pitman-shaft H, wheels S^8, shaft S^6, belt S^7, with the reel-shaft aud pulley thereon, substantially as speeified.

5. The arrangement of the eurved post T^2, slide T^1, radial bar T^3, and spring-stop T^4, substantially as speeified.

6. The eombiuation, with the elevator, of the eutoff U U^1, dropper V^2, slide V, dog U^2, rod V^1, and rod V^4, all substantially as speeified.

97,557.—Abraham Shenfield, New York, N. Y.—*Suspenders.*—December 7, 1869.

Claim.—The yoke formed of the straps A, A, and D, united at B C, and arranged as specified, in combination with the double buttoning-straps E applied at the sides and back so as to slide through the respective loops by which said straps E are connected to the said yoke, for the purposes and as specified.

97,558.—Samuel W. Shorey, Galesburgh, Ill.—*Boot-Conformator.*—December 7, 1869.

Claim.—1. The combination of the sole-plate A, outside surrounding frame B, and radial bars F, with the adjustable measuring-uprights C, and springs *s*, for measuring the tread or contour of the foot, substantially as specified.

2. The combination, with the adjustable measuring-uprights C, or certain of them, of the vertically-adjustable horizontal bars D, for measuring the height of the foot at certain parts, as well as at its contour or tread, essentially as herein set forth.

3. The combination of the springs *s* with the adjustable measuring-uprights C, operating independently of each other, substantially as and for the purpose specified.

4. The arrangement of a scale or scales on the measuring-uprights C, which carry the vertically-adjustable horizontal bars D, essentially as described.

5. A boot-conformator made up of a sole-plate, A, surrounding hinged or vertically-operating frame B, yielding or adjustable measuring-uprights C, with their markers E and vertically-adjustable horizontal bars D, substantially as specified.

97,559.—Addison Smith, Perrysburgh, Ohio.—*Combined Umbrella and Cane.*—December 7, 1869.

Claim.—The arrangement of the spring-pawl D and ferrule C with the lower detachable section of the standard B, for the purposes herein described, substantially as set forth.

97,560.—Cyrus Smith, Hermon, Me.—*Safety-Lamp.*—December 7, 1869.

Claim.—1. The guards C, with the end-pieces O′ and stops *d*, in combination with the wick-tube B, as and for the purpose set forth.

2. In combination with the above, the lever E, arranged and operating substantially as described.

97,561.—Dexter Smith, Springfield, Mass.—*Manufacture of Cartridge-Shells.*—December 7, 1869.

Claim.—The method herein shown of striking up a solid head upon a metallic cartridge-shell, by means of the punch B, die C, and header A, the parts being constructed, arranged, and operating in the manner and for the purpose shown and set forth.

97,562.—E. N. Snow, Chicopee, Mass.—*Garment-Suspender.*—December 7, 1869.

Claim.—The construction by which the vertical piece of wire C and the elliptical piece are connected, by twisting the end of A around the piece C at E, and in the means of suspending it, as shown and described.

97,563.—Pratt A. Spicer, Marshall, Mich.—*Track-Cleaner for Mowing-Machine.*—December 7, 1869.

Claim.—The upper swath-stick of a grass-divider, formed with a portion ascending from the base or socket *i*, and then deflected downward at any suitable angle of inclination to, or nearly to the ground, such deflected portion standing at the proper angle or curve of lateral divergence from the dividing line, whereby the fallen grass is first raised, and then cleared from the divider, and spread evenly on the swath, substantially as herein described and shown.

97,564.—Edward Sullivan, Pittsburgh, Pa.—*Piston-Packing.*—December 7, 1869.

Claim.—Making a recess in a packing-ring, at its joint, and using, in combination with said recess, a plate, and a metal or alloy filling, as herein described.

97,565.—D. G. Taylor, Campbellsville, Ky.—*Churning-Machine.*—December 7, 1869.

Claim.—The combination of the churn with the platform C, made in two parts, the one, c^1, stationary, the other, c^2, movable, and secured by hooks to the frame D, all constructed and arranged as herein shown and described, for the purpose set forth.

97,566.—Thomas Taylor, Washington, D. C.—*Explosive Compound for Use in Fire-Arms, Blasting, &c.*—December 7, 1869.

Claim.—The combination of ingredients, forming a new explosive, for the purposes set forth and described, substantially.

97,567.—Thomas Taylor, Washington, D. C.—*Gunpowder.*—December 7, 1869.

Claim.—The combination of paraffine with ordinary gunpowder, in all proportions, for the purpose substantially set forth and described.

97,568.—M. P. Thatcher, Pontiac, assignor to Julius A. Foster, Adrian, Mich.—*Combination-Padlock.*—December 7, 1869.

Claim.—1. The dog E, as constructed, with inclined catches, in combination with spring T and slotted bolt G, as and for the purpose specified.

2. The tumblers *m m*, &c., constructed with dished surfaces on one side and projecting rings 1 on the other, as and for the purpose specified.

3. The combination of slotted bolt G, dog E, with inclined catches, spring T, barrel H, tumblers *m m*, &c., heads B and C, screw *t*, and staple A, constructed and operating substantially as and for the purpose specified.

97,569.—George Theobalt, Springfield, Mass.—*Check-Hook.*—December 7, 1869.

Claim.—The construction of the hook A, with projections D and E, and with screw-hole C, whereby it is attached to the saddle by means of the screw-bolt B.

97,570.—William F. Thoms, New York, N. Y.—*Ventilator.*—December 7, 1869.

Claim.—1. The combination and arrangement of the pipes B A C D E and valve F, with each other, when used alone or in connection with the pipes H G I K, said parts B A C D E F being constructed and operating substantially as herein shown and described, and for the purpose set forth.

2. The combination of the pipes H G I K, and valve J, with each other, whether used alone or in connection with the pipes B A C D E, said parts H G I K J being constructed and operating substantially as herein shown and described, and for the purpose set forth.

3. The combination of a charcoal-stove or other heater with the pipes A and G, or either of them, substantially as herein shown and described, and for the purpose set forth.

4. The combination of one or more gratings k^1, with the pipe K of the apparatus G H I J K, substantially as herein shown and described, and for the purpose set forth.

97,571.—Lewis W. Truesdell, Owego, N. Y.—*Instrument for Describing Spiral Lines.*—December 7, 1869; antedated November 30, 1869.

Claim.—1. The peculiar construction of the traverse-wheel E, with its outer ring, J, with rubber band thereon, the inner ring with its plate *m*, and screws holding the tube *n*, with its projecting arm and set-screw *r*, or any arrangement of parts substantially the same as herein set forth and described.

2. In combination with the traverse-wheel E, the screw-shaft F, pencil-carrier *b*, and ring *o*, when these several parts are applied in a compound "spiro-volutograph" for drawing concentric spiral lines, in the manner herein specified.

97,572.—Cornelius Walsh, Newark, N. J.—*Trunk-Hasp.*—December 7, 1869.

Claim.—1. The cushion *g*, confined within a suitable socket in the upper part of the hasp, and bearing downward against a shoulder, *k*, on the lower part, substantially as set forth.

2. The combination, with the face-plate *a* and hasp proper *b*, of the recess *f*, cap *h*, screws *i j*, and projection *k*, formed and arranged as described, for the reception of an elastic cushion, *g*, by which to elevate and support the hasp proper, when released, as set forth.

3. The bent lip *m*, catching against a shoulder on the projection *k*, acting as a stop, to limit the elevation of the hasp, as described.

97,573.—HIRAM J. WATTLES, Rockford, Ill.—*Cultivator.*—December 7, 1869.

Claim.—1. The frame described, consisting of the longitudinal beams A A, transverse beams B *b b*, and braces C C, the whole being combined and arranged as described, for the purpose set forth.

2. The brace M, constructed as described, with the half circle *m* m^1, and hinge m^2, for the purpose described.

3. The machine described, having the frame A B *b* C, lifting-devices E *e* G H, beams J, standards K, the whole combined and arranged as described, for the purpose set forth.

97,574.—MARTIN WESSON, Springfield, Mass.—*Surcingle.*—December 7, 1869.

Claim.—An improved surcingle, consisting of the main web C, the elastic web D, and the clasp *a a'*, all constructed and operating substantially as and for the purpose herein described.

97,575.—SETH WHEELER, Albany, N.Y.—*Shaft-Coupling.*—December 7, 1869.

Claim.—The case *a b*, extending between the bearing-points of A and B, substantially as described.

97,576.—CHARLES F. WHORF, Saint Louis, Mo.—*Ventilator.*—December 7, 1869.

Claim.—The furnace or heater H, with reservoir I, and smoke-pipe D, in combination with ventilating-stack E, pipe or duct G, provided with openings, and pipes or ducts A B C, arranged and operating substantially in the manner and for the purpose described.

97,577.—M. F. WICKERSHAM, Springfield, Ill.—*Railway-Track Cleaner.*—December 7, 1869.

Claim.—1. The cylindrical rotary brushes H, arranged as described, upon the frame A, with relation to the rails of a railroad-track, and hung upon the lever-arms I I', in such a manner as to be raised or lowered simultaneously, or in succession, substantially as herein shown and described, for the purpose specified.

2. In combination with the cylindrical brushes H, and the main frame A, the pivoted inclined aprons or spouts O, and spouts P or P', receiving the dirt directly from the spouts O, substantially as herein shown and described, for the purpose specified.

3. The axle *a a'*, constructed as described, with the plates B, and arranged substantially as and for the purpose specified.

4. The frame A, constructed as described, with removable cases L, and adapted to be guided, with relation to the rails of the track, by means of the truck B B', as herein set forth and shown, for the purpose specified.

97,578.—SAMUEL Q. WILLIAMS, Rutland, Vt.—*Trace-Lock for Whiffletree.*—December 7, 1869.

Claim.—The springs C, in combination with the whiffletree and trace-hooks, when said springs are so constructed as to enter the same eyes of the traces or tugs with the trace-hooks, and hold the said tugs or traces forward upon said hooks, substantially as herein shown and described, and for the purpose set forth.

97,579.—FREDERICK WITTRAM, San Francisco, Cal.—*Seat for Chairs, Sofas, &c.*—December 7, 1869.

Claim.—The combination of the spring-blocks C, with parallel sides, and sliding in contact, the horizontal partition B, the pins D, and the frame A, when constructed and arranged as herein described.

97,580.—JOSEPH S. WOOD, Philadelphia, Pa., assignor to himself and JOHN J. CARBERRY, same place. — *Generating Hydrogen and Hydrocarbon Gas.*—December 7, 1869.

Claim.—1. The double cylindrical vessel A B, for generating hydrogen-gas for illuminating purposes, constructed substantially as described.

2. The supplementary telescopic tube P, constructed with the gas-chamber *p''*, carbureting-chamber *p'*, and pipe R, substantially as described.

3. The combination of the double vessel A B, the telescopic tube P, (containing the carbureting-apparatus,) and the tubes R and G, arranged substantially as described.

4. The construction of the vessel A B, with the tube G adapted to receive the reservoir-tube H, for making hydrogen-gas, or the supplementary tube P, for making hydrocarbon-gas, as herein described.

97,581.—THOMAS B. WORRELL and THOMAS WALKER, Philadelphia, Pa., assignors to THOMAS B. WORRELL.—*Lock.*—December 7, 1869.

Claim.—1. The combination and arrangement of the interlocking-bars D and D', with the pinion F', when the teeth of one bar are of greater width than the teeth of the other, and the pinion has a reciprocating movement inward and outward, so as to be disengaged at pleasure from one of the bars, whereby an unequal movement of the two bars is effected, substantially in the manner and for the purpose hereinbefore described.

2. The construction of the bar D', with teeth, *d*, on both edges, whereby to provide for changing its connection with the pinion F', to make the lock A susceptible of many additional changes, substantially as described.

97,582.—JOHN AMSTERDAM, New York, N. Y.—*Manufacture of Steel.*—December 7, 1869.

Claim.—1. A steel compound, made of cast or Bessemer steel, and cemented steel or steel cementation, substantially in the manner and for the purposes described.

2. A compound, made of cast or Bessemer steel and case-hardened wrought iron, substantially in the manner herein set forth.

3. The within-described process of producing a compound of steel and iron, or of cast or Bessemer steel and blistered steel, by clamping a slab of iron or blistered steel between the closing faces of the mold, and pouring the molten cast or Bessemer steel against it, substantially as set forth.

4. Clamping two slabs of iron or cemented steel, face to face, between the closing edges of the mold, so as to produce two castings of the same mold, substantially as described.

97,583.—BERNHARD ADLER, New York, N. Y., assignor to himself and W. N. DRESCHER, same place.—*Drinking-Cup.*—December 7, 1869.

Claim.—A cup for medicinal or effervescing draughts, divided interiorly by partitions, vertically disposed into compartments, having a common point of discharge, substantially as herein set forth.

97,584.—J. R. ALLEN, Edinburgh, Ind.—*Grain-Separator.*—December 7, 1869; antedated November 27, 1869.

Claim.—The metal plate B, provided with the wings *a a*, and the wings *b b*, placed in rows, and connected to the frame A, substantially as and for the purposes specified.

97,585.—WILLIAM W. ALLMAND, East Boston, Mass.—*Packing for Stuffing-Boxes.*—December 7, 1869.

Claim.—The employment of a ring of wood, or its equivalent, between packing, (composed wholly or in part of rubber,) and the rod, substantially as and for the purpose set forth.

97,586.—JAMES B. AYER, Elizabeth, N. J.—*Driving-Mechanism for Sewing-Machines.*—December 7, 1869.

Claim.—1. The wheel F, constructed as described, and provided with the spring L, shaft H, and ratchet J, in combination with the belt-wheel C and brake N, all arranged and operating substantially as and for the purpose set forth.

2. Constructing the driving-wheel as described, and arranging within the same the power, substantially in the manner and for the purpose set forth.

3. In combination with the driving-mechanism the brake N, for regulating the speed of the belt-wheel, substantially as described.

97,587.—W. M. BAKER, Greenwich Station, Ohio.—*Horse-Collar.*—December 7, 1869.

Claim.—The collar A B, constructed with a stay, E, bar G, trip H, lever J, spring I, and tug-irons K, in the manner substantially as and for the purpose set forth.

97,588. — THOMAS J. BARGIS and JOHN C. UNDERWOOD, Richmond, Ind.—*Fruit-Jar.*—December 7, 1869.

Claim.—1. The construction of a fruit-jar or can with a continuous ledge, or its equivalent, around the lower portion of the interior of the neck of the same, to receive the float, and arrest its movement in a downward direction, as described.

2. The arrangement of the hollow float A, with reference to the ledge or projections *b*, and the permanent cover C, it being such that the movements of said float are controlled thereby, in the manner and for the purpose set forth.

97,589.—BENJAMIN J. BARTON and ROSWELL J. STANLEY, Washington, Iowa.—*Spring for Horse-Collars.*—December 7, 1869.

Claim. — 1. The spring B, constructed as described, and secured around the collar in the manner herein shown and described, for the purpose specified.

2. The staple C, in combination with the spring B and collar A, substantially as herein shown and described, and for the purpose set forth.

3. The staple or staples D, in combination with the spring B and collar A, substantially as herein shown and described, and for the purpose set forth.

97,590.—H. T. BEAM, JOSEPH C. FREEMAN, and D. B. MILLS, Palestine, Ill. — *Hollow Auger.*—December 7, 1869.

Claim. — 1. The combination of the stock A, guide E, spindle F, ring C, and knife D, when constructed and arranged substantially as shown and described.

2. The knife D, when constructed and used substantially as and for the purpose shown and described.

97,591.—E. R. BEARDSLEY, Aroma, Ill.— *Water-Wheel.*—December 7, 1869.

Claim.—The wheel A, having the case or dome E, the buckets B, and annular gate C, all constructed and arranged substantially as described.

97,592. — A. BECKWITH, New Orleans, La.— *Horse-Collar.*—December 7, 1869.

Claim.—As a new article of manufacture, a horse-collar, having a rope foundation for the front rim, but otherwise made like any ordinary collar, substantially as set forth.

97,593.—HENRY BELFIELD, Philadelphia, Pa.— *Railway-Rail.*—December 7, 1869.

Claim.—1. The within-described "truss-rail," consisting of the sections A and A, held apart by the fish-plates E, and connected with each other by means of said plates and the bolts, F, substantially as and for the purpose specified.

2. In a rail composed of vertical longitudinal sections, the connecting together of said sections so as to leave between the same a vertical longitudinal space open at both top and bottom, substantially as and for the purpose shown.

97,594. — THOMAS M. BIDDLE, Fort Wayne, Ind.—*Alarm-Faucet.*—December 7, 1869.

Claim. — 1. The funnel, provided with a float, which, when raised, serves to close the faucet, through which the liquor flows into said funnel, substantially as herein shown and described.

2. The combination of the float I, rod K, lever *h*, rod *g*, chain *r*, shaft *n*, and hammer L, arranged and operating as described, to strike the bell M, as set forth.

3. The swinging tube D, arranged on the plate C, which is suspended from a supply-faucet or tube, substantially as herein shown and described.

4. The arbor *n*, having the cranks *o* and *p*, and connected with the pivoted tube D, when combined with the lever *g*, catch *h*, spring *e*, and float I of the funnel, substantially as herein shown and described.

97,595. — SAMUEL BLACKMAN, Reading, Pa.— *Steam-Gauge Cock.*—December 7, 1869.

Claim.—The casing A, adapted for application to a boiler, having a valve-seat at its inner end, and a packing, *h*, in combination with the sliding rod B, its valve *e*, and passages *b* and *k*, and with the lever F, connected to a projection on the casing, and operating as set forth.

97,596.—NICHOLAS H. BORGFELT, New York, N. Y. — *Machine for Preparing Tobacco-Stems.* — December 7, 1869.

Claim.—In a machine for preparing the stems of tobacco-leaves, the combination of pressing-rollers C and drawing-rollers D, constructed and operating substantially as set forth.

97,597.—JULIUS BRONNER and HERMANN GUTZKOW, Frankfort-on-the-Main, Prussia. — *Process of Treating Asphaltum to Obtain Colors and Dyes.*— December 7, 1869.

Claim.—1. The preparation of anthracene and similar substances out of asphaltos, that is to say, pitch obtained from coal-tar in the manner herein set forth, and the oxidizing of the product which we obtain out of the anthracene, by means of nitric acid or the other substances hereinbefore recited, using, in the said oxidation, the substances above mentioned, or other substances acting in a similar manner, and in the further treatment with alkalies, if necessary to the complete development of the two coloring-matters.

2. Changing anthracene into both coloring-matters in one operation, by uniting or combining the two described processes, the whole substantially as herein set forth.

97,598. — J. G. BURWELL and J. J. WALLS, Crystal Springs, Miss.—*Dumping-Wagon.*—December 7, 1869.

Claim.—The combination, with the front and rear axles A D, of the two parallel rails G G, with hooks *e e*, bolsters B F, with perforated plates *c c*, and arms *f f*, boxes H I, with pivoted and pendant-bars J J, and hooks *d d*, all constructed and operating substantially as set forth.

97,599. — JOHN F. BYLAND, Walton, Ky.— *Corn-Harvester.*—December 7, 1869.

Claim.—1. The provision, in a corn-harvester, of the knives J J′ *j*, and hinged bars I I′, arranged and operated substantially as described.

2. In combination with the knives J J′ and hinged bars I I′, the gathering-arms G G′ and the rest-bar E, substantially as described.

97,600.—HENRI CABANES, Bordeaux, France.— *Apparatus for Dressing Flour.*—December 7, 1869.

Claim.—1. The devices herein described, or any equivalents to the same, whereby an elastic network, or series of elastic cords, *b*, may be drawn back from a bolting-cloth, *a*, and suddenly released, so as to strike the said cloth, substantially in the manner and for the purpose herein set forth.

2. The combination of a bolting-cloth, a fan, or its equivalent, and conducting-tubes, so arranged that a current of air is passed beneath the said cloth, and supports the latter, substantially as described.

97,601.—C. A. CHAMBERLIN, Pittsburgh, Pa.— *Railroad-Ticket.*—December 7, 1869.

Claim.—1. Forming the tickets with a raised number, letter, letters, figure or other mark, to serve as a type to register the station to or from which the ticket is issued, substantially as herein shown and described.

2. Cutting, defacing, or marring the raised number, letter, mark, or figure, upon the ticket, in the act of printing with it, so that it cannot be again used as a type, substantially as herein shown and described, and for the purpose set forth.

3. Printing or impressing upon the tickets, at the time of selling, the name of the station, from or to which the ticket is sold, by the same impression or operation by which the numbers or marks of the two stations are printed upon the register, (the name of the other station having been previously printed upon said ticket,) substantially as herein shown and described, and for the purpose set forth.

97,602.—Bela L. Churchill and George Z. Vanderslice, Philipsburgh, Pa.—*Device for Turning Logs in Saw-Mill.*—December 7, 1869.

Claim.—1. The combination of the lever E, with the rope or chain G attached thereto, and the push-bar F, with the carriage of a saw-mill, all arranged to operate substantially as described.

2. Turning a log on a saw-mill carriage, by the backward movement of the carriage, in connection with the lever E, rope or chain G, and push-bar F, as set forth.

97,603.—D. J. Clark, W. F. Doggett, and S. M. Burr, Columbus, Ohio.—*Wooden Trunk.*—December 7, 1869.

Claim.—A trunk formed of two pieces of bent wood, one piece forming the top and sides, and the other the bottom and ends, substantially as herein set forth.

97,604.—Frances E. Clarke, Flint, Mich., assignor to Thomas D. Clarke, same place.—*Dish-Washer.*—December 7, 1869.

Claim.—The vessel A B C, provided with strainers *c*, wheel E, and adjustable racks F G H *f g*, when constructed and arranged to operate as herein described, for the purpose specified.

97,605.—George Edward Cleeton, New Haven, Conn.—*Folding Chicken-Coop.*—December 7, 1869.

Claim.—The herein-described coop, consisting of the two sides, folding ends, and folding bottom, hinged together, and provided with a detachable top, the whole constructed so as to be folded, substantially as set forth.

97,606.—William Cline, Jr., Clayton, Ind.—*Ditching-Machine.*—December 7, 1869.

Claim.—1. The adjustable foot-piece E, provided at its lower end with the bit F, and running in an inclined position, substantially as and for the purposes herein set forth.

2. The combination and arrangement of the slotted beam A, cutter D, adjustable foot-piece E, and lever G, all constructed as described, and operating substantially in the manner and for the purposes herein set forth.

3. The broad curved scraper I, working up and down on guides *b b*, substantially in the manner and for the purposes herein set forth.

4. The slotted sliding plate or guide J, provided with block K, at its lower end, and moving up and down on the guides *c c*, substantially in the manner and for the purposes herein set forth.

5. The combination and arrangement of the beam A, foot piece E, cutter D, scraper I, and sliding guide J, all constructed as described, and operating substantially in the manner and for the purposes herein set forth.

97,607.—Paul Cousin and Pierre Oury, Paris, France, assignors, for one-third, to N. Washauer, New York City.—*Process for Decorative Oil-Painting.*—December 7, 1869.

Claim.—1. The process, substantially as herein described, of preparing paper, and applying thereto designs in oil-colors, and transferring the same to walls or other surfaces, as set forth.

2. The use of paper, when treated or prepared, as herein described, for the reception and transfer of designs in oil-colors, as set forth.

3. The use of Almacica, Sierra Leone, or similar gums, when treated, substantially as herein described, and combined with oil-colors, for the purpose set forth.

4. The paper, with the design printed thereon, and ready for transfer, as herein described, as a new article of manufacture for mural decoration.

97,608.—Walworth D. Crane, New York, N. Y.—*Railway-Car.*—December 7, 1869.

Claim.—1. The locker A, when arranged within a railroad-car, over the seat, substantially as and for the purpose described.

2. The movable car-seat bottom B, when made to swing upward either way, and combined with a reversible car-seat back, substantially as and for the purpose specified.

3. The speaking-tubes D′ and D, one or both, when arranged in a railroad passenger-car, substantially as and for the purpose specified.

97,609.—Charles Crow, Covington, Ind., assignor to himself and Williamson D. Kerr, same place.—*Plow.*—December 7, 1869.

Claim.—1. A plow, provided with two adjustable mold-boards, which may be moved nearer to or farther from each other, which may be used either as a ditcher or plow, substantially as set forth.

2. The movable land-side L, when used in the manner and for the purpose described.

3. The mold-boards H, cutter M, braces K, N, and O, beam A, plates *a*, screws *c*, and sheath D, when combined to form a plow, substantially as specified.

97,610.—Homer H. Cummings, Enfield, N. H.—*Water-Wheel Scroll-Chute.*—December 7, 1869.

Claim.—A scroll-curb for water-wheel, having a graduating semi-oval top, and a graduating bevel or slightly concave bottom, substantially as shown and described.

97,611.—John Cutlan, Moorestown, N. J.—*Machine for Sewing the Sole and Upper of Boots and Shoes.*—December 7, 1869.

Claim.—The plate P, having a groove or channel *l*, shaft S, feed-wheel F, straight needle N, and presser-foot D, all arranged as described, to sew the channeled sole to the upper while inside out, and leave the stich formed on the inner side of the sole, when the upper is reversed, as herein specified.

97,612.—George W. Dawson, New Haven, Conn., assignor to Willis M. Smith, same place.—*Musical Game.*—December 7, 1869.

Claim.—The herein-described musical game.

97,613.—Gilbert Déclat, Paris, France.—*Apparatus for Treating Croup and other Diseases.*—December 7, 1869.

Claim.—The application, (at a distance, without any operation or medication,) by inhalation, of the vapors of the different ingredients here described, or to be described hereafter, (which vapors are produced by any proper apparatus,) to cure the croup, diphtheria, angina, (malignant and gangrenous,) the diseases of the chest, the generality of the diseases of the skin, &c., or any other, substantially the same, and which will produce the intended effect.

97,614.—Jules Decoudun, Paris, France.—*Machine for Ironing and Stiffening Linen and other Fabrics.*—December 7, 1869; patented in France, May 16, 1868.

Claim.—1. The combination of revolving cylinder D, blanket or apron E, and stationary concave heated surface A, constructed and arranged as set forth.

2. The combination of the treadle M, balance-weight N, and connecting-mechanism, with the shaft of the cylinder, to lift said cylinder, in the manner specified.

97,615.—Abraham C. Depew and John Slatcher, Bridgeport, Conn.—*Metallic Cartridge.*—December 7, 1869.

Claim.—The metallic cartridge-case, herein described, having an interior case or lining, B, with conical chamber B^1, and concave base *e*, and a thin external shell, C, secured to a steel base, A, with concave front, perforated centrally, and having a shoulder, *z*, to receive and support a removable nipple, *a*, having three firing-apertures, constructed and arranged to operate as specified.

97,616.—J. H. Dickason, Hannibal, Mo.—*Tobacco-Machine.*—December 7, 1869.

Claim.—The above-described device for sizing the tobacco, its several parts being constructed and arranged in the manner set forth.

97,617.—Henry Dierkes, New York, N. Y.—*Combined Call-Bell and Table-Caster.*—December 7, 1869.

Claim.—The arrangement of a call-bell, gong, or equivalent instrument of sound, above the handle of a table-caster, substantially as shown and described.

97,618.—William S. Douglass, Richmond, Vt., assignor to W. O. Douglass and A. S. Douglass, same place.—*Carriage-Jack.*—December 7, 1869.

Claim.—The forked standard A, provided with the inclined series of notches *a*, in combination with the self-locking lever B and bands C, substantially as and for the purpose described.

97,619.—Daniel E. Dugan, Springville, Pa.—*Bedstead.*—December 7, 1869.

Claim.—The combination of the rail and post of a bedstead, the fastening-device securing the two together, and a block of rubber or other compressible material, as set forth.

97,620.—Joseph Dunott, Philadelphia, Pa., assignor to himself and George Gibson, same place.—*Car-Coupling.*—December 7, 1869.

Claim.—1. The combination of the revolving keeper C with the swinging keeper D and shaft B, substantially as described, for the purpose set forth.

2. The draw-head A, with shaft B, keepers C D, and slide E, when arranged and operated as described, for the purpose set forth.

97,621.—Samuel Fletcher, Hollis, N. H.—*Sawing-Machine.*—December 7, 1869.

Claim.—The arrangement of the several parts of the device, viz, the handles *a a*, the arms *h h*, operated by springs *g g*, the shaft *f*, the plates *d d* and *e*, the screws *c c*, all constructed and operating in the manner and for the purpose herein shown and described.

97,622.—Samuel Forrester, Allegheny, Pa.—*Axle for Carriages.*—December 7, 1869.

Claim.—Providing the spindle A with the elip-flange *e*, and so constructing the bore of the spindle that it will fit neatly and closely to the upper and lower sides of the axle B, and leave oil-chambers *x* on the back and front sides of it, as herein described, and for the purpose set forth.

97,623.—Samuel Forrester, Allegheny, Pa.—*Carriage-Axle.*—December 7, 1869.

Claim.—The projection *x*, when used in combination with cavity *e*, in the spindle B, wedge *h*, and the metal or alloy filling, as herein described, and for the purpose set forth.

97,624.—James D. Frary, New Britain, Conn.—*Knife-Handle.*—December 7, 1869.

Claim.—A knife, consisting of the blade and tang A, the latter being provided with the hole *a* and recesses *b b*, and tubular cast-metal handle B, the tang and tubular handle being attached by casting, substantially as described.

97,625.—Lamartine R. Fulda and Martin Fulda, San Francisco, Cal.—*Machine for Jointing Staves.*—December 7, 1869.

Claim.—1. In combination with the cutters or saws O, arranged in planes oblique to each other, the device consisting of the adjustable ways C, carriage B, guide I, rack G, and pinion H, for carrying the stave through between the cutters, and, at the same time, raising and depressing it, as required, to give it the proper shape, substantially as described.

2. The arrangement of the hinged frame P with the screws R, for adjusting the cutters O so as to bevel the edges of the staves, according to the size of the casks to be formed, substantially as described.

3. In combination with the carriages Q, supporting the cutters O, the curved removable ways V, for adjusting the cutters to joint staves of different widths for the same cask, or casks of the same diameter, substantially as described.

97,626.—Samuel A. Gardner, Round Hill, Pa.—*Sawing-Machine.*—December 7, 1869.

Claim.—A sawing-machine, consisting of frame A, sliding frame D D′, gate C, fender-posts B, crank-shaft F, lever *h*, and curved bar *m*, the whole constructed, arranged, and operated as and for the purpose specified.

97,627.—Robert Gill, New York, N. Y.—*Gas-Burner Regulator.*—December 7, 1869.

Claim.—The combination, in a gas-regulator, as applied to a burner, of the outside guides *c c*, with the disk C, supply-vent or orifice *a*, and seat or fixed surface *b*, essentially as shown and described.

97,628.—Bernard Goetz, Philadelphia, Pa.—*Corrugated Reflector.*—December 7, 1869.

Claim.—The plate A, having on its surface a series of squares formed by diagonal lines *a*, *b*, *c*, *d*, *e*, *f*, *g*, &c., intersecting diagonal lines a^1, b^1, e^1, d^1. e^1, f^1, g^1, &c., and also having a series of parallel grooves or furrows, *h*, h^1, h^2, and h^3, substantially as and for the purpose set forth.

97,629.—Benjamin J. Greeley, Boston, Mass.—*Attachment for Fastening Overlapping Parts of Garments.*—December 7, 1869.

Claim.—1. The combination of the plate and its cord with the overlapping part of a garment, when the plate is attached to the overlapping part, and one end of the cord is attached to some other part of the garment, the whole combination being and operating substantially as specified.

2. The combination of the two plates and elastic strap with the waist of a garment, when each plate is attached to the waist of a garment, and the strap connects together the two plates, the whole combination being and operating substantially as specified.

97,630.—William Green, Holly, Mich.—*Potato-Digger.*—December 7, 1869; antedated November 27, 1869.

Claim.—1. The spades *c*, in combination with the conveying-bars *c*, as and for the purpose described.

2. The bars *c*, provided with the longitudinal slots *c′* and the recesses *i*, in combination with the pins *k*, as and for the purpose described.

97,631.—Robert Greene, Greenville, N. C.—*Cotton and Hay-Press.*—December 7, 1869.

Claim.—1. Mounting the roller F at the point of junction of levers D D′.

2. The combination of the lever D, roller F, wineh G, lateh H, and pawl K, all arranged and operating substantially as set forth,

3. The combination of levers C C′ and levers D D′ with roller F, wineh G, latch H, and pawl K, adapted to operate said levers by means of a rope or chain, substantially as set forth.

4. The combination of the head-block N, arms N^1, posts A, and pivots *n′*, substantially as and for the purpose set forth.

97,632.—Alexander Hamar, Philadelphia, Pa.—*Mode of Generating Illuminating-Gas.*—December 7, 1869.

Claim.—1. The introduction of jets of steam into the gas-retorts, during the time the gas is being generated, substantially as and for the purpose set forth.

2. The combination of the mouth-piece of the retorts with the steam-pipes, substantially as and for the purpose set forth.

97,633.—Michael Hanstine, Waynesborough, Pa.—*Pump.*—December 7, 1869.

Claim.—A pump, combining in its construction a straight barrel or stock, A, lower or check-valve B, having a bail for lifting it out of its seat, a plunger, C, composed of an upper solid disk, C′, connected to a valve, C″, by bars, as shown, and a piston-rod, D, when all the parts are constructed and arranged as and for the purpose set forth.

97,634.—John H. Harper, Pittsburgh, Pa.—*Portable Furnace.*—December 7, 1869.

Claim.—1. The collar A, provided with a zigzag rim B, constructed as described, substantially as and for the purposes herein set forth.

2. The griddle or lid D, provided with depending flange, having projections *m m* and *n n*, constructed as described, substantially as and for the purposes herein set forth.

3. The ribs *d d*, placed vertically within the collar A, substantially as and for the purposes herein set forth.

4. The combination of the collar A, zigzag rim B, flanges *i i*, ribs *d d*, grate C, notched rim *e*, and griddle or lid D, provided with zigzag teeth, all substantially as and for the purposes herein set forth.

97,635.—Henry H. Hatheway, Clockville, N. Y.—*Grappling-Hook.*—December 7, 1869.

Claim.—In combination with a grappling-hook, A, the sliding collar B, ferrule D, with horizontally-curved and notched arms E E, and pole G, provided with the hook, pin, or projection F, all constructed and arranged to operate as specified.

97,636.—W. E. Hayes, Durand, Wis.—*Spark-Arrester.*—December 7, 1869.

Claim.—1. The combination of the adjustable straps or draw-bands *d d*, and their appurtenances *f g h*, arranged and operating substantially as set forth, with the cap B, flare C, and outer casing D, as specified.

2. The combination, with the stack A, of the perforated body of the outer casing surrounding the upper portion of the stack A, and the flare C, arranged as described.

3. The outer casing of the top of the stack A, consisting of the flare C, cap B, and wire-gauze or perforated body D, arranged as described.

97,637.—Harry M. Heineman, San Francisco, Cal.—*Fastening for Neck-Tie.*—December 7, 1869.

Claim.—The combination of a tie, A, or a tie or scarf-holder, a cord, *a*, and a bar, *b*, connected to the said cord, substantially as and for the purpose described.

97,638.—Charles H. Helms, Poughkeepsie, N. Y.—*Machine for Trimming the Heel of Boots and Shoes.*—December 7, 1869.

Claim. — The double cutter-wheel *h''*, having double-faced shoulder *g''*, and provided with adjustable cutters, substantially as set forth.

97,639.—John B. Hobson and John Middleton, Jr., San Francisco, Cal. — *Water-Closet.*— December 7, 1869.

Claim. — 1. The bowl-discharge valve A, constructed and arranged, substantially as represented and described, to operate in combination with the supply-port valve I, in the manner and for the purpose set forth.

2. The combination, with the valve A, arranged and operating as described, of the flange or disk C, and packing D, as and for the purpose shown.

3. In combination with the supply-port valve I, its stem H, and spring K, the stem or coupling N^1 J, for the connection of the supply-pipe, as constructed and arranged, in the manner shown and described, for the purposes set forth.

4. In the described combination with the other parts of a water-closet washing-apparatus, substantially as herein described, the measuring-cistern or tank Q, as provided with an automatic air-valve, R S, and constructed and arranged as set forth, for the purpose shown.

97,640.—Jacob R. Hoffman, Fort Wayne, Ind.—*Saw-Mill.*—December 7, 1869.

Claim.—The stacks of grooved pulleys A′ and B′, in combination with the intermediate adjustable pulley *f*, when constructed and arranged to operate in the manner and for the purpose substantially as described.

97,641.—Egmont Inger, New York, N. Y.—*Sad-Iron Holder.*—December 7, 1869.

Claim.—A handle-protector for sad-irons, composed of tapering jaws *a*, hinged at their thick ends, while their loose thin ends are capable of overlapping each other, as shown and described.

97,642.—Stephen Inman, Rockford, Ill.—*Brick-Molds.*—December 7, 1869.

Claim.—1. The combination of the longitudinal turning rods C and arms *b*, with the centrally-arranged lever D and rods d^2, as described, for the purpose set forth.

2. The brick-mold described, consisting of the box A, with divisions *a a a*, followers, cross-rods *b*, turning-rods C, levers D, connecting-rods d^2, and catches *e*, when combined and arranged as described, for the purpose set forth.

97,643.—Ludwig Jarchow, New York, N. Y.—*Fastening for Corsets.*—December 7, 1869.

Claim.—As a corset-fastening, the plates *a b*, having on their inner ends the angular hollow projection A, and the solid projection B, adapted to engage with each other, to fasten, or be detached to unfasten the corset, the said parts being constructed and operating substantially as shown and described.

97,644.—John Jay, Jonesborough, Ind.—*Coffee-Roaster.*—December 7, 1869.

Claim.—1. The removable vertical crank-shaft D, and the removable horizontal stirrers G and H I, in combination with the portable case A, substantially as herein shown and described, for the purpose specified.

2. As an improved article of manufacture, the portable coffee-roaster, consisting of the case A, provided with the handle B, hinged cover C, and openings K, and the removable crank-shaft D, and stirring-plates G and H I, all arranged and operating as herein shown and described, for the purpose specified.

97,645.—Charles T. Jeffries, Philadelphia, Pa.—*Car-Spring.*—December 7, 1869.

Claim.—1. A conical spring, composed of two or more conical coils, arranged in nests, or one within the other, with blocks of rubber or equivalent elastic material interposed between them, substantially in the manner and for the purpose described.

2. In combination with the said conical spring, the flanged tubes C and C′, for the purpose specified.

3. In combination with the said spring, a bolt, H, for the purpose set forth.

97,646.—Byron Jennings, Gilroy, Cal., assignor to himself and Henry W. Briggs, same place.—*Gang-Plow.* — December 7, 1869; antedated December 1, 1869.

Claim.—1. The combination, with the arms *b*, on the shaft C, of the plates *d*, provided with holes *e*, for making their connection adjustable, substantially as and for the purpose set forth.

2. The curved arm E, attached to the shaft C, sliding-bar *g*, and guide *h*, substantially as and for the purpose described.

3. The bent lever F, with its slotted inclined lug *i*, together with the bent pin or staple *n*, substantially as described.

97,647.—Samuel B. Jewett, Laconia, N. H.—*Artificial Leg.*—December 7, 1869.

Claim.—The link D, substantially in the manner and for the purposes set forth.

97,648.—Charles Kanzler and Albert Nega, Saint Louis, Mo.— *Sash-Balance.* — December 7, 1869.

Claim.—The rope-lock D^1 *d* d^1 d^2, arranged and combined with the pulley D and rope *c*, substantially as and for the purpose set forth.

97,649.—Charles Kellermann and Peter W. Stauff, Chicago, Ill.—*Stay for Trunks.*—December 7, 1869.

Claim.—The hook-stay C, pivoted to the lid B, in combination with the horizontal loop D, attached to the body of the trunk, when arranged to operate as described and shown, for the purpose specified.

97,650.—S. C. Kenaga, Kankakee, Ill.—*Grain-Drier.*—December 7, 1869; antedated November 27, 1869.

Claim.—The heating-compartments A^1 A^2, with their flues *h* h^1, and flue-spaces *d* d^1 d^2, in combination with the perforated drying-floors B B^1 B^2 of the chambers D D^1 D^2, the centrifugal and centripetal conveyers C^1 C^2 C^3, chimneys *g* g^1 g^2, and ventilating-doors a^3 a^4, all arranged and operating substantially as and for the purpose herein set forth and described.

97,651.—William Kenworthy and John H. Pollitt, Buchanan, Pa.—*Oiling Carriage and Car-Axles.*—December 7, 1869.

Claim.—The combination and arrangement of the oil-chamber B, oil-ways *o*, gum washers *x*, and recess *f*, constructed, arranged, and operating as herein described, and for the purpose set forth.

97,652.—A. M. Laevison, Quiney, Ill.—*Gas-Burner.*—Deeember 7, 1869.

Claim.—The slotted regulating-serew D, in eombination with a gas-burner having an expanding-chamber, substantially as herein shown and deseribed, for the purpose specified.

97,653.—Charles William Lancaster, London, England.—*Shot-Cartridge.*—Deeember 7, 1869.

Claim.—A cased shot-eartridge, in which the powder, shot, and shot-concentrating hollow wad, or its equivalent, are inclosed and held within the shell, substantially as herein deseribed, for the purposes set forth.

97,654.—Charles F. Langford, Brooklyn, N. Y.—*Attaching Knobs to Doors.*—December 7, 1869.

Claim.—The employment of an annular spriug, of rubber or metal, between the rose and shank of the knob, in attaehiug knobs to doors, substantially as herein set forth.

97,655.—N. H. Lebby, Charleston, S. C.—*Centrifugal Pump.*—Deeember 7, 1869.

Claim.—The openings O, in the baek of the wheel P, in combination with tongues and grooves *a b*, on the back of the wheel P, and on the plate B, substantially in the manner and for the purpose speci-fied.

97,656.—Philip Leonard, Sharon, Pa.—*Tool-Holder for Grindstones.*—Deeember 7, 1869.

Claim.—1. The eombinatiou, with the slotted oscillating plate A, provided with journals, and either mounted in adjustable or permanent bearings C, of the carriage E, and the adjustable tool-holder G, substantially as speeified.

2. The arrangement, with the earriage E, of the tool-holder G, and clamp or guide K, substantially as speeified.

97,657.—Reuben Lighthall, Brooklyn, N. Y.—*Mode of Preventing Corrosion in Pipes, Bolts, and Similar Articles of Iron in Sea-Water.*—Deeember 7, 1869.

Claim.—The combination with or application to iron pipes, bolts, and other like bodies, of plates, nnts, sleeves, or washers surrounding them at intervals, and composed of different metals approximating each other and the iron in eorrodibility, substantially as and for the purpose or purposes herein set forth.

97,658.—A. W. Lloyd, North Adams, Mass.—*Water-Wheel.*—December 7, 1869.

Claim.—1. The combination, with the wheel, constructed as described, and the exterior ease D, of the interior cases E, made in two recessed parts, and provided with gates M, operating substantially as speeified.

2. The eombination, with the wheel, and ease D, of the air-conducting tubes or passages V, when arranged substantially as speeified.

3. The combination, with the water-wheel, arranged for operation substantially as herein deseribed, of a water-regulating deviee, for governing the level of the water in the draught-tube, consisting of passage I′, valves K¹ H′ O′, substantially as herein shown and speeified.

4. The combination, with the vessel A′, eonneeted to the wheel-ease and draught-tube, of the float E′, air-tube G′, valve F′, water-tube I′, valves K¹, H′, and O′, when arranged for operation substantially as speeified.

97,659.—Hamilton D. Lockwood, Charleston, Mass.—*Artificial Nipple.*—Deeember 7, 1869.

Claim.—An artificial nipple, (made of elastie material,) having its rim re-enforeed at the seam, substantially as deseribed.

97,660.—Zephaniah Lockwood, Saratoga Springs, N. Y.—*Cooking-Stove.*—Deeember 7, 1869.

Claim.—1. The cooking-attaehment B, for base-burning or parlor stoves, constructed as deseribed, and provided with the feeder-holes for eooking-utensils and boiler, applied and operating substantially in the manner and for the purpose set forth.

2. In eombination with the above, the supplemental fire-box I, eonstructed and operating as and for the purpose set forth.

97,661.—C. M. Lufkin, Alstead, N. H.—*Sled-Brake.*—Deeember 7, 1869.

Claim.—The eombination of the grapples C C, eonneetion-rods *u u*, eross-bar *n*, reach *e*, roeker *f*, and button *p′*, when attaehed to a traverse-sled, substantially as herein set forth, for the purpose specified.

97,662.—Thomas J. Magruder, Marion, Ohio.—*Cock-Eye for Harness.*—Deeember 7, 1869.

Claim.—As an improved artiele of manufaeture, swivel eock-eyes, having the ueeks of the eyes, and the eross-bars to which they are eonneeted, eonstrueted, arranged, and eonneeted together substantially as herein speeified.

97,663.—James W. Maloy, Bostou, Mass.—*Bush-Hammer.*—Deeember 7, 1869.

Claim.—A bush-hammer, formed by the eombination of head A, eonstructed substantially as shown, and elamp B, the parts held together, and securing blades H, substantially as hereiu deseribed.

97,664.—Clark Marsh, Bridgeport, Conn., assignor to Wheeler and Wilson Manufacturing Company, same plaee.—*Machine for Grinding Needles.*—Deeember 7, 1869.

Claim.—1. The combiuation and arrangement of the following instrumentalities, viz, the rotating grinder, the grinder-carriage, the turning-holder, the holder-carriage moving in the direetion of a tangent of the eireular periphery of the grinder, the rest, and eontrolling-mechanism, all eonstrueted to operate substantially as before set forth.

2. The eombiuation of the rotating grinder, the grinder-carriage, the turning-holder, the holder-earriage, moving iu the direction of a tangent of the eircular periphery of the griuder, the rest and stop-mechanism, the whole eonstrueted to operate substantially as before set forth.

3. The combination of the rotating grinder, the grinder-earriage, the turning-holder, the holder-carriage moving in the direetion of a tangent of the eireular periphery of the grinder, the rest, and the traversing-mechanism, the whole constructed to operate substantially as before set forth.

4. The eombiuation of the turuing-holder and the holder-carriage, with a pattern-plate, eonstructed so as to be adjusted laterally, substantially as before set forth.

5. The combination of the rotating griuder and the grinder-earriage, with an adjustable bearing for the pattern-plate, substantially as set forth.

97,665.—Henry P. McCleave, Tomales, Cal.—*Water-Wheel.*—Deeember 7, 1869.

Claim.—A wind-wheel, eomposed of the vanes *a*, formiug the eurve E, and eonstrueted substantially as herein deseribed.

97,666.—James McCullough, Quiney, Ind.—*Wagon-Standard.*—Deeember 7, 1869; antedated December 4, 1869.

Claim.—The eap B and standard C, formed of one piece, and seeured to the bolster by means of the bolts D, or their equivalent, aud provided with the rings E, when combined in the manner and for the purpose specified.

97,667.—David McFarland, Worcester, Mass.—*Cutter for Card-Setting Machine.*—December 7, 1869.

Claim.—1. The eutter E, eonstrueted with the notches, grooves, or serrated edge, and adjustable around its eenter, so as to present different cutting-points aud form a guide for the wire, substantially as deseribed.

2. In combination with the eireular eutter E, the sleeve *a*, with the set screws C and D, for the purpose of adjusting the cutter, substantially as set forth.

3. The arrangement of the vibrating eutter I, in the holder G, made adjustable on the lever F, substantially as set forth.

4. The combination of the fixed vibrating cutters E and I, arranged upon the bar B, so that both may be adjusted, substantially as herein set forth.

97,668.—PETER MCINTYRE, Norwich, Conn.—*Drain-Pipe Machine.*—December 7, 1869.

Claim.—1. The combination of the outer mold with the solid and hollow plungers, for forming and completing the pipe and its bell-mouth at one operation, in the manner and by the means substantially as described.

2. The axial movement of the plunger of the bell-mouth, to break the adhesion between the said plunger and the newly-formed pipe, in the manner and for the purpose substantially as described.

3. The combination of the solid and hollow plungers with the operating-gearing, in such wise as to elevate the hollow plunger to the proper height for the bell-mouth, before the solid plunger has advanced any or much within the pipe-mold, and retaining it in that position till the solid plunger has completed its full stroke, and is withdrawn from the mold, or nearly so, before dropping the hollow plunger, in the manner and for the purposes substantially as described.

4. The combination of the cap-piece B, pins C, and hooks V, with the side parts A A, when constructed and arranged to operate as shown and described, for the double purpose of clamping said parts A A together, and closing and completing the top of the mold around the plunger, in the manner substantially as set forth.

97,669.—A. J. MCMILLEN, Ravenswood, West Va.—*Fruit-Can.*—December 7, 1869.

Claim.—As a new article of manufacture, fruit-cans, provided with the strengthening-hoops B, arranged for clamping tightly around the can, and provided with the lists of names of the fruits, for adjustment, relatively to the seam, or other distinguishing mark, all substantially as specified.

97,670.—CHARLES L. MERRILL, Watertown, N. Y.—*Pump.*—December 7, 1869.

Claim.—In connection with a pump, P, the employment of an air-pump, C R A *a*, to force atmospheric air into the water of the well, said air-pump being worked by the ordinary pump-brake B, substantially as and for the purposes herein described.

97,671.—E. C. MERRILL, Charleston, Vt.—*Abrading and Polishing Wheel.*—December 7, 1869.

Claim.—As a new article of manufacture, factitious abrading-wheels or other tools, having their cutting properties due in whole or in part to the employment in their composition of the material named.

97,672.—WILLIAM M. MICHAEL, Indiana, Pa.—*Pattern for Laying Out Garments.*—December 7, 1869.

Claim.—The combination of the pattern A and scale H, the former having the lines C and central point G delineated thereon, and the latter being graduated as described, the two arranged for joint operation as specified.

97,673.—ROBERT E. MOORE, Navasota, Tex.—*Machine for Operating Pumps.*—December 7, 1869.

Claim.—1. The combination of the escapement C C F, levers H I K, pendulum and rock-shaft D, with the pumps L L, substantially as and for the purpose set forth.

2. In combination with the devices cited in the first clause of claim, the adjustable pendulum rod E, cups P, valves *c c*, operating as described, and for the purpose set forth.

97,674.—EZRA MORGAN, French Creek, N. Y.—*Churn.*—December 7, 1869.

Claim.—The flaring cream-saver B, herein described, having a square end, which extends below the churn-lid A, with openings in its side, and provided with the rectangular metal plate D, when connected to lid A by means of the band C, and the shoulder formed in the cream-saver, all as shown and described.

97,675.—OWEN H. MORRIS, New Haven, Conn.—*Clamp for Embossing Harness-Loops.*—December 7, 1869.

Claim.—The apparatus, consisting of the plate A, fixed bar B, adjustable bar E, arranged in the manner described, so as to relieve the part not to be clamped, and the screws D, for the purpose of holding harness-loops, while being formed, ornamented, and finished, in the manner herein described.

97,676.—WILLIAM A. MORSE, Philadelphia, Pa.—*Pen.*—December 7, 1869.

Claim.—1. Immovably attaching a fountain or ink-retainer to a pen, by passing one end of said fountain entirely through the pen, and clinching it upon the opposite side, substantially as shown at Figs. 1 and 2.

2. A pen-fountain or ink-retainer, made with one or more points or projections turned at right angles, substantially as shown, and for the purpose specified.

97,677.—M. D. MYERS, Frankfort, N. Y., assignor, of one-fourth, to GEORGE W. GATES, same place.—*Hay-Tedder.*—December 7, 1869.

Claim.—1. The oscillating fork-heads applied to revolving reel-disks when operated by means of crank-arms *f*, connecting-rods *e*, and spur-wheels *d* and *c*, substantially as described.

2. The construction of an eye-bearing, E, with two eyes, one to receive a bar, *h*, and the other to receive the fork-bar D, in combination with the lateral hooked offsets *i i*, to receive and gripe the ends *g'* of the teeth, and allow the removal of the teeth by lateral movement, when screw *j* is loosened, substantially as described.

97,678.—R. W. MEYERS, Glen Gardner Station, N. J., assignor to himself, GEORGE GARDINER, WILLIAM GARDINER, and O. L. GARDINER, same place.—*Heating-Attachment for Cooking-Stoves.*—December 7, 1869.

Claim.—1. A heating-attachment for stoves or ranges, adapted for receiving the heat from the top of the stove or from the ovens, or the steams and odors from cooking-vessels inclosed by it, and provided with pipes for conveying the heat to the rooms above, also provided with pipes communicating with the smoke-flue and valves, as described, for discharging the odors of cooking food to the said flue, all substantially as specified.

2. The combination, with the case A, provided with the front openings, of the drawer F and slide G, substantially as specified.

97,679.—ARCHIBALD NIMMO, Philadelphia, Pa., assignor to himself and THOMAS MORAN, same place.—*Mechanism for Operating the Shuttle-Boxes in Looms.*—December 7, 1869.

Claim.—1. A cylinder, on which spirally-arranged pins are combined with a spiral groove, or spiral projecting rib, for laterally controlling the lever, or its equivalent, actuated by the pins.

2. The disk, with its pins arranged on a spiral line, in combination with a lever or its equivalent, operating in connection with the drop-boxes, substantially as set forth.

3. The combination of the said disk and pins with a groove or rib arranged on the disk, for controlling the lever, (or a sliding projection on the latter,) actuated by the pins.

4. The combination of the cylinder, its spirally-arranged pins, rib, and cog-wheel, with the double pawl, which is caused to operate in the manner set forth, by the mechanism herein described, or its equivalent.

5. The said double pawl, in combination with the sliding plate J and its projections *q q'*.

97,680.—FREDERICK NISHWITZ, Brooklyn, N. Y.—*Harrow-Cultivator.*—December 7, 1869.

Claim.—1. The combination, in a harrow-cultivator, of a revolving disk, with a hollow boss, closed at its inner end, substantially as and for the purposes set forth.

2. The combination, in a harrow-cultivator, of revolving disks, independently adjustable, relatively to the line of draught, substantially as set forth.

3. The combination, with a harrow-cultivator frame, of a stud-axle, a thimble, and a clamping-bolt, substantially as set forth.

4. The combination, with a harrow-cultivator frame, of the recessed thimble, the clamping-bolt, and the stud-axle, as set forth, whereby the disk is carried at an angle, both to the line of draught and to the horizon.

5. The combination, in a harrow-cultivator frame, of a revolving disk with a scraper, which keeps the disk on its axle, substantially as set forth.

6. The combination, in a harrow-cultivator, of a loose disk, an adjustable axle, and an adjustable scraper, substantially as set forth.

7. The combination, in a harrow-cultivator, of revolving disks, arranged in two series or gangs, adjustable toward or from each other, substantially as set forth.

8. The combination, in a harrow-cultivator, of an adjustable triangular frame, a leading disk, at the apex of the triangle, and a series of following disks, on each side of the triangle, substantially as set forth.

9. The combination, in a harrow-cultivator, of an adjustable triangular frame, two series of revolving disks, and a seat for the driver, substantially as set forth.

10. The combination, in a harrow-cultivator frame, of a long arm, a short arm, pivoted to the long arm, and the cross-pieces, admitting of the adjustment relatively to the line of draught, substantially as set forth.

97,681.—JOHN NORBURN, Pittsburgh, Pa., assignor to JOHN CHANDOS WOODHEAD and JOSIAH HOLMES, trustees for Universal Manufacturing Company.—*Interchangeable Boot and Shoe Heel.*—December 7, 1869.

Claim.—In an interchangeable boot or shoe heel, the permanent half B, having an embedded plate, S, with its socket *e*, and tapered screw-pin N, in combination with the changeable base A, having an embedded plate C and tenon R, when constructed and arranged substantially as described, and for the purpose set forth.

97,682.—EMILE NOUGARET, Newark, N. J.—*Machine for Washing Wool.*—December 7, 1869; antedated December 1, 1869.

Claim.—A wool-washing machine, consisting of the annular vessel A and elevated reservoir E, all arranged and operating substantially as herein shown and described, so that the leaning liquid will serve to keep the wool in motion within the vessel A, as specified.

97,683.—RENÉ OLIVIER, Paris, France.—*Velocipede.*—December 7, 1869.

Claim.—For the suspension of the wheels of velocipedes, the combination of an auxiliary compensating-fork.

97,684.—HENRY O. PEABODY, Boston, Mass.—*Centrifugal Machine for Extracting Honey from the Comb.*—December 7, 1869.

Claim.—1. The use, in centrifugal machines, of two or more light portable vessels, arranged around a common center, and attached to the arms of a light frame, in such a manner that either or all of them may be removed therefrom, when desired, said frame being mounted upon a central spindle, around which the whole may revolve, and each of the said vessels being adapted to receive a wire screen, and the material to be acted upon, substantially as described.

2. In combination with two or more vessels, arranged as described, the outlet N, inclined conduit *g*, outlet *g'*, annular groove B, and discharge-orifices C C, substantially as described.

97,685.—WILLIAM PEARSON, Windsor Locks, Conn.—*Spring.*—December 7, 1869.

Claim.—A combined or combination-spring, made up of a series of spiral springs connected by tongues and grooves, to act in unison, yet free to operate separately, in a limited degree, substantially as specified.

97,686.—A. W. PERRY, Saint Joseph, Mo.—*Piano-Forte Action.*—December 7, 1869.

Claim.—1. The combination of back-catch, having lip e^1, with lever C, pivoted near its center, upon the adjustable fulcrum B, and operating, in connection with stop *m* and fixed butt E, substantially as and for the purposes specified.

2. The spring S, when applied between the flanch or flanch-rod and the front side of a jack articulated at the stem G at *j*, substantially as and for the purposes specified.

3. The arm L attached to the jack J, and operating in connection with stop *l*, substantially as and for the purposes described.

4. The adjustable stop *n*, supported by a post attached to the butt E, or key-lever, and operating in connection with the jack, substantially as and for the purposes indicated.

97,687.—HANS PETERSON, Red Wing, Minn.—*Feed-Cutter.*—December 7, 1869.

Claim.—1. The frame M, arm L, lever K, pitman H, crank-shaft E, and wheel R, when constructed and arranged to operate as specified.

2. In combination with frame M, and its operating connections, the cylinders F and D, and removable knife T, when constructed and arranged as and for the purpose specified.

97,688.—IMMANUEL PFEIFFER, New York, N. Y., assignor for one-half to HENRI M. BRAEM, same place.—*Apparatus for Cleaning Barrels.*—December 7, 1869.

Claim.—1. A machine for cleaning hogsheads, barrels, and casks, combining in its construction a revolving circular vessel, around the axis of which are arranged (on pivots) one or more revolving frames, in which such hogsheads, barrels, and casks are to be suspended, a stationary sheave, an endless chain for rotating the pivoted revolving frames, and another endless chain for rotating the hogsheads, barrels, and casks around their axis, substantially as and for the purpose set forth.

2. The combination and arrangement of vessel A, main or driving-shaft B, socket C, stationary sheave or ratchet-wheel K, movable ratchet-wheels H, endless chain L, shafts F, ratchet-wheels I, and the revolving frames E, when constructed substantially as and for the purpose set forth.

3. The combination and arrangement of the revolving frames E, consisting of platform E, vertical frames E' and E'', cross-head E''', plate or flange P^1, adjustable thumb-screws P^2, projection P, India-rubber cushions Q, crank or bent rod R, bolt S, lever O, inclined groove friction wheels N, endless chain M', and wheel M, when constructed and operated substantially as and for the purpose set forth.

97,689.—WILLIAM L. PHILLIPS, Normal, Ill.—*Ventilator.*—December 7, 1869.

Claim.—The arrangement of the air-shaft C, smoke-stack or foul-air shaft B, shafts D and E E, and the double floor or sides, constructed substantially as described and for the purposes set forth.

97,690.—MARTIN PRILLAMAN, Tipton, Ind., assignor to himself and ELIZABETH RESSLER, same place.—*Draught-Regulator for Plows.*—December 7, 1869.

Claim.—Plate *a*, plates *b* and *c*, screw *e*, and lever-bar *f*, in combination with half-circle *u*, plate *o*, lever *i*, catch *k*, spring *m*, and draught-rod *p*, substantially as herein set forth, and for the purposes specified.

97,691.—TREAT T. PROSSER, Chicago, Ill.—*Machine for Swaging Threads on Screws.*—December 7, 1869.

Claim.—1. The guides C, when constructed as herein described, and arranged to be adjustable by the screws *c d* and spring *i*, and to operate substantially as and for the purpose set forth.

2. The water-tank D, with the die-roller E mounted therein, constructed and arranged substantially as herein described, and for the purpose set forth.

3. The roller-head K, having the die-rollers J arranged in its periphery, in combination with the die-rollers E, for forming the thread upon the blanks, substantially as set forth.

4. In combination with the shaft T, provided with the guides O, the cam-levers *g*, dogs *h*, and conical tube P, when constructed and arranged to operate substantially as herein described, and for the purpose set forth.

5. In combination with the shaft T, and its feeding-devices, the devices for automatically shifting the belts, consisting of the lever *m*, providing with a weight V, the connecting-rod *o*, and belt-shifter G, when constructed and arranged to operate substantially as and for the purpose set forth.

6. In combination with the shaft T and the devices for holding the bolt, the spiral spring *u*, for throwing the bolt out, after it is released, substantially as and for the purpose set forth.

97,692. — WILLIAM PATTERSON PUGH, High Point, N. C. — *Manufacture of Soap.*—December 7, 1869.

Claim. — The improved soap herein described, made by combining the materials herein named, substantially in the manner described.

97,693.—JOHN P. RECHTEN, New York, N. Y. —*Gun-Harpoon.*—December 7, 1869.

Claim.—1. The combination, with the main stock or handle to a hand-weapon, of the description herein referred to, of a harpoon, connected with the tow-line of the weapon, and arranged to operate as a projectile from a barrel carried by the main stock, and provided with suitable firing-contrivances, substantially as specified.

2. The combination of the barrels C and D, the sliding rod or firing-point E, the harpoon F, for operation in connection with a bomb, H, the tow-line G, and the main stock A, essentially as herein set forth.

3. The combination, with the barrels C and D, and sliding rod or firing-point E, of the screws *b b* and hammers *c c*, substantially as shown and described.

4. The stop *f* on the tow-line G, in combination with the harpoon F and loop or eye *e*, on the main stock A, essentially as and for the purpose herein set forth.

97,694. — FRANK REED, Fitchburgh, Mass. — *Privy-Seat.*—December 7, 1869; antedated November 30, 1869.

Claim.—1. The shaft D, with its pinions *e* and *f*, the sector-bar L, spring *m*, rod *o*, and tread-piece N, in combination with privy-seat, substantially as described and for the purposes set forth.

2. The combination of the shaft *g*, pinion *j*, and double rack *k*, with the shaft D, carrying the valve C, and operated as described, and with the extra seat B, as herein set forth, for the purpose specified.

97,695. — A. F. REEDER, Normal, Ill. — *Piston-Valve.*—December 7, 1869.

Claim.—1. A valve, of the form and construction described, adjustable, by a right-and-left screw, upon the valve-stem, receiving the stem between the two valve or piston heads, and secured and held in position in the inner cylinder by the arms J J, as described.

2. The adjustable lining, or inner cylinder, adjustable by the screw in the outer cylinder and cylinder-head, for the purpose of shifting the lining, and holding it in position, as described.

97,696.—ADAM REID, Buffalo, N. Y.— *Tubular Refrigerator.*—December 7, 1869.

Claim.—As my improvement, the refrigerator B, pivoted to the frame A, and provided with top doors D D and inside doors D′ D′, ice-compartment E, waste-pipe F, vat G, and shelves K K, attached to brackets on the side of the refrigerator, by means of pins H, all constructed as herein described, for the purposes specified.

97,697.—HERMANN RETZLAFF, Saint Louis, Mo. —*Land-Roller.*—December 7, 1869.

Claim.—The frame A, shafts E, and rollers F′, with intermatching beads F, substantially as set forth.

97,698.—ANDREW J. REYNOLDS, Chicago, Ill.— *Atmospheric and Condensing Hydraulic Engine.* — December 7, 1869.

Claim.—1. In combination with the devices employed for connecting together the pistons, the cylinder C, provided with the ports H and side-pipes H′, by means of which steam is admitted to the channel-plate, substantially as and for the purpose specified.

2. The arrangement of the air-valves *o*, the lifter-rods O, the follower O′, the yoke P, with the cross-head F″, the piston-rod F′, and the piston F, to open and close the air-pipes before steam is admitted to the cylinders, and after it is cut off, substantially as set forth.

3. The arrangement of the piston-valves *m*, lifter-rods N, yokes P, poppet-levers *m′*, tappets *n n′*, followers N′, steam-chests M, and piston-rods F′, for admitting steam to and cutting it off from the cylinders C, substantially as described.

4. The channel-plate D, foot-valves I, discharge-pipes J, and clack-valves E K′, in connection with the pipe E and check-valves E′, arranged substantially as herein set forth.

5. An atmospheric and condensing hydraulic engine, wherein two cylinders are employed, with their pistons connected through a walking-beam, and so arranged that the surplus power of one piston is transferred to the other, so as to produce a continuous reciprocating motion, without the use of a crank and fly-wheel, substantially as and for the purpose set forth.

97,699.—QUARTUS RICE, Nevada, Cal.—*Flexible Pipe-Coupling.*—December 7, 1869.

Claim.—1. The combination, with a flexible water-pipe coupling of any suitable construction, the anti-friction wheels E E E, in combination with the inverted circular plane L L L, substantially as and for the purposes set forth.

2. The strap H H, the screw-bolt *g g*, follower O, and spring-box *m*, or their equivalents, for the purposes set forth.

97,700.—JULIUS ROBBINS, Auburn, N. Y.—*Machine for Making Buckles.*—December 7, 1869.

Claim.—1. The intermittently-rotating head-block *r*, constructed with an annular holding-seat, 8, for the buckle-frames, and eyes *s*, and notches 4, for holding the tongues in place during the operation of uniting them with the buckles, substantially as before described.

2. The combination of an intermittently-rotating head-block, *r*, with the toothed detaching-arm *c′*, for the purpose of removing the finished buckle from said head-block, substantially as before described.

3. The combination of the intermittently-rotating head-block *r*, constructed as described, with the horizontal and vertical upsetting and bending tools a^2 *q*, constructed, arranged, and operating, as herein described.

4. In combination with horizontally and vertically reciprocating upsetting and bending tools, the feeding-arm *t*, with its toothed wheel 12, the intermittently-rotating head-block *r*, with its friction-brake *z*, and the detaching spring-toothed arm e^1, the whole arranged and operating as described.

5. The arrangement of the walking-beam *d*, the connecting-arm *v*, and the cams *j* and 2, the bar *e*, link *f*, and arm *i*, for giving motion to the acting-parts of the machine, as herein described.

97,701. — Z. C. ROBBINS and H. A. ROBBINS, Washington, D. C. — *Knife-Sharpener.*—December 7, 1869.

Claim.—1. The four-eared and laterally-grooved body *a c c c c* of our improved knife-sharpener, when the shape thereof is such as will enable it to be placed in a working position upon the tines of a fork, substantially as herein set forth.

2. The combination of the annularly-grooved rollers *b b* with each other and with the peculiarly-shaped body *a c c c c* of our improved knife-sharpener, substantially as herein set forth.

3. The combination of emery or corundum with the highly-tempered metallic ridges of knife-sharpeners, substantially in the manner herein set forth, by which the said gritty substance will act conjointly with the said metallic ridges in the reduction of knives, &c., to sharp-cutting edges.

97,702. — G. ROBINSON, Louisville, Ky. — *Tobacco-Elevator.*—December 7, 1869.

Claim.—The combination, with a pair of endless

elevators, provided with hooks B, of the supplying and discharging jacks, substantially as specified.

97,703. — G. ROBINSON, Louisville, Ky. — *Machine for Rolling, Pressing, and Cutting Tobacco.*— December 7, 1869.

Claim.—The fixed partitions D, feeding-belts *c*, rollers A B E, and the discharger F, slotted to fit in the grooves in the roller B, to guide the tobacco to the cutting-rolls G and H, all combined, constructed, and arranged with relation to each other, as shown and described.

97,704.—WILLIAM A. ROBINSON, Grand Rapids, Mich., assignor to O. B. NORTH AND COMPANY.—*Trace-Buckle.*—December 7, 1869.

Claim.—In combination with the buckle-frame A, constructed with trunnions *a a* thereon, and the cross-bar B, the said cross-bar having the tongue D formed thereon, the clamp, consisting of the bars I and G, with the two sides F F, the said two sides curved, and arranged as described, so as to operate under the trunnions, and clamp the strap between the bars I and B, substantially in the manner herein set forth.

97,705.—TIMOTHY ROSE, Cortland, and PLATT S. BUELL, Windsor, N. Y.—*Coil-Spring and its Attachments.*—December 7, 1869.

Claim.—1. The coil-spring A B, in the form described, that is, with the lower part in a conical form, and the upper part in a cylindrical form, for the uses and purposes set forth.

2. The combination of a conical coil-spring, (whether with or without the cylindrical part,) with the concave depression underneath said spring, when made in the manner described, for the uses and purposes set forth.

3. The combination of the spring A B, the concave depression C C, and the plug or standard I, for the uses and purposes described.

97,706.—IRA MOSHER RUSSELL, Lewiston, Me.—*Spring-Bed Bottom.*—December 7, 1869.

Claim.—The arrangement of each of the bands C or C′ with the spring B, the slats D, and the pins or studs *c* of such slats, such arrangement involving the extension of the band through the several springs thereof, and the pins or studs into the holes of the band, in manner substantially as and for the purpose as described.

97,707. — ANDREW SCHOLLARS, Leavenworth, Kansas. — *Apparatus for Laying out Stair-Rails.*— December 7, 1869.

Claim.—1. The supplementary post G, and arm H, with their points made adjustable in any vertical and horizontal, or inclined plane, substantially as described, for the purpose of supporting the board, (or plank to be cut,) in an inclined position, as specified.

2. The uprights N, and their braces O, and the cross-bar M, with its hinged plates *c c*, arranged substantially as described, for the purpose of securely holding the head of the plank while describing and cutting the required curved piece.

97,708. — WILLIAM SHARKEY, Chico, Cal.—*Horse Hay-Rake.*—December 7, 1869.

Claim.—The combination and arrangement of the hinged plate K, rod *d*, and stirrup or foot-piece *g*, constructed to operate substantially as described, for the purpose set forth.

97,709. — MARY A. SHEAFFER, Elizabethtown, Pa. — *Process for Manufacturing Cheese.* — December 7, 1869.

Claim. — The above-described composition and mode of making my compound scalded cheese, substantially in the manner described.

97,710.—HAMILTON SHERMAN, Waverly, Pa.—*Book-Holder.*—December 7, 1869.

Claim. — The combination, with the adjustable table D, of the clamping-bar I, adjusting-arms F, spring M, and adjusting-slide H, all substantially as specified.

97,711. — JAMES W. SHUBERT and NORVAL DOUGLAS, New Haven, Conn.—*Plate for Holding the Lids of Trunks in Place.*—December 7, 1869.

Claim.—The plates A and B, fastened on the corners of trunks, and operating substantially as and for the purposes herein set forth.

97,712. — JOHN SIMPSON, Cleveland, Ohio.—*Vises for Wood-Working.*—December 7, 1869.

Claim.—The construction and arrangement of the bench-leg A, jaw B, socket C, screw-rack bar F, screw I, jaw H, and socket and lever K, with notch and pawl *e*, all constructed as described, and operating substantially as and for the purposes herein set forth.

97,713. — PETER G. SMITH, Brooklyn, N. Y., assignor to himself and ROBERT DONAHUE, same place.—*Key-Guard.*—December 7, 1869.

Claim.—A key-fastener, composed of the jaws A A and boxes B B, constructed and fastened together substantially in the manner and for the purposes herein set forth.

97,714. — ROBERT W. SMITH, Toledo, Ohio.—*Bridge.*—December 7, 1869.

Claim.—1. The provision, in a bridge, of the inclined lateral ties G G′, extending from the rafters F F′, across the beams D, to the uprights C C′, to which beams and uprights they are bolted, substantially as herein described and for the purpose explained.

2. In combination with the diagonal floor-braces E′, the tie-bolts J K *k k′* L, for the object herein described.

97,715.—SAMUEL B. SMITH, New Haven, Conn.—*Hammer.*—December 7, 1869.

Claim.—The implement composed of the claw *a*, hammer *b*, ice-pick *c*, screw-driver *h*, and handle A, when the whole is constructed and arranged as herein described.

97,716.—WILLIAM H. SMITH, Newport, R. I.—*Boot and Shoe Cleaner.*—December 7, 1869.

Claim. — 1. The upright rotary brushes, geared and combined with the cylindrical corrugated driver B, as and for the purposes described.

2. The scraper C, and brush D, in combination with brushes E, and their driving-cylinder B, as described.

97,717. — CHARLES EDWARD SNEIDER, Baltimore, Md.—*Sight for Fire-Arms.* — December 7, 1869.

Claim.—In combination with the front sight of a fire-arm, a lens, located in close proximity thereto, so as to leave the intervening space between said front sight, or lens, and the rear sight unobstructed, and the natural vision of the user unaffected, until it reaches the lens, or front sight, at or near the front of the barrel, as herein described and represented.

97,718.—HOWARD SPENCER and LAFAYETTE K. SAYLOR, Philadelphia, Pa. — *Manufacture of Iron and Steel.*—December 7, 1869.

Claim.—The process, substantially as described of converting iron-ore directly into steel, or into refined cast iron, at one operation, and in one chamber of a blast-furnace.

97,719.—EBENEZER SPERRY, Saint Louis, Mo.—*Toy Harpoon-Gun.*—December 7, 1869.

Claim.—1. The barrel A, when provided with a slot, *a′*, in its bottom side, for the passage of the cord *c*, as herein described and set forth.

2. The arrow C, when made hollow, for the reception of the cord *c*, and otherwise provided with a notch at c^2, for the passage of the cord to the slot *a*, as herein described.

3. The hollow plunger or follower D, when slotted at *d*, for the passage of the cord *c* to the slot *a*, as set forth and described.

4. The spring-clamp *e* or *e′*, in combination with the barrel A, as described and shown.

97,720.—JOST STENGEL, Croton, Mich.—*Spring-Bed Bottom.*—December 7, 1869.

Claim.—1. The reversible springs C C, provided with movable pieces D D, as and for the purposes herein set forth.

2. The bed-bottom, herein described, composed of the bed-slats E E, cross-slats I I, and springs G G, all as specified.

3. The arrangement, within a bedstead, of the springs C C, pieces D D, bed-slats E E, cross-slats I I, and springs G G, all constructed as described, and operating as and for the purposes herein set forth.

97,721.—SIMON STERNS, New York, N. Y.—*Pleating-Machine.*—December 7, 1869.

Claim.—1. The sliding plate N, arranged to operate substantially in the manner and for the purpose described.

2. The lever P, provided with vertical rod S, to which is attached foot T, operating in the manner and for the purpose set forth.

3. The combination and arrangement of the slotted standards B B, shaft D, with roller E, adjustable shaft H, with roller I, plate N, cams O O and R, lever P, foot T, and table W, all constructed and arranged to operate substantially in the manner and for the purposes herein set forth.

97,722.—WILLIAM STEVENS, Tarentum, Pa.—*Bedstead-Fastening.*—December 7, 1869.

Claim.—The combination of the latch *e* with the parts C and D of the bedstead-fastener, the whole being constructed, arranged, and operating as herein described, and for the purpose set forth.

97,723.—JAMES G. STOWE, Providence, R. I.—*Tool-Rest for Lathes.*—December 7, 1869.

Claim.—The combination of the poppet-block A, tool-rest B, helical cam-block C, screws *d d*, cog-wheel *b*, and cog-rack *e*, or their equivalents, constructed and arranged substantially as and for the purpose described.

97,724.—W. H. STRAUB, Danville, Pa.—*Hay-Loader.*—December 7, 1869.

Claim.—1. The pivoted cross-pieces *b*, grooves or track *d*, and shoes *e*, combined and arranged substantially as and for the purpose described.

2. The slotted adjustable bracket *k'*, standard *k*, inclined frame A, and tongue C, combined and arranged substantially as and for the purpose described.

3. The slotted arms *h*, combined with the crank-axle B' and frame A, in the manner and to discharge the function set forth.

97,725.—THOMAS H. TATLOW, Jr., Newark, Mo.—*Washing-Machine.*—December 7, 1869.

Claim.—1. The laterally-oscillating, backward and forward as well as up and down adjustable rubber, G, of a washing-machine, when arranged to operate against a curved wash-board, substantially as herein shown and described.

2. The combination of the rocking-post C and bar D, with the levers E F, rubber G, hinged guard J, and rod *i*, all arranged and operating substantially as herein shown and described.

3. The above, in combination with slotted plate *a*, carrying the pin *b*, when adjustable on the pivoted end of the post C, for regulating the height of the rubber, substantially as herein shown and described.

4. The removable pivoted guard and partition K, when arranged and combined with the other parts of the machine, substantially as and for the purpose herein set forth and described.

97,726.—JOHN I. TAY, Oakland, Cal.—*Hanging Window-Shades.*—December 7, 1869.

Claim.—The combination of the plate *e*, pawl *i*, ratchet-wheel *g*, loose pulleys *k*, cords D and *l*, and weighted tassel E, when arranged to operate as herein set forth.

97,727.—JOHN I. TAY and LODOWICK L. SAWYER, Oakland, Cal.—*Means for Hanging Window-Shades.*—December 7, 1869.

Claim.—The combination, with an adjustable shade-roller, C, of a fixed pulley, *a*, loose pulley *b*, and endless cord *k*, arranged to operate as herein set forth.

97,728.—JOSEPH TAYLOR, Hudson, N. J.—*Bread-Slicer.*—December 7, 1869.

Claim.—1. The combination of the base A, revolving receiving-case E, and plate C, forming cutters *a'*, substantially as described, for the purpose specified.

2. The cover I, constructed as described, with the plungers J, and adapted to press the contents of the openings H within the revolving case, in contact with the cutters *a'*, substantially as described, for the purpose specified.

3. The adjustable plates K, in combination with the case A, revolving case E, and cutters *a'*, substantially as described, for the purpose specified.

97,729.—JOHN HENRY THOMAS and PHINEAS P. MAST, Springfield, Ohio.—*Grain-Drill.*—December 7, 1869.

Claim.—1. A grain-drill, having two sets of drag-bars, one set being hinged to a stationary bar B, and the other set being hinged to a movable bar, C, the latter being arranged to be secured at the front, or moved back so as to bring the points of hinging of the two sets in line, substantially as described.

2. Attaching the drag-bars D to the under side of the cross-bar B, and the drag-bars E to the rear edge of the movable bar C, so as to bring the drill-tubes all in line, when the bar C is moved back, substantially as described.

97,730.—J. B. VAN DYNE, Nashville, Tenn.—*Railway-Car Brake.*—December 7, 1869; antedated November 30, 1869.

Claim.—1. The tiller-wheel G^2, in combination with the rope or chain G, guide-pulleys *g d* d^3, and movable blocks E, the whole constructed and operating substantially as described, for the purpose of simultaneously applying and releasing the brakes of a railroad-train, as set forth.

2. The brake-shafts F' and ropes or chains F, in combination with the guide-pulleys d^1, blocks E, and pulleys e^2 *e*, substantially as described, and for the purpose of operating the brakes of each car separately, as set forth.

3. The rope or chain H, rods J, and ropes or chains J^1, in combination with the pulley *e*, guide-pulleys d^2, pulleys J^2 *i* i^3, and brake-beams I I', the whole constructed and operating substantially as described, for the purpose of applying the brakes to both sides of the truck-wheels, as set forth.

97,731.—NICHOLAS S. VEDDER, Troy, N. Y.—*Cooking-Stove.*—December 7, 1869; antedated November 30, 1869.

Claim.—The hot-air chamber C, provided with partitions *d e*, openings *f*, and regulating-slide *g*, constructed and arranged as described, whereby the air is first heated, and then passed into the grate at the ends, substantially as and for the purpose set forth.

97,732.—SAMUEL D. VOSE, Milwaukee, Wis.—*Coal-Stove.*—December 7, 1869.

Claim.—1. The local ring-scraper, for cleaning the upright flues of stoves, when constructed and operated substantially as herein set forth and described.

2. The combination of a wire shield or door, A, with a draught-register, when said door is constructed and affixed as above described, and for the purpose of catching sparks.

3. The combination of a safety-button C, when used in connection with a separate latch or turn-key, for the purposes of safety, as above described.

97,733.—CORNELIUS WALSH and JOSIAH WALSH, Newark, N. J., assignors to CORNELIUS WALSH.—*Fastening for Traveling-Bag.*—December 7, 1869.

Claim.— A fastening for traveling-bags, composed of a bracket, 1, clasp 2, 4, 5, 6, and button or stop 3, 7, constructed and arranged to operate in the manner herein represented and described, for the purposes set forth.

97,734.—WILLIAM G. WARD, New York, N. Y.—*Breech-Loading Fire-Arm.*—December 7, 1869.

Claim.—1. The combination of the hammer and firing-pin C, provided with the groove *c*, at the rear end thereof, with the automatic catch *b*, substantially as shown and described.

2. The combination of the bolt A, spring *a*, and pin *b*, with the hammer and firing-pin C, formed with the groove *o* at the rear end thereof, substantially as shown and described.

97,735.—ADDISON G. WATERHOUSE, San Francisco, Cal.—*Pen.*—December 7, 1869; antedated November 25, 1869.

Claim.—The application of the gauge or shoulders C, acting on the levers A, so as to prevent too great a strain being put upon the springs Y, and thereby preventing the points *d* from being broken off.

97,736.—LAWRENCE B. WATERMAN, Chicago, Ill., assignor to LOUIS B. KELLY, same place.—*Clothes-Drier for Stove-Pipes.*—December 7, 1869.

Claim.—The arrangement of the collar A with its flange *a* and thumb-screw *c*, in combination with the disk or ring B, with its projections *d* and slots *f*, as shown and described.

97,737.—HENRY WIGLEY, New Albany, Ind.—*Boiler-Feed and Water-Heater.*—December 7, 1869.

Claim.—1. A reservoir constructed as described, and connected with the boiler, substantially as herein set forth.

2. The combination of the outer reservoir A, inner reservoir B, provided with flanges *a a*, and V-shaped perforated cap D, tortuous pipe E, inlet F, and outlets G, H, and I, all substantially as herein set forth.

97,738.—A. WILKE, Brunswick, Germany.—*Ice-Creeper.*—December 7, 1869.

Claim.—An ice-creeper, consisting of the metal frame, A, provided with the clips L and the screw F, with the felt sole B attached, substantially as described.

97,739.—F. L. WILKINS, Saint Mary's, Ohio.—*Corn-Planter.*—December 7, 1869; antedated December 4, 1869.

Claim.—1. The seed-boxes K, when provided with the projections N, in combination with the slides P, arm R, and spring S, when used substantially in the manner and for the purpose set forth.

2. The marker G, when provided with a slot upon its inner side, and with curved arm H, when used in the manner and for the purpose specified.

3. The levers M, in combination with the seed-boxes K, slides P, and cam-wheel B, when used substantially in the manner as described.

4. The marker G, and arm H, in combination with the cam I and rod O, when used substantially as set forth.

5. The plows D and F, cam-wheel B, marker G, provided with arm H, rod O, and cam I, in combination with the levers M, seed-boxes K, and slides P, when all are arranged in the manner and for the purpose substantially as set forth and described.

97,740.—ISAIAH M. WILLIAMS, Clinton County, Ohio.—*Tire-Heater.*—December 7, 1869.

Claim.—1. The box F, in combination with the ventilators *f f*, and the ears or buckets *g g*, constructed and operating substantially as and for the purpose described.

2. The revolving platform E, in combination with the crank B, horizontal beam D, and lever C, constructed and operating substantially as and for the purpose described.

3. In combination with the revolving platform E, crank B, lever C, and beam D, the box F, with ventilators *f f*, and ears or buckets *g g*.

97,741.—JOHN H. WILSON, Philadelphia, Pa., and JACOB C. OUTWATER, Newark, N. J.—*Mechanism for Driving Sewing-Machines.*—December 7, 1869.

Claim.—1. The grooved friction-wheel D, and brake-arm E, and shoe E′, when they are secured to the arm B in such manner that the brake-arm shall be adjustable, substantially as described.

2. Elbow-lever B B′, wheel D, brake-arm E, spring F, and treadle-arm G, when the same are so combined and arranged as to operate substantially as described.

97,742.—JOSEPH WILSON, Little Falls, N. J.—*Mole-Killer.*—December 7, 1869.

Claim.—The combination of the outer case or box A, inner box B, spikes C, bail or loop D, arm E, shaft F, elastic rods G *g′*, and sliding bars H *h′* I, with each other, said parts being constructed and operating as herein shown and described, and for the purpose set forth.

97,743.—LEVI WILSON, Springfield, Ohio.—*Cider-Mill.*—December 7, 1869.

Claim.—1. The combination of the wheel D, reciprocating plunger K, and chambered wheel L, arranged to operate substantially as and for the purpose set forth.

2. In combination with the plunger K, a revolving wheel L, constructed with chambers *l*, containing followers M, substantially as set forth.

3. The wheel L, when constructed with chambers *l*, and chambered recesses *l′*, connected by slits, to permit the expressed juice to flow through the wheel.

4. The combination of the wheel L, the followers M, and the cam-plate N, arranged in relation to each other, substantially as and for the purpose set forth.

5. The combination of the plunger K, lever I, and cam-wheel H, constructed and arranged to operate substantially as and for the purpose set forth.

6. The combination of the chambered wheel, the cam-plate N, springs *q*, plate Q, and set-screws, for regulating the relation of the cam-plate to the wheel, substantially as and for the purpose set forth.

7. The combination of the spur-wheel F, pinion E, and shaft F^2, bearing the thread of an endless-screw wheel G, shaft G′, and cam-wheel H, for simultaneously operating the grinding-wheel, press, plunger, and chambered wheel D, substantially as set forth.

97,744.—ALLEN L. WOOD, New York, N. Y.—*Apparatus for Treating Diseases by Mechanical Movement.*—December 7, 1869.

Claim.—1. As an instrument of hygienic treatment, the vibrating bar G, having a rotary motion at the end actuated, and its opposite extremity connected with a vertical vibratory support, for producing the operation of kneading and vibrating through the medium of fixed or removable attachments, for the purpose substantially as shown and described.

2. In combination with the bar G, the pitman J, and elbow-lever K, for converting the circular vibratory into vertical and horizontal vibratory motion, substantially as set forth.

3. In combination with the vibrating bar G, operating as described, the removable leather-covered, ribbed, rubbing-attachment M, substantially as described.

4. The foot and hand rests or bars, having continuous rotary motion given by the disk at the point of attachment, substantially as shown and described.

5. The radially-ribbed rubbing-disk, Fig. 4, operated by any suitable mechanism, either by rotary or oscillating motion, substantially as set forth.

6. The compound cam-wheel E, for producing a kneading effect by rotary motion, substantially as shown and described.

7. Extending the usual opening for the operation of the vibrating-devices through the entire length or breadth of the table on which the patient rests, so that the bar G may operate for the entire length or breadth of said table, substantially as set forth.

97,745.—JAMES A. WOOD and EDWARD V MARBAKER, Crosswicks, N. J.—*Gate.*—December 7, 1869.

Claim.—1. The movable shaft or rod D, provided with pivot *d*, arms E, and pivots *f f*, substantially as and for the purposes herein set forth.

2. In combination with the arm E and pivots *f f*, the plate *g*, constructed as described, and for the purposes set forth.

3. The crank F, secured to the upper end of the shaft D, and provided at its rear end with a box-like projection, in which the pulls G G are pivoted, all substantially as and for the purposes herein set forth.

4. The arrangement of the pawls G G and spring *h*, in combination with the projections *i i* on the circle C, substantially as and for the purposes set forth.

5. The lever H, provided at its center with the clamp I, and having a rod, J, attached at each end, substantially as and for the purposes set forth.

6. The arrangement and combination of the movable shaft or rod D, provided with pivots *d* and *f f*, crank F, pawls G G, lever H, rods J J, and circle C, all constructed as described, and operating substantially in the manner and for the purposes herein set forth.

97,746.—ALEXANDER WRIGHT, Allegheny City, Pa.—*Plow.*—December 7, 1869.

Claim.—Providing the mold-board A with lugs S, and combining it with the cutter D, substantially as herein described.

97,747.—EDWIN M. DAY, Elkhart, Ill.—*Game-Trap.*—December 7, 1869.

Claim.—1. The doors H, secured to and revolving with the shaft I, and operated by means of the trough K, the ball L, and the arm M, substantially as and for the purpose specified.

2. The means employed for resetting the trap, consisting of the door E′, the shaft E, and the arms O and N, in combination with the above-claimed devices, substantially as herein described.

3. The hereinbefore-described animal-trap, consisting of the box A, provided with the open end B, and with the openings G, the swinging doors C′, D′, and E′, and H, the shaft I, the trough K, the ball L, and the arms M N and O, all constructed and arranged substantially as and for the purpose specified.

97,748.—T. G. SPRINGER, Clinton, Iowa.—*Gas-Machine.*—December 7, 1869.

Claim. — 1. Regulating the flow of the carbureting-material into the generating-chamber automatically, by balances, in such a manner that it will be supplied only in proportion as it is needed for evaporation and use, substantially as herein set forth.

2. Maintaining automatically within the generating-chamber of a carbureter or gas-machine the necessary degree of temperature, by means of the expansion and contraction of any suitable material used for that purpose, substantially as herein set forth.

3. Surrounding the generating-chamber of a carbureter or gas-machine with a suitable fluid or other material capable of being expanded and contracted by heat and cold, substantially as herein set forth.

4. Maintaining the same degree of pressure of the atmospheric air, both above and below the carbureting-material, substantially as herein set forth.

5. The combination of a water-tank A, reservoir E, aperture *a*, and air-pipe *b*, all constructed and arranged substantially as and for the purposes herein set forth.

6. The balance G, provided at one end with the adjustable weight K, rod *d*, and valve *e*, and at the other with the tube *i* and cup I, substantially as and for the purposes herein set forth.

7. In combination with the balance, thus constructed, the cup *f*, receptacle *g*, and pipe *h*, all constructed and arranged substantially as and for the purposes herein set forth.

8. The arrangement of the generating-chamber H, tube *i*, and cup I, the latter provided with sponge, or other suitable porous material, substantially as and for the purposes herein set forth.

9. In combination with the generating-chamber H, the outside chamber L and pipe M, constructed and arranged substantially as and for the purposes herein set forth.

10. The piston or plunger *p*, rod *r*, adjustable lever P, and stop-cock *o*, all constructed and arranged to operate substantially as and for the purposes herein set forth.

11. The combination of the longitudinally-slotted lever P, and the longitudinally-slotted bar R, substantially as and for the purposes herein set forth.

12. The heating-chamber N, with pipes *k l*, leading to the chamber L and the burner *m*, constructed and arranged substantially as and for the purposes herein set forth.

13. The heating-chamber T, with pipes *t t* and burner *s*, constructed and arranged substantially as and for the purposes herein set forth.

97,749.—MOSES BURLINGAME, Garrattsville, N. Y., assignor to himself and JAMES E. PILKINGTON, Washington, D. C.—*Machine for Making Candle-Molds.*—December 7, 1869.

Claim.—1. Candle-molds, with their tips formed from the same blank, at one operation, by machinery constructed substantially as described.

2. The combination of a mandrel, B, provided with a longitudinal groove, *b*, the inclosing forming-case A, having a feeding-opening, *a*, and swaging-die C, having a socket, I, all arranged and operating substantially as described.

3. The combination of the pivoted dog G with a mandrel, constructed with a notch or groove *b*, for arresting the motion of the mandrel in the proper position to be locked with the blank, substantially as described.

4. The sliding biting-arms *m*, for holding the mold within the case, for the purpose of allowing the mandrel to be turned independently of the mold, to unlock the latter therefrom, substantially as described.

5. The combination of the pivoted arm F, for locking the mandrel within the case A, with the toothed dog G, and swaging-die C, all arranged and operating substantially as described.

6. The combination, in a machine for forming candle-molds from a single blank, at one and the same operation, of a receiving-case, A, a forming-mandrel, B, a swaging-tip die, C, sliding biting-arms *m*, pivoted locking-arm F, and arresting-dog G, all constructed, arranged, and operating substantially as described.

7. A candle-mold, with its tip made from a single blank, provided with V-shaped projections at one end, as a new article of manufacture, substantially as described.

97,750.—GOTTFRIED BIERING, New York, N. Y.—*Hoop-Skirt.*—December 7, 1869.

Claim.—The combination, with the ordinary hoops E, of a skirt and additional auxiliary and adjustable hoop G, operating as a spring, forming loops, and sliding backward or forward in links H, as herein described and for the purposes set forth.

97,751.—HENRY B. ADAMS, New York, N. Y.—*Fluting-Machine.*—December 14, 1869.

Claim.—The spring M, levers E and L, the set-screw N, and roller B, when combined and arranged to operate substantially as and for the purpose herein shown.

97,752.—GEORGE W. BILLINGS, Chicago, Ill.—*Elastic Washer for Carriages, &c.*—December 14, 1869; antedated December 4, 1869.

Claim.—1. A metallic concavo-convex washer, so constructed that the edge of the concave side shall have a continuous rib or rim, B, substantially as described, and for the purpose set forth.

2. The combination of the concavo-convex washer A, rim B, and filling C, in the manner as and for the purpose described.

97,753. — ABRAHAM BITNER, Jr., Lancaster, Pa.—*Adjustable Wagon-Bottom and Chute.* — December 14, 1869.

Claim.—The arrangement of the adjustable bottom B, in a wagon, in combination with a trap or valve, D, in said bottom, so that it may be connected with a trough or chute, for discharging coal or the like, in the manner and for the purpose specified.

97,754.—THOMAS SCHOENBERGER BLAIR, Pittsburgh, Pa.—*Mode of Treating Conglomerates of Cast Iron.*—December 14, 1869.

Claim.—The before-described improved treatment of pig-bloom, wherein the pig-bloom is first heated to the requisite degree to render it friable, is then crushed, and the crushed material charged at once into a reverberatory furnace, with the least possible loss of heat.

97,755.—JOHN BLUME, Mount Pleasant, Md.—*Animal-Trap.*—December 14, 1869.

Claim.—The toothed ring B, provided with the cross-bars *b′ b″*, and combined with the vertical posts A′ *a a*, spring *c*, trigger *e*, bait-holding apparatus *d d′*, and connecting-rod *h*, in the manner and for the purpose set forth.

97,756.—JOSHUA BROOKS, Boston, Mass., assignor to himself and BENJAMIN E. CORLEW, same place.—*Electro-Magnetic Advertising-Frame.*—December 14, 1869; antedated December 1, 1869.

Claim.—1. Drums H H′, ratchets *h h′*, pawls *g g′*, bell-crank *e′ f′*, *e f*, and bars *d d′*, in combination with an electro-magnetic apparatus, substantially as described.

2. Drum H, strap *q*, stud *p′*, in combination with bell-crank lever *m′ l′*, rod *v*, wire *s*, ball *i*, and pawl *g*, substantially as described.

97,757.—WILLIAM I. BUNKER, Yankton, Dakota Territory.—*Lamp-Extinguisher.*—December 14, 1869.

Claim.—A slot, *a*, in the side of a wick-tube, near the top, with a tap, *b*, extending down from the upper edge of the slot, at an angle from the tube, for the purpose of conveying the rising air to the flame.

97,758.—ROBERT F. BURNS, Albany, N. Y.—*Machine for Polishing the Edges of Boot and Shoe Soles.*—December 14, 1869.

Claim.—1. The polishing-cylinder D, when furnished with the creasing-projections *s s* and the inclined grooves *o o*, substantially as and for the purpose set forth.

2. In combination with a polishing-cylinder, D, constructed with a solid face, and provided with creasing-projections *s s*, the jet of gas or other flame G, applied substantially as and for the purpose set forth.

3. The revolving nut *d*, screw *f*, hand-wheel C, in combination with the frame A, and the adjustable gauge B, substantially as and for the purpose set forth.

4. The stops *k*, made into and in combination with the adjustable gauge B, substantially as and for the purpose set forth.

97,759.—PETER CAMPBELL, Carrolltown, Pa.—*Bee-Hive.*—December 14, 1869.

Claim.—1. The vertical ventilating-tube A, passing centrally through the hive, open at the top and bottom, and perforated and provided with screens, all substantially as herein described.

2. The construction of the hive proper, of a base B, glass sides and back *c c e*, hinged shutters C E, blocks *e e*, comb-frame supports H, removable upper portion K K, and vertical central perforated tube A, open at top and bottom, said hive containing the suspended comb-frames G, the removable sections I, and honey-boxes J, all constructed and arranged substantially as herein described and shown.

97,760.—PETER CAMPBELL, Carrolltown, Pa.—*Railway-Gate.*—December 14, 1869.

Claim.—1. The self-closing gate, provided with springs I, as and for the purpose set forth.

2. The pivoted spring-holders G G′, when connected with the rail B′, for the purpose, and substantially as described.

3. The catch-bars E E′ and levers F F, in combination with the spring-rail B′, when constructed and arranged to operate substantially as described.

4. The combination of the self-closing gate, the spring-rail B′, posts H H, holders G G′, and catch-bars E E′, and levers F F, all constructed and arranged to operate substantially as described.

97,761.—THOMAS J. CHUBB, Williamsburgh, N. Y.—*Reducing Ores.*—December 14, 1869; antedated June 14, 1869.

Claim.—1. Effecting the heating, reducing, melting, or refining of ore, metals, metallic or earthy substances by aid of an agitated intermittent reciprocating or revibrating motion to a current or blast of air or gas entering the combustion-chamber of a furnace, for the purpose of producing a perfect combustion of the air and gases, and for the purpose of facilitating the action of the heated gases or flame to heat the metal, (or other substance to be acted upon by the heated gases,) without a cutting blast.

2. The employment of an agitating, revibrating motion to air, steam, gas, or gases, passing through or among particles of coal or other carbonaceous matter in a gas-producing furnace or apparatus, for the purpose of aiding the production or improving the quality of combustible gas.

3. Effecting the heating, reducing, melting, or refining of ores, metals, metallic or earthy substances by aid of gas, produced substantially as set forth.

4. Producing combustible gas by aid of an agitated intermittent reciprocating or revibrating motion to the air, steam, gas, or gases in immediate contact with the coal or other carbonaceous substances in a gas-producing furnace or apparatus.

97,762.—JAMES B. CLARK and LUCAS C. CLARK, Plantsville, Conn.—*Machine for Bending and Folding Sheet-Metal.*—December 14, 1869.

Claim.—1. The combination of the swinging brakes C and D, and the folding-plate B, substantially as and for the purpose described.

2. The combination of the swinging brakes C and D, folding-plate B, brake-plate J, and cams F F, all constructed and operated substantially as set forth.

97,763.—JOSEPH S. CLARK, New York, N. Y.—*Saw-Swage.*—December 14, 1869.

Claim.—The removable die *e*, in combination with the beveled jaws *b* and *e*, and handle *a*, all constructed, arranged, and operated as set forth.

97,764.—NELSON C. COLE, Beaver Dam, Wis., assignor to himself and LEVERETT H. MARVIN, same place.—*Sash-Holder.*—December 14, 1869.

Claim.—The construction of a combination window-lock, with two bolts upon one plate, and operated by detachable keys, operating upon each sash independently, as herein described.

97,765.—CHRISTOPHER DAY, Mineral Point, Wis.—*Machine for Crimping and Forming the Front of Boots.*—December 14, 1869; antedated November 30, 1869.

Claim.—The new and improved method of forming and crimping the fronts of boots, by means of the ratchet-beam B and ratchet-bars R R, in combination with the gates *g g*, stanchions *o o*, and toothed jaws K K, and the adjustment of the stanchion-sections and jaws K K, by means of screws N and T T, constructed and arranged as herein described.

97,766.—ROYAL E. DEANE, Brooklyn, N. Y.—*Water-Heater for Culinary Purposes.*—December 14, 1869.

Claim.—1. So constructing a water-heater for culinary purposes, that the steam rising from the water boiling in the heater shall force any desired quantity of boiling water out of said heater and into a contiguous vessel, properly connected with the heater, when the same shall be constructed substantially as described.

2. The combination, with a steam-tight cylinder, A, of the pipes F and G, when the same shall be constructed and operate substantially as and for the purposes set forth.

3. In combination with the subject-matter of the second clause of claims, the steam-cock H, pipe I, and perforated plate or disk L, constructed and operating as and for the purposes specified.

4. The combination, with a steam-tight cylinder, A, provided with the pipes F and G, of a measuring-scale, D, as and for the purposes fully described.

97,767.—JOSEPH W. DOUGLAS, Middletown, Conn., assignor to W. & B. DOUGLAS.—*Pump.*—December 14, 1869.

Claim.—An air-chamber, and the passages connected therewith, having a porcelain-enamel surface, as and for the purpose described.

97,768.—S. C. FRINK and L. D. HARLAN, Indianapolis, Ind.—*Depurator.*—December 14, 1869.

Claim.—1. The shield and adjustable head-rest, in combination with the elastic hood, arranged as described, substantially as and for the purposes set forth.

2. Securing the hinged covers of the box G, arranged with the folding lid, as described, by means of the hook-eccentries, arranged as and for the purposes set forth.

97,769.—CHARLES B. GOODRICH, Jr., Boston, Mass.—*Shutter-Fastener.*—December 14, 1869.

Claim.—The combination of a catch-rod, con-

structed with a screw-thread on the inner end, and a catch on the outer end, with a brick perforated to receive the same, and a nut to secure the same, all substantially as and for the purposes described.

97,770.—Suspended.

97,771.—GEORGE GUENTHER, Chicago, Ill., assignor to himself and E. H. HEYMANN, New York City.—*Manufacture of Glue.*—December 14, 1869.

Claim. — As a new article of manufacture the within-described canned glue, prepared substantially in the manner and so as to combine the advantages herein set forth.

97,772.—HIRAM W. HAYDEN, Waterbury, Conn., assignor to HOLMES, BOOTH AND HAYDENS, same place. — *Shade-Rings for Lamp-Burners.*—December 14, 1869.

Claim. — The crimps 2 2 in the springs *o* of the shade-ring *d*, in combination with the bead *i* around the base of the burner, as and for the purposes specified.

97,773.—HIRAM W. HAYDEN, Waterbury, Conn., assignor to HOLMES, BOOTH AND HAYDENS, same place.—*Lamp.*—December 14, 1869.

Claim.—1. The perforated cylinder *d*, and guide-socket, made of one piece of metal, and removable from the wick-tube, as and for the purposes specified.

2. The perforated cylinder *d*, flange *e*, and guide-socket, in combination with the chimney-holder, attached to the flange *e*, as set forth.

3. The perforated cylinder *d*, guide-socket *g*, flange *e*, and chimney-holder *f*, made as specified, in combination with the compound dome *h i*, with flame-slot and notches *o o*, as and for the purposes set forth.

97,774.—FREDERICK HEWITT, Bloomfield, N. J. —*Fluting-Machine.*—December 14, 1869.

Claim.—The combination and arrangement of the heater-boxes A B, A′ B′, lever C, link D, spring H, and lever G, operated as shown and described.

97,775. — ABRAM C. JAQUES, Leavenworth, Kansas.—*Wagon-Brake.*—December 14, 1869.

Claim.—1. The ratchet *i i i*, on the top of the perch A, the pawl *e* and lever *d*, as arranged therewith, and connected with the brake-bar C, in combination with the bell-crank lever *h*, to liberate the pawl and brakes, all being arranged and operating substantially as and for the purposes set forth.

2. The arrangement of the hand-lever I, guide-ratchet *j*, the movable double-tree F, all connected together, and combined with the brake-locking and liberating mechanism, as herein described.

97,776.—E. C. JENKINS, Jr., Worcester, Mass. —*Wick-Trimmers for Lamps.*—December 14, 1869; antedated December 11, 1869.

Claim.—1. The combination, with the wick-tube of a lamp-burner, of a wick-cutting-device composed of two cutting-plates or blades affixed to or forming part of a sleeve fitting the wick-tube, and capable of being moved up or down thereon, so as to bring the blades up in position to cut the wick, or to lower them out of the way.

2. A wick-cutting device, composed of the sleeve *d*, spring-plates *e*, and blades *f*, the whole constructed and operating as described.

97,777.—JESSE B. JOHNSON and THOMAS E. JOHNSON, Indianapolis, Ind.—*Lumber-Drier.*—December 14, 1869.

Claim.—Furnishing the drying-chamber with the vertical deflecting-plates D, and the horizontal deflecting-plates E, arranged substantially as set forth, in combination with the furnace B, curved deflecting-plate C, ventiducts G, and longitudinal ducts formed by the pieces H resting on the top of the truck-frame, all arranged and operating substantially as and for the purpose set forth.

97,778.—JULIUS H. JONES, Charlton, Mass.— *Turbine Water-Wheel.*—December 14, 1869.

Claim.—The wheel, composed of the two series of buckets, D and E, both having a vertical inlet and horizontal discharge, and the rims B and C, confining the water admitted to the upper series to them, when constructed and operating as above set forth and described.

97,779.—HENRY J. KING and BENTON L. BEEBE, Middletown, N. Y.—*Hydraulic Engine.*—December 14, 1869.

Claim.—1. The rectangular box A, provided with valve-chamber B, valves D, inlet and outlet pipes C *b*, in combination with piston-boxes E, having the pistons provided with air-chambers *h′*, substantially as set forth.

2. The rectangular box A, with partitions and plates *a a*, valves D D, rod or stem *c*, packing-box *e*, inlet and outlet pipes C *b*, constructed and arranged substantially as set forth.

3. The pistons F, so constructed with air-chambers as to form a trunk, extending to the bottom end thereof, in combination with valves and valve-chamber, substantially as set forth.

4. The slide I, provided with V-shaped shoulders *i*, and connecting by levers with valve-rod or stem *c*, in combination with elongated cam J, substantially as set forth.

5. The elongated cam J, so arranged with slide, as to impinge against either side of the shoulders *i* thereof, and operate the valves, substantially as and for the purpose set forth.

97,780.—FRANÇOIS ALEXANDRE LE MAT, New Orleans, La., assignor to CHARLES PIETRONI, London, England. — *Breech-Loading Revolving Fire-Arms.*—December 14, 1869.

Claim.—1. The construction and arrangement, with the central barrel, of its hinged breech-block, and the central firing-pin carried in the same, and located, with relation to the hammer, substantially as described and shown.

2. The combination of the hinged breech of the central barrel, carrying the percussion-pin or firing-needle, as described, with the cartridge-retractor, under the arrangement and for the operation as set forth.

3. The herein-described construction of the double hammer, with a permanent beak or pin for exploding the cartridge of the revolver, and a hinged auxiliary hammer, constructed and arranged substantially as specified, to strike against the percussion-pin of the central barrel.

97,781.—FERDINAND LEROY, (FERDINAND LEROY, administrator,) of Commercial Road, London, England, assignor to himself and P. A. VICTOR LE LUDEZ, England.—*Composition for Covering Steam-Boilers, and for other Purposes.*—December 14, 1869.

Claim.—1. Certain additions to and modification in the substances constituting the non-conducting composition.

2. The use of brick-clay, powdered charcoal, saw-dust, fuel-sweepings, cow-hair, cocoanut-fiber, wheaten flour, yeast, or other fermentable substance, the residues of the conversion of starch into sugar and cotton-foot oil, in combination, so as to form a non-conducting composition.

3. The method of preparing the same by fermentation, and the method of applying the same, as set forth in this specification.

97,782.—EDWARD C. LEWIS, Benton Harbor, Mich.—*Wine and Cider Mill.*—December 14, 1869.

Claim.—1. The door or adjustable wall L′, of the intermediate chamber between the two sets of grinding or crushing devices, as and for the purpose set forth.

2. The combination of the chute-supports a^2 a^3, arranged relatively to the two sets of grinding or crushing devices, as shown, and the adjustable wall L′, and removable chute or chutes N O, as and for the purposes described.

97,783.—JOHN R. LEWIS, Piper City, Ill.—*Excavator.*—December 14, 1869.

Claim.—1. The plow, provided with a mold-board turned up at W, to carry earth on to the elevator, in combination with the brace *g*, shoe-plate X, and connecting-plate *t*, as set forth.

2. The combination of the plow D W F E, brace *g*, plates *t* X, stiles O O, roller Y, and beams T and G G′, as described.

3. The combination of the frame A A′, depending standards J K and L K, cross-beam T, provided with lugs U, wheel I, rope *x*, and chain Z, for supporting and adjusting the plow and lower ends of the elevator, as and for the purpose specified.

97,784.—Francis M. Lottridge, Portland, Ind., assignor to himself, James M. Templer, and James C. Jay.—*Band-Tightener.*—December 14, 1869; antedated December 14, 1869.

Claim.—1. The combination of shaft A A^1, hook A^2, ratchet-wheel A^3, pawl *a*, spring *a′*, crank B, and cross-arm C, with pulleys *c c* and *c′ c′*, all arranged to operate substantially as described.

2. In combination with the above, the cut C′ on the upper side of the cross-arm C, with reference to the band or rope, and the pulleys *c′ c′*, substantially as shown and described.

97,785.—Francis M. Lowden and John D. Lowden, Lawrence, Ind.—*Clod-Fender.*—December 14, 1869.

Claim.—The clod-fender herein described, when the same is constructed in its several parts and used substantially as herein set forth.

97,786.—T. J. Magruder, Marion, Ohio.—*Shaft-Tug Lug for Harness.*—December 14, 1869.

Claim.—A harness-tug lug, provided with the plate *a*, and secured to the skirts and pads as described, when the lug is either made hollow, and provided with female-screw thread, and an engaging-bolt, *g*, or solid, with removable nut *d*, all substantially as specified.

97,787.—John W. Marshall, Gilman Joslin, and Nelson Curtis, Boston, and Oliver Edwards, Brookline, Mass.—*Ships or Vessels for Carrying Liquid Cargo.*—December 14, 1869.

Claim.—1. The combination of the cargo-space or tank, either with or without compartments, with the hull of a vessel, when arranged centrally within the hold, and at such distance from the hull as to be accessible on all sides, and made of such relative length, breadth, and height, that when filled with cargo, the center of gravity and weight of the contents will bear such relation to the center of gravity and displacement of the vessel as to load and trim it, substantially as described.

2. The cargo-space, arranged centrally in the hull, as described, and made with its sides longitudinally continuous, in structural combination, with the hull, as described, so that the rigidity due to such construction of the cargo-space shall be imparted to the hull.

3. The combination of the series of tanks, arranged centrally in the hull, and provided with rising-chambers, as described, with the hull of the vessel, when so arranged that the rising-chambers shall extend above the outer deck, so as to serve as hatches, and afford free communication between the interior of the tanks and exterior of the hull, and as combings, to prevent the influx of water that may come on board, as well as means of keeping the tanks entirely filled, substantially as described.

97,788.—Frank W. Marston, Boston, Mass.—*Fastening for Corsets.*—December 14, 1869; antedated November 30, 1869.

Claim.—The spring *a*, covering the clasp, when formed with a concavity, *d*, to engage with the head of the stud *c*, and retain it in position, substantially as described, and for the purpose set forth.

97,789.—W. B. McClure, Alexandria, Va.—*Cart-Saddle.*—December 14, 1869.

Claim.—1. The employment of rollers in the groove of a cart-saddle, when said rollers have their bearing directly upon the saddle, substantially as described.

2. The cart-saddle described, having the groove *a*, depression a^1, rollers *b*, bearing-plate a^2, and bolts *c*, when combined and arranged as described, for the purpose set forth.

97,790.—Philip C. McManus, Troy, N. Y.—*Potato-Digger.*—December 14, 1869; antedated December 7, 1869.

Claim.—1. The arrangement of the digger D L D, the fixed apron E, and the pivoted vibrating sifter F, with reference to each other and the wheels B B, the bevel-gear wheel G, and the pinion H, in manner substantially as herein set forth and shown, for the purpose specified.

2. The combination of the ratchet *p* and pawl R with the lever Q, shaft V, arms M M, links *a a*, and digger D L D, substantially as shown, for the purpose set forth.

3. Making the bars L of the digger in a flanged, ribbed, or angular form at their top sides, substantially as herein described and shown.

4. The combination of the cradle or bolster *f* S S, sifter F, links *b b*, arms O O, shaft W, connecting-arm T, crank U, pinion H, bevel-gear wheel G, and wheel B, with each other, when arranged, with reference to the apron E and digger D L D, in manner substantially as shown, for the purpose set forth.

97,791.—J. S. Merchant, Hopedale, Ohio.—*Washing-Machine.*—December 14, 1869.

Claim.—The washing-machine, consisting of the rectangular tub A, the removable concaves C C, provided with end-pieces or extensions D D, forming the spaces J J, and the semicircular rubber E, forming one end of a lever K, whose fulcrum-rod G works in vertical slots in the sides of the tub, all constructed, combined, and arranged as shown and described.

97,792.—James Montgomery, Croton Landing, N. Y.—*Railway-Rail.*—December 14, 1869.

Claim.—1. A tubular rail, rolled in one piece, and composed of a single bloom or ingot, having an aperture through it of such shape and dimensions, and so located as to leave the largest amount of metal at top and bottom, (the points against which the wheels bear,) the vertical or nearly vertical sides being parallel to each other.

2. Mounting tubular steel rails in string-pieces C, from which they derive both vertical and lateral support, and securing them by bolts E, applied in any manner substantially as set forth.

3. The dovetail-joints, represented in Fig. 9, formed in substantially the manner described.

97,793.—William Morgan, Middlebrook, Va.—*Washing-Machine.*—December 14, 1869.

Claim.—1. The combination of the depressing-lever, the sliding frame, the rubber, the tub, and the oscillator, all constructed to operate as set forth.

2. The combination of the tub with the oscillator, constructed and operating as herein described.

97,794.—H. H. Munroe, Louisville, Ky.—*Compound for Treating Rheumatism.*—December 14, 1869.

Claim.—The above-described remedy for rheumatism, consisting of the compounds A and B, substantially as set forth.

97,795.—John Nester, Portland, Oregon.—*Scribe-Hook.*—December 14, 1869.

Claim.—1. The marker D, when provided with the V-shaped cutting-edge, in combination with the pin *i*, projecting from the pin *h* into the segmental slot of the plate *j*, all arranged to operate substantially as herein shown and described, and for the purpose set forth.

2. The springs *m m*, in combination with the marking-device D *h j*, for the purpose of retaining the marker, arranged as herein shown and described.

97,796.—H. G. Noble, Selma, Ala.—*Roofing.*—December 14, 1869.

Claim.—The arrangement of the sheets A B, in the concave form, between the rafters, and of the caps or troughs C at the joints over the rafters, all substantially as specified.

97,797.—Anthony T. Norgan, Palo Alto, Pa.—*Device for Fastening Piston to Piston-Rods.*—December 14, 1869; antedated December 7, 1869.

Claim.—The construction and arrangement of the piston-rod A with convex nut C and piston B, substantially as described.

97,798.—G. S. NORRIS, Baltimore, Md.—*Attachable and Removable Calks for Horseshoes.*—December 14, 1869.

Claim.—An attachable and detachable calk, secured to the shoe by the catch-piece *e* and the clinch-nails *f f*, with or without the creases in the shoe, substantially as and for the purpose described.

97,799.—JOHN PALEN, Lockport, assignor to NATHAN T. HEALY, Medina, N. Y.—*Harness for Horses.*—December 14, 1869.

Claim.—The construction and arrangement of the neck-strap, as herein described, the same consisting of the length A, passing over the horse's shoulders, and the side-straps *a a*, attached to the breast-plate or collar, passing up through loops, and received at the top by a single buckle, or any other device, whereby side-buckles are dispensed with, substantially as set forth.

97,800.—THOMAS PAYNE, Detroit, Mich.—*Railway-Car Brake.*—December 14, 1869.

Claim.—1. The slotted draught-iron A, which slides in the draw-bar B, in combination with and acting on chain F, so that in starting the engine or power, the pull on said draught-iron A is communicated to and unwinds the chain F, thus acting on tumbling-rod C and chain G, as and for the purpose above described; or, in case the chain V to be used in place of the rod C, then said draught-iron A is claimed in combination with and acting on shaft U, as and for the purpose above described.

2. The manner of putting the brakes on by "shutting off" and drawing the rod O, thereby removing the strain of draught-iron A upon chain F, in consequence of which the spring H is released, and by its own power, unaided either by concussion or momentum, forces the brakes on.

3. The chains J J, tumbling-rod C, slides E, draw-bar B, chain F, spring and spool H, chain G, ratchet L, when arranged and acting in combination, as and for the purpose above specified.

4. The hand-power retaining and releasing device K P Z R, for keeping the brakes partly off, and allowing the strain to apply gradually, and also for releasing brakes by hand, when desired, instead of by engine or other power, when arranged and acting in combination, as and for the purpose above set forth.

97,801.—A. PERIN, Paris, France.—*Saw-Mill.*—December 14, 1869.

Claim.—1. The arrangement of the upper or tension-pulley, the carriage E, screw-shaft *d*, miter-wheels *b*, and crank *a*, when combined, as herein described, with the standard B.

2. The arrangement of the linked serrated plates K, rotating on chain-pulleys, spurs, and bevel-gears *i k l m n o p q r*, axle *t*, and pulleys *z z'*, when combined with the carriage L, as herein described.

3. The carriage L, screw-shaft V, axle *x*, and spur-gears *y y'*, when arranged as described.

4. The arrangement of the carriage M, provided with vertical rollers, elbow-lever *b'*, weight *c'*, and screw *e*, in combination with the table *c*, as set forth.

5. The jointed guide *e*, through which the saw-blade passes, when arranged with the cylindrical stem H, substantially as described.

97,802.—JOSEPH A. PERLEY, Lynn, Mass., assignor to himself and WILLIAM H. PERLEY, same place.—*Spoke-Shave.*—December 14, 1869.

Claim.—The combination of the two handles, the double-edged knife, and the two throat-pieces, substantially in manner as specified.

97,803.—J. R. PERRY, Wilkesbarre, Pa.—*Organ-Bellows.*—December 14, 1869.

Claim.—1. The additional chamber I, in combination with the chamber formed by the suspended valve H, in the manner and for the purpose set forth.

2. The chamber N, attached to the exhaust-boards, as arranged and for the purpose specified.

3. Disclaiming the special arrangement of A. W. Wilcox, patented April 28, 1868, the combination of the valve-chamber H, recess I, and chamber N, in the manner and for the purpose specified.

4. The adjustable frame R, combined with the organ-case, for the support of the spring P, substantially as specified.

97,804.—WILLIAM C. PICKERSGILL, Providence, R. I., assignor to PROVIDENCE TOOL COMPANY, same place.—*Apparatus for Setting Caps in Metallic Cartridges.*—December 14, 1869.

Claim.—The apparatus for setting a cap in a metallic cartridge, substantially as herein shown and described.

97,805.—WILLIAM C. PICKERSGILL, Providence, R. I., assignor to PROVIDENCE TOOL COMPANY, same place.—*Cap-Extractor for Cartridges.*—December 14, 1869.

Claim.—The apparatus for extracting the cap from a metallic cartridge, substantially as herein shown and described.

97,806.—WILLIAM C. PICKERSGILL, Providence, R. I., assignor to PROVIDENCE TOOL COMPANY, same place.—*Apparatus for Setting Bullets in Cartridges.*—December 14, 1869.

Claim.—An apparatus for setting a bullet in a metallic cartridge, which consists of a suitable lever or other power-press, in combination with a mechanism for greasing the bullet, substantially as described.

97,807.—LEMUEL POWELL, Milford, Conn.—*Smoke and Spark Conveyer for Railroad-Trains.*—December 14, 1869.

Claim.—1. The pipes F G H I and smoke-stack D, all constructed and arranged in reference to each other, as described.

2. The arrangement of pipes H I, upon each side of a passage-car, but in a reversed direction, to connect with a single pipe arranged on one side of the tender, as set forth.

3. The combination of a stack-pipe, closed at top, and an angular draught-pipe, F, with a series of conducting-pipes, arranged, as described, in a horizontal line below the top of the highest car, but above the window thereof, for the purpose set forth.

4. In combination with pipes to transfer and discharge the smoke behind the moving train of cars, as set forth, an inclined pipe, J, located on the tender, to receive the cinders, and convey them to the ground, or some receptacle, in the manner described.

97,808.—THOMAS T. POWELL and JOHN F. BURROUGHS, Lawn Ridge, Ill.—*Convertible End-Board and Platform for Wagons.*—December 14, 1869.

Claim.—1. The use and construction of the board B, both as a platform or wagon-bed extension, and as a wagon-seat, with its staples or hooks *k k*, or equivalent fastenings for the gates, and the bars *e' e*, substantially as described, and for the purposes set forth.

2. In combination with the above, the gates C D, with their straps *b b b b* and eyes *d d d d*, secured by the rod *i*, and auxiliary recess *l*, the braces *a a*, and the transverse bar *g*, with its recesses or mortises *f f*, all substantially as described, and for the purposes hereinabove stated.

97,809.—A. PRUTZMANN, Canton, Ohio.—*Machine for Making Fly-Nets.*—December 14, 1869.

Claim.—1. The guide-plate T, provided with the arm U, with pressure-roller *u*, and the tension-device 2 *z* 3, and combined with the bed-plate by the clamping-screw V, substantially as and for the purpose specified.

2. The adjustable arms W S, secured to the plate T by screws *w' t*, and having the pressure-screws *w v* at their ends, substantially as and for the purpose specified.

3. The center-pin *k*, arranged on an arm, *i*, pivoted on the slide *h*, and held by a spring, *j*, attached to the slide *h*, and acting between the end of the arm *i* and the slide-rail Z, substantially as and for the purpose specified.

4. The combination of the plate B with clamping-bolt *y*, and knife *x*, guide-plate T, with clamping-screw V, and pressure-roller *u*, arranged on arm U, with tension-device 2 *z* 3, and slide-rails Z with slide *h*, having arm *i*, with center-pin *k* and spring *j*, attached thereto, the several parts being arranged substantially as and for the purpose specified.

5. The trimming-cutter 7, provided with the jam-nut 9, when used in combination with the standard

M 11, provided with the slot 10, substantially as and for the purpose specified.

6. The trimming-cutter 70, provided with the conical end 73, when used in combination with the retaining-plate 71, with clamping-bolt 72, and the standard M′, substantially as and for the purpose specified.

7. The burnisher 12, provided with one or more holes, 13, and secured by the jam-nut 14, in the standard L, with slot 15, when used in combination with trimming-cutter 7 or 70, substantially as and for the purpose specified.

8. The standard K, with grooved wheel 16, when used in combination with the burnisher 12 or trimming-cutter 7 or 70, substantially as and for the purpose specified.

9. The vise-cylinder I, composed of the jaw I′, fixed to the shaft 20, and provided with the incline 24 and lip 21, and the jaw 17, provided with screw 18 and wedge 22, and incline 23, the several parts being combined and arranged substantially as and for the purpose specified.

10. The cutter-box N, provided with clamp-screw 4, clamping-piece 34, cutter-base 32, and one or more cutters 5, with corresponding cells 33, the several parts being arranged substantially as and for the purpose herein specified.

11. The corrugated slide-rod 6, when used in combination with the cutter-box N, provided with cutters 5 and cells 33, substantially as and for the purpose specified.

12. The tension-rods *r r*, fixed in the head *r′*, and sliding through the compound revolving nut *l m*, in the plate C, and held in position by the jam-nuts *p p*, on the rod *q*, in the head *r′*, in combination with the frame-piece Y, substantially as and for the purpose specified.

13. The straight cutting-knife shaft 60, provided with clamping-bolt 37, journals 67 67, and handle 36, and having the knives 61 61 secured between the headed blocks 62 62 63, substantially as and for the purpose specified.

14. The adjustable stop-piece 38, secured to plate 40 by screw 39, when used in combination with the handle 36, provided with slot 44, on the knife-shaft 60, substantially as and for the purpose specified.

15. The pressure-bar door X, arranged to turn on journals 46 46, working in holes 41 41, in the plates C and 40, and provided with pressure-screws 35 35, and pressure-plate 47, held by clamp 49 and screws 50 50, and held in position either by hooks 35 35, or the retaining-bar 43, substantially as and for the purpose specified.

16. The shaft 56, provided with rollers 58 59 59 and yoke 57, and held down by pressure-screws 35, when used in combination with the knives 61 61 and the front plate 54, substantially as and for the purpose specified.

17. The punch-arm P, provided with the slot *c*, with one or more punches, *b b*, of a conical form, secured therein, and the adjusting-rod *f*, with nut *f′*, when used in combination with the punch-standard *o*, hand-lever Q, and plate B, substantially as and for the purpose specified.

18. The blacking-cup G H, composed of the cup H, with cover-screw 25, and the hinged cover G, with entrance and exit apertures 26 28, dipping-arm 31, and wiping-leather 30, held by clamp 29 and screw 27, the several parts being arranged substantially as and for the purpose specified.

19. The reel E, mounted on standard D, on the frame A, and provided with crank F, when used in combination with the blacking-cup G H, also secured on the plate A, substantially as and for the purpose herein specified.

97,810.—George W. Putnam, Boston, Mass.—*Burglar-Proof Safe.*—December 14, 1869; antedated November 27, 1869.

Claim.—As my invention, the new manufacture of burglar-proof safes, as described, consisting of the hollow cylinder A, or its equivalent, and the dome-shaped cylindrical cap B, made with connection-screws, and provided with a bolt in the one part, and a bolt-receiving cavity in the other, or the mechanical equivalents of such bolt and cavity, the whole being substantially as specified and represented.

97,811.—Ephraim Quinby, Comstock, Mich.—*Horseshoe-Beveler.*—December 14, 1869; antedated December 1, 1869.

Claim.—1. Constructing a horseshoe-"former" with a beveled surface at and near the heel portion, as and for the purposes specified.

2. The improved former herein described.

97,812.—John S. Rankin, Ann Arbor, Mich.—*Padlock.*—December 14, 1869.

Claim.—A spring-actuated pivoted tumbler A, having projection C, recess H, and convexity E, in combination with a pivoted bow, D, having locking recess at one end, and spring-actuated arm F at the other, the said tumbler and bow being arranged within a padlock-case, substantially in the manner described.

97,813.—Elisha R. Rich, South Boston, Mass.—*Ship-Windlass.*—December 14, 1869.

Claim.—The pawl ships' windlasses, constructed to yield or give to the movement of the windlass, for sudden strains thereon, and the above provided with graduations, substantially as described, for the purpose specified.

97,814.—Lemuel Richmond, Derby, Vt.—*Rein-Guide for Harness.*—December 14, 1869.

Claim.—The above-described rein-guide, consisting of the bars H and D, and arm B, arranged substantially as described.

97,815.—Stacy Risler, Locktown, N. J.—*Churn.*—December 14, 1869.

Claim.—The dasher-head E, diamond-shaped blades *d*, arms C, removable bar D, and removable standards B B, in combination with dovetailed ends *b* of box A, provided with removable lids *c*, the arm of dasher being operated either by pin *e* or removable lever F, constructed and arranged substantially as described

97,816.—Thomas C. Robinson, Boston, Mass., assignor to George H. Sandborn, New York City.—*Paper-Cutting Machine.*—December 14, 1869.

Claim.—1. The yokes Y, constructed as described in combination with the screws P P′ and the knife-stock K, having the slits *a a* in its ends, as and for the purpose stated.

2. The automatic reversing-mechanism for operating the clutch, the same consisting of the combination and arrangement of the toe Q, slide U, arm X, bolt *g*, yoke G′, and weight B′, in the manner specified.

97,817.—Henry Schofield, Philadelphia, Pa., assignor to himself and Charles D. Clarke, same place.—*Stone-Polishing Machine.*—December 14, 1869.

Claim.—1. In a machine for rubbing blocks or slabs of marble, &c., the combination of the reciprocating carriage, for supporting the block or slab, a rotating rubbing-disk, composed entirely of metal, and having a smooth or plain rubbing-surface, substantially as described, and mechanism for adjusting and supporting said disk at different elevations, corresponding to the thickness of the block or slab to be rubbed, the combination being and operating substantially as herein set forth.

2. In a machine for rubbing blocks or slabs of marble, &c., the combination of the reciprocating carriage, for supporting the block or slab, a rotating metallic rubbing-disk, with a plain rubbing-surface, and weighted balance-lever, or equivalent device, for graduating the pressure of the disk upon the block or slab, the combination being and operating substantially as herein set forth.

3. In a machine for rubbing blocks or slabs of marble, &c., the combination of the reciprocating carriage, for supporting the blocks or slabs, a rotating metallic rubbing-disk, and hand-lever, for elevating said disk temporarily above the surface of block or slab, the combination being and operating substantially as herein described.

4. In a machine for rubbing blocks or slabs of marble, &c., the combination of the reciprocating carriage, for supporting the block or slab, with a rotating rubbing-disk, connected to a swingin

frame, and made capable thereby of adaptation to surfaces that are curved, inclined, and horizontal, the combination being and operating substantially as herein set forth.

5. In a machine for rubbing blocks or slabs of marble and other stone, a rubbing-disk, the rubbing-surface of which is of metal, entirely plain—that is to say, free from a protruding shaft, and from angular projections or protuberances—perforated, for the passage of sand and water, and connected, on its back or reverse surface, to the extremity of a shaft, through the medium of which power is communicated, for rotating said disk, and for elevating it, to suit blocks or slabs of different thicknesses, all substantially as described.

6. The combination, substantially as described, or its equivalent, of the revolving gear-wheel *g*, gear-wheels *g' g''*, rods *k* and M, shaft F, screw C, carriage B, and stops *m*, for the purpose set forth.

7. The combination, substantially as described, or its equivalent, of the revolving gear-wheels *r'* and *r*, shaft *q'*, and screws *q*, worm-wheels Q, and swinging frame P, for the purpose herein set forth.

97,818.—Socrates Scholfield, Providence, R. I.—*Twist-Drill.*—December 14, 1869.

Claim.—1. A twist, or other similar drill, marked with distinct center-guiding lines or grooves *a a* and *a' a'*, for the purpose of indicating the proper position of the inner corner of each lip in grinding.

2. The combination of the parallel exterior lines *b b* and *b' b'*, with the center-guiding lines *a a* and *a' a'*, substantially as described.

97,819.—George H. Smith, Galesburgh, Ill.—*Smoke-Consuming Fire-Boxes.*—December 14, 1869.

Claim.—1. The pipe E, or its equivalent, with or without perforations *a a*, and the pipe *b*, in combination with the fire-chamber of a furnace, substantially in the manner and for the purpose set forth.

2. The pipe E, perforated as shown, or its equivalent, and the pipe *b*, in combination with the flues F G H of a furnace, and arranged substantially as specified.

97,820.—Samuel Smith, Yohogany, Pa.—*Churn.*—December 14, 1869.

Claim.—The shaft H, provided with revolving dashers G G, in combination with the racks B B, arranged upon each side of the shaft, and extending from the bottom to the top of the churn-box A, and the notched cross-bars C C, all constructed and operating as and for the purpose set forth.

97,821.—William Sidney Smoot, Washington, D. C.—*Repeating Fire-Arm.*—December 14, 1869.

Claim.—1. The combination of an annular key or eccentric sleeve L, vibrating upon the exterior of the breech-block, with the continuous solid breech-block B, and feathers *t t*, the whole forming a breech-system, reciproeating upon the top of the frame, and available throughout its entire length, for the reception of a mainspring and guiding-flange or feather,

2. The combination of the spring Q with the carrier-block H, and a magazine-tube, G, loaded from above and in rear, the whole being arranged in such manner, that after the insertion of each cartridge into the magazine, the carrier shall be caused to partially cover the mouth or entrance thereof, to prevent the expulsion of the cartridge.

3. The wedge-faced bar 2C', operating in connection with a series of inclines on the bottom of the magazine, to hold the cartridges firmly in place.

4. A cartridge-retractor, consisting of a lever-eatch, D, hinged to the sliding breech-block, and operated upon by the side of the frame, to force it against the cartridge-case during the forward movement of the breech, and by a spring, *u*, shoulder, *z*, or other equivalent device, to disengage it from the flange of the cartridge toward the latter portion of its backward movement.

5. The retaining-fingers H, in combination with the pivoted carrier-block E, and inclines *r r*, on the sides of the breech-frame, the whole operating substantially as and for the purpose set forth.

97,822.—Robert Spear, New Haven, Conn.—*Pneumatic Engine.*—December 14, 1869.

Claim.—1. A pneumatic engine into which condensed air is admitted, and from which it escapes through alternating cocks, automatically operated, substantially as described.

2. A plurality of cocks, connected by a crank or cam-arrangement, and operated by the ascent and descent of the float-stem, substantially as described.

3. An engine constructed and arranged as described, so that it will work automatically for ejecting the water when a given quantity thereof shall be received into the engine, and by which means the power is admitted to expel the water, substantially as described.

97,823.—William F. Spear, Wooster, Mass.—*Machine for Polishing Wood.*—December 14, 1869.

Claim.—1. The combination of two or more pulleys or gear-wheels K P T, provided with a crank, V, on the shaft of the last pulley T, connecting-rod Z, and slide-block *i*, with rubbing-block *p* attached, the several parts being constructed, arranged, and operating substantially as and for the purpose specified.

2. The combination of the rubbing-block *p*, provided with the bolt-plate *m*, threaded bolt *k*, with head *n* and the adjusting-nut *l*, the several parts being arranged substantially as and for the purpose specified.

97,824.—Alexander Stevenson, New York N. Y.—*Carpet-Beater and Cleaner.*—December 14, 1869.

Claim.—1. The combination of a yielding bed B, brushing-rollers D; and winding-rollers E, substantially as specified.

2. The arrangement of the yielding beating-bed, with the device for rolling D D and E E, as shown and described, in combination with the beater K F I I H G G, for the purpose specified.

97,825.—Cornelius St. John and Charles E. Marston, Charlestown, Mass.—*Mode of Forming "Burner-Cones" of Lamps.*—December 14, 1869.

Claim.—As a new article of manufacture, a flame-shield or burner, made of a thin shell of metal, formed into shape by electro-deposit of the metal upon a suitable pattern.

97,826.—Lyman Stone, Nelson, N. H.—*Loom.*—December 14, 1869.

Claim.—1. The combination of sliding-bar C^5, cord C^6, weighted lever C^8, having presser C^9 thereon, with the yarn-beam, all being arranged as described, for the purpose of automatically sliding the ratchet-wheel C^4.

2. The worm C^2, wheel C^4, and pawl C^{10}, in combination with a branched lever, the stud 14, arm D, lever *d*, and spring d^3, all arranged as and for the purpose set forth.

3. The arrangement of the sliding ratchet-wheel C^4, shaft C^3, and vibrating pawl C^{10}, substantially as specified.

4. The combination of cams D, arms D^4, rock-shafts D^5, arms D^6, and rods D^7, with the arms D^{11}, rocker-ends D^{12}, and springs D^{13}, as and for the purpose specified.

5. The shipper-lever I, constructed from a single rod, bent as described, and arranged with the spring K, as specified.

97,827.—Clark Strong, Winsted, Conn.—*Coffin-Handle.*—December 14, 1869.

Claim.—1. The use of double sockets C C, in combination with the arm of the coffin-handle, substantially as shown and described.

2. Providing the arms B with pivots *e e*, formed of pieces of wire, and having a right-angled flattened shank placed together, so that when the arm is cast upon them, there will be an equal thickness of metal on both sides thereof, substantially as described.

3. Securing the handle A to pivoted arms B B, by means of the tips F, driven into the slotted ends of the handle, substantially as set forth.

97,828.—Zophar W. Sturtevant, Dunstable, Mass.—*Plow.*—December 14, 1869.

Claim.—1. The shaft B and the beam A, constructed and combined as shown and described, for the purpose specified.

2. The combination, with the shaft B, and with the beam A, as described, of a supporting-frame, F F′, and handles C, in the manner and for the purpose set forth.

3. The combination, with the shaft B, the beam A, frame F F′, and handles C, as described, of the double or reversible plow L L, the parts of which are removable and changeable, and adapted for a double or single plow, or a right or a left-hand plow, in the manner, by the means, and for the purposes substantially as specified.

4. The lever d^3, in combination with the shaft B, and with the back brace K, or other connecting or holding device, for the purpose and substantially as described.

5. The rising-wheel D, and its frame, and guide-rods *f*, cross-head g^3 and screw E, in combination with the handle-supporter F F′, and the shaft B, in the manner and for the purpose described.

6. The rising-wheel G, and rod *k*, having a stand or ears, *m*, and a pin, *c*, with the lever H and cord *o*, in combination with the beam A and shaft B, in the manner and for the purpose substantially as described.

7. Combining a plow or plows, L L or N, with the shaft B and beam A, by box bearings I and *c c*, or caps 7 and 8, and a bail or curved braces, S, as described.

8. Combining the lever d^3 with the shaft B, by means of a hub, d^2, and by screws or pivots, as described.

9. The combination, with the lever H, as shown and described, of the cord *o*, arranged within and through the shaft B, substantially as and for the purpose specified.

10. The handle-supporter F F′, as described, and which serves as a guide and a support for the rods *f*, a stop for the screw E, and to connect the handles with the shaft B, as set forth.

11. The arrangement and combination of the wheels D and G, and their connecting and operating-mechanisms, with the beam A and the shaft B, whereby either or both ends may be raised successively or simultaneously, for the purpose and substantially as described.

97,829.—Timothy J. Sullivan, Albany, N. Y.—*Safe.*—December 14, 1869.

Claim.—1. In safes of vaults, the exterior plates of which consist of alternate layers of iron and steel, constructed and inter-riveted together as described, the bars or strips *b b* placed around the corners or joints of the several sides inter-rivcted to the body of the safe, and having the plate or plates *b′* secured to the said strips *b*, as set forth.

2. The heavy plate *f*, in combination with the plates *a c a′ c′*, forming the vestibule, substantially as and for the purpose set forth.

3. In vaults or safes, strengthening the jointure of the vestibule with the body of the vault by securing the plate *f* to the angle-iron *d″*, substantially as and for the purpose set forth.

4. The lock-bolt holes *e e*, when made into the rabbet-bars *g* and continued through the plate *f*, the line of direction of the said bolt-holes being perpendicular to the plate *f*, substantially as and for the purpose set forth.

5. In safe or vault doors, the exterior plates of which consist of alternate layers of iron and steel constructed and riveted together, the plate *h* riveted to the back of said door, as set forth.

6. The body A of a safe, when provided with the vestibule B and door C, all the parts being constructed and arranged as set forth.

97,830.—James Swan, Seymour, Conn.—*Auger-Handle.*—December 14, 1869.

Claim.—An auger-handle, formed in one piece, surrounded by a sleeve, having an angular hole transversely through the middle to receive the auger-shank, and provided with a set-screw entering at the vertex of an angle, as shown and described.

97,831.—G. L. Swett, Leominster, Mass.—*Stove-Shelf.*—December 14, 1869.

Claim.—The shelf H, shank F F′, and adjustable arm E, in combination with the support A B, as shown and described, and for the purpose set forth.

97,832.—J. F. Tallant, Burlington, Iowa.—*Railway-Rail.*—December 14, 1869.

Claim.—1. In the formation of such a rail, the construction of the cap A with an outer portion, *d*, extending to near the extremity of the base B, where it abuts firmly against a shoulder, *e*, or its equivalent, substantially in the manner and for the purpose above shown.

2. In a compound rail, constructed as above described, the use of the hook-shaped wing *c*, to aid in resisting the outward thrust of the car-wheels, substantially in the manner above described.

97,833.—Richard W. Tanner, Albany, N. Y., assignor to himself and Samuel J. Davenport, same place.—*Tool for Cabinet-Makers.*—December 14, 1869; antedated December 11, 1869.

Claim.—The tool-holder, consisting of the block B, double-handed bar A, tool-bar *a*, eye-bolts *e e*, with their thumb-nuts, and the screw-bolt *c*, all arranged and constructed to operate as described, substantially as and for the purpose specified.

97,834.—Asahel Todd, Jr., Pultneyville, N. Y.—*Ticket-Box for Railroad Passenger-Trains.*—December 14, 1869.

Claim.—1. The self-closing receptacle C E, attached to the case A, for holding in view a coupon or ticket, its insertion being under the control of the conductor, and its removal under the control of the passenger or conductor.

2. The arrangement of the conical recess F, in the case A, the hinged lever I, and gate D, for admitting the coupon, together with the spring-levers G G, for releasing the same.

3. The key A′, having a triangular spring-box, K L, for the insertion of the coupon into the receptacle.

4. In combination with the ticket-box, as constructed, the employment of the coupon-ticket as described, substantially and for the purposes set forth.

97,835.—T. Van Kannel, Cincinnati, Ohio.—*Hydrant.*—December 14, 1869.

Claim.—1. A hydrant having the key D, of cock C, tapering upward, to allow the pressure of the water to force the key into the cock, and provided with the cock C, screwed to the elbow B, as and for the purpose above described.

2. The pipe E, attached to and having a water-communication with key D, by coupling F, as above specified.

3. The part H, having head *h* and radial projections *h′*, screwed on pipe E, in combination with the adjustable collar I, held by the set-screw *g′*, and the rubber J, operating as and for the purpose set forth.

4. The drip-pan K, having the interior central elevation, in combination with stock A attached thereto, and constructed and operated as above specified.

97,836.—Joseph Venet, New York, N. Y.—*Reticule Wicker-Basket.*—December 14, 1869.

Claim.—A reticule wicker-basket provided with metallic ribs G G′ *g*, &c., which form the holders *h i* for the handle, hinges J J for the cover, and loop and staple *k l* for the lock, as a new article of manufacture, substantially as set forth.

97,837.—William Volk, Buffalo, N. Y.—*Velocipede.*—December 14, 1869.

Claim.—1. The lever E, carrying the pinion *c*, and acted upon by the spring *d*, when arranged to connect the pinions *b* on the ends of the axles D, substantially as herein shown and described, for the purpose specified.

2. The combination of the separate driving-axles D D, which carry the pinions *b*, eccentrics *f*, and cranks *g*, with the lever E, pinions *c*, levers F and G, and rods *e*, all arranged and operating substantially as herein shown and described.

97,838.—Henry Balen Walker, New York, N. Y.—*Silvering Glass and Protecting the Same.*—December 14, 1869.

Claim.—A chemical compound, consisting of

nitrate of silver, concentrated liquid ammonia, crystallized tartaric acid, and distilled water, prepared and compounded in quantities and proportions substantially as above described, and in the manner of its application for the uses and purposes aforesaid; and, also, the compound or solution of shellac and alcohol, in the quantities and proportions as above described, and the compound of litharge, red-lead, and oil, forming the outer coating, substantially as above described.

97,839. — P. H. WALKER, Boston, Mass., assignor to himself and JOHN L. TROWBRIDGE, same place.—*Steelyard.*—December 14, 1869.

Claim.—The employment, for the purpose of suspending the weight from a reversible scale-beam, of a tubular sliding cross-head, which encircles and fits the beam, and upon which the weight is hung, substantially in the manner and for operation as herein shown and described, so that when the beam is reversed, the position of the weight may be correspondingly changed without removing the cross-head from the beam, or the weight from the cross-head.

97,840. — DANIEL H. WATERS, Grand Rapids, Mich.—*Barrel.*—December 14, 1869.

Claim.—As a new article of manufacture, a barrel or box, composed of horizontal sections A, united by means of hoops B, as described.

97,841. — DANIEL H. WATERS, Grand Rapids, Mich.—*Barrel.*—December 14, 1869.

Claim.—A barrel or box, composed of horizontal cylindrical sections A, connected together by means of ribbed hoops B and vertical staves D, as described.

97,842. — CYRENUS WHEELER, Jr., Auburn, N. Y.—*Car-Spring.*—December 14, 1869.

Claim.—1. The combination of the metallic cylinder and the hollow rubber cylinder with the piston or follower, substantially as described.

2. The combination of the metallic cylinder and the hollow rubber cylinder with the spiral spring and the piston or follower, substantially as described.

97,843. — ROLLIN WHITE, Lowell, Mass.—*Metallic Cartridge.*—December 14, 1869.

Claim.—1. In combination with the cup *c*, and pellet or cap fitting therein, a metal ring or cup, to re-enforce said cup *c*, substantially as shown in Figs. 1, 2, 3, and 4.

2. In combination with a cup in the base of the cartridge-case, or the vent of a gun, substantially as described, a pellet or cap, with a recess or cavity in its center or near its rim, to receive the fulminate, substantially as and for the purpose described.

3. In combination with a recess, vent, or cup in the base of the cartridge-case, or in a gun, a pellet or cap, so corrugated that by the blow of the hammer, or its equivalent, the rim or edge of said pellet or cap will be pressed against the wall of the cup or vent, or ring within the same, substantially as and for the purpose set forth.

4. A fulminate paste, formed by mixing the fulminate powder with India rubber or other similar elastic substance, substantially as described.

97,844.—SAMUEL M. WICKERSHAM, Allegheny, Pa.—*Apparatus for Purifying Iron.*—December 14, 1869.

Claim.—A gutter or run, having both bottom and sides hollow, lined with fire-clay, and furnished with a series of holes inclined in a direction across that in which the metal flows, as and for the purpose herein described and represented.

97,845.—HENRY WILLOGHS, New York, N. Y.—*Making Piano-Legs.*—December 14, 1869.

Claim.—A piano-leg, when constructed substantially in the manner herein shown and described.

97,846. — DANIEL WILLSON, Ishpeming, Mich.—*Dumping-Wagon.*—December 14, 1869.

Claim.—1. The combination of the connecting-bars M with the wagon-body E, forward bolster J, sliding reach I, and stationary reach G, substantially as herein shown and described, and for the purpose set forth.

2. An improved dump-wagon, formed by the combination of the rear wheels A, rear bolster B, castings C, rollers D, wagon-body E, lock-levers F, stationary reach G, sliding reach I, forward bolster J, forward axle K, king-bolt L, forward wheels O, and connecting-bars M, with each other, substantially as herein shown and described, and for the purpose set forth.

97,847. — EDWIN L. YANCEY, Batavia, N. Y.—*Harvester-Knife Grinder.*—December 14, 1869.

Claim.—A machine for grinding harvester-blades, consisting of a slotted frame, A, adjustable standard B, gearing F G, stone D, hinged frame I, and spring P, constructed, combined, and arranged to operate substantially as described, and for the purpose set forth.

97,848.—H. ZAHN, San Francisco, Cal.—*Candlestick.*—December 14, 1869.

Claim.—In combination with a candlestick, the screw D, arranged and operating substantially as and for the purposes described.

97,849.—SAMUEL ZARLEY, Niantic, Ill.—*Monkey-Wrench.*—December 14, 1869.

Claim.—The wrench, composed of the stem or shank A, shouldered on its opposite sides, the sliding jaw E, its set-screw F, and the fixed jaw B, all constructed, arranged, and operating as herein shown and described.

97,850.—A. F. ABLE, New Orleans, La., assignor to himself and A. D. FINLEY.—*Humming-Wheel Toy.*—December 14, 1869.

Claim.—1. The bent arms A, hinged at B, suitably shaped for handles at one end, and shaped at the other, and provided with two or more sets of cord-holding catches D, substantially as specified.

2. A toy humming-wheel device, consisting of the bent hinged rods A, two or more sets of catches D, and two or more humming-wheels and cords, all substantially as specified.

97,851.—WILLIAM P. ADAMS, Brooklyn, N. Y.—*Ironing-Table and Clothes-Drier.*—December 14, 1869.

Claim.—1. The extension clothes-drier G, constructed and operating as described, for the purpose set forth.

2. The combination of the clothes-drier G and the frame A and ironing-board F, as and for the purposes set forth.

97,852. — DANIEL AGNEW, Vincennes, Ind.—*Saw-Set.*—December 14, 1869.

Claim.—1. A saw-set, composed of the independent levers C and D, said lever C pivoted or hinged to the die *b*, supported at the rear by the chain-links *h h*, and ears or projections *g g*, to receive the lever D, all arranged to operate as and for the purpose described.

2. The lever-bars or handles A B, said lever B provided with ears *g g*, in combination with the independent levers C D, when arranged to operate as and for the purpose described.

3. The springs *i j*, when arranged in combination with levers A B C D, to operate said levers independent of each other, as and for the purpose set forth.

97,853.—HENRY A. ALDEN, Mattewan, N. Y.—*Mode of Protecting the Ends of Vulcanized-Rubber Hose.*—December 14, 1869.

Claim.—1. Protecting the ends of vulcanized India-rubber hose, by means of an annular water-proof cap, in the manner substantially as described.

2. As a new article of manufacture, an annular water-proof cap, for protecting the ends of vulcanized India-rubber hose, the same being applied and used substantially as shown and set forth.

97,854.—JOSEPH BELL ALEXANDER, Washington, D. C.—*Lamp-Burner.*—December 14, 1869.

Claim.—1. The spring D, with its curved teeth N N, and its throat O, substantially as described, and for the purpose set forth.

2. The L-shaped indentures M M, in the cap F, in combination with the projections L L on the inner circumference of the throat H, in the draught-plate E, substantially as described, and for the purpose set forth.

3. The combination of the spring D, with the piece A B C, comprising the deflector, shell, or body, and chimney-seat, and with the draught-plate E, together with the wick-tube P, cap F, base G, and any of the wick-adjusters in use, when arranged together substantially as described, and for the purpose set forth.

97,855.—LAURITZ ANDERSON, Chicago, Ill.—*Gate for Swinging-Bridges.*—December 14, 1869.

Claim.—The gate B, counterpoised by a weight, and provided with a projecting pin or stud, *n*, in combination with the groove *a'* in the end of the turning-bridge, and the locking-lever S, all constructed and arranged to operate substantially as described.

97,856.—SAMUEL J. BAIRD, Staunton, Va.—*Button-Holing Attachment for Sewing-Machines.*—December 14, 1869.

Claim.—1. The screw, having the eccentric thereon, in combination with the cloth-clamp and oscillating plate, as and for the purposes described.

2. The cloth-clamp, the rest, the spring, and presser, in combination, substantially as and for the purpose described.

3. The cloth-clamp and its operating screw, in combination with the double rack, the ratchet and cog-wheels, substantially as and for the purposes described.

4. The connecting-plate, the oscillating plate, and lever, and cam, in combination, substantially as and for the purposes described.

5. The cam V and carrier T, in combination with the sliding ratchet, for changing its position, and changing the movement of the clamp, substantially as described.

97,857.—JAMES L. BAUMER, Columbus, Ohio.—*Oil-Blacking for Leather.*—December 14, 1869.

Claim.—The within-specified composition as an oil-blacking for leather, mixed in the proportions substantially as set forth.

97,858.—CHARLES B. BEALL, Hamilton, Ohio.—*Head-Block for Saw-Mills.*—December 14, 1869.

Claim.—A head-block for saw-mills, combining in its construction a bed-plate for the log to rest upon, two racks E E', with friction-rollers H H in the outer ends, a spring and oscillating lever at their inner ends, a cam-shaped slide, L, for operating the racks, and a knee, C, constructed as described, all arranged and operating as and for the purpose set forth.

97,859.—A. BELT, Newton, Iowa.—*Churn-Dasher.*—December 14, 1869.

Claim.—The within-described churn-dasher, formed of an inverted pan-shaped metal piece, C, perforated and connected to horizontal perforated wood piece A, and connected to the staff B, all as shown and described.

97,860.—FREDERIC S. BIDWELL, Mystic Bridge, Conn.—*Combined Shovel and Sifter.*—December 14, 1869.

Claim.—1. The combination of a fire-shovel with a grate or strainer fitted therein, when the latter is adapted to be lifted, to allow the removal of the ashes, substantially as herein described.

2. A fire-shovel, having a grate or sieve contained within it, and means D *d*, or their equivalent, for disconnecting the same at will, substantially as and for the purposes herein specified.

3. The within-described general combination, construction, and arrangement of a shovel-body, B, with hole b^1 and slot b^2 b^3, the grate or sieve C, with trunnions m^1 m^2, and the fastening-button D, turning on center *d*, all as herein specified, and for the purposes herein set forth.

97,861.—HORATIO N. BILL, Willimantic, Conn.—*Stove-Pipe Thimble.*—December 14, 1869.

Claim.—1. The combination, with a frame, D, provided with grooves or guides E, and adapted for application in the openings in the flue-walls, as described, of the sliding thimble-plate A, provided with an opening, B, for the reception of a pipe or thimble, substantially as specified.

2. The mode of attaching the thimbles G to the plates A, by means of the bent projections H on the former, passing through the notches C in the plates, and turning behind the parts of the plate adjacent to the notches, substantially as specified.

3. The combination of the plate A, frame D, and button F, all constructed and arranged substantially as specified.

97,862.—HENRY C. BILLINGS, Brooklyn, N. Y.—*Diving-Bell.*—December 14, 1869.

Claim.—1. In combination with the compressed-air chamber D, the water-chamber C, with perforated spout G, arranged in the top of the bell, whereby the working-chambers are sprinkled and carbonic-acid gas absorbed, when necessary, as specified.

2. In combination with the bag V and ledge *c*, a revolving hinge *v*, constructed and arranged to operate as specified.

3. In combination with the slab-weight Z, a pocket, *e*, secured to the outside of the bell, and bolt and nut *m*, as specified.

4. In a diving-bell, the combination of the circular rail *u* and the swinging-steps U U, when constructed and arranged to operate as specified.

97,863.—LEWIS BILLINGS, Gallipolis, Ohio.—*Hoe.*—December 14, 1869.

Claim.—The hoe-blade A, constructed as herein described, in combination with the bifurcated handle *b b*, and operating as and for the purposes set forth.

97,864.—EDWARD BOURNE, Pittsburgh, Pa.—*Steam-Generator.*—December 14, 1869.

Claim.—The construction, combination, and arrangement of the boiler A, chambers B, and passages T, substantially as described.

97,865.—EDWARD BOURNE, Pittsburgh, Pa.—*Steam-Generator.*—December 14, 1869.

Claim.—A steam-generator, formed by attaching to and beneath the steam-drum or receiver, by means of short pipes, one or more boilers, provided with a system of flues, each boiler being constructed, arranged, and operating, with respect to the steam-receiver, substantially in the manner herein set forth, and shown in the drawings.

97,866.—EDWARD BOURNE, Pittsburgh, Pa.—*Rivets and Washers.*—December 14, 1869.

Claim.—The combination of the rivet C, washers B and *a*, all constructed as described.

97,867.—WILLIAM H. BRADT, New Scotland, N. Y.—*Wagon-Brake.*—December 14, 1869.

Claim.—1. The combination and arrangement of the T-head pushing-bar *d*, sliding cross-bar *h*, pushing-rods *m m*, levers *k k*, draw-rods *o o*, and shoe-bar P, for the purpose set forth.

2. The combination and arrangement of the levers *k k*, provided with graduating-holes *l l*, or their equivalents, the drawing rods *o o*, and shoe-bar P, when motion is communicated to said levers by the pushing-rods *d m m*, or the equivalents of these parts.

97,868.—J. C. BROADLEY, Franklin, N. J., assignor to himself and JAMES STOUT, same place.—*Drill for Boring Polygonal Holes.*—December 14, 1869.

Claim.—The combination of two or more bits C C, with a pattern-cup D, and spring-levers B B, the said parts being arranged and operated in the manner described.

97,869.—JAMES D. BRYSON and J. H. HARTSUFF, Newcastle, Pa.—*Water-Wheel.*—December 14, 1869.

Claim.—The sliding rings *a a'*, in combination with the fixed chutes *b* and the gates *d*, when the latter have a sliding motion in opening and closing the water-veins, and also an independent motion on their pivots, substantially as described.

97,870.—Isaac W. Burch, Fayette, Miss.—*Cotton-Cultivator.*—December 14, 1869.

Claim.—1. A cotton-cultivator, having adjustable beams E, vibrating on joints C, in the front part of the frame, and adjustable, as to their distances apart, in the manner described.

2. A cotton-cultivator, provided with a vibrating frame I, and rotary cutters N, arranged as described, to cut close to the plant, and cultivate on each side thereof, as set forth.

3. A cotton-cultivator, with a pair of plows, F F, to work on both sides of the row, and arranged in front of the frame, combined with a series of oblique cutters N N, on the hinder part thereof, arranged to rotate on disks, at a less distance apart than the plows, and to clean up close to the plants, all as shown and described.

4. The combination, with the frame A, mounted on wheels B, of the vibrating frame I and rotary oblique cutters N, arranged for adjustment and for operation, substantially as specified.

97,871.—Isaac W. Burch, Fayette, Miss.—*Buckle.*—December 14, 1869.

Claim.—A compound harness-buckle and punch, composed of an ordinary frame and hollow punch-tongue A, as an article of manufacture.

97,872.—Mathias Burkhardt, Cincinnati, Ohio.—*Clamp.*—December 14, 1869.

Claim.—A clamp, composed of jaw-arms C D, screw-rod G, and box A, when constructed and arranged substantially as and for the purpose herein specified, shown, and described.

97,873.—Nelson C. Burnap, Argusville, N. Y.—*Dinner-Pail.*—December 14, 1869.

Claim.—The arrangement of the cover F, pail A, cylinder E, disk *c*, and stop-cock I, when constructed to operate as described.

97,874.—Orren E. Butler and Stephen P Dunham, Marshalltown, Iowa.—*Bolt-Cutter.*—December 14, 1869.

Claim.—The combination, with the slotted lever A and cam-lever E, of the bolt-cutter F, when all constructed and arranged substantially as specified.

97,875.—Samuel G. Cabell, Quincy, Ill., assignor to Flora B. Cabell, same place.—*Padlock.*—December 14, 1869.

Claim.—1. A double-arched padlock-shell, when cast in halves, in an egg or oval shape, having interior spaces only for the insertion of the operating-mechanism, substantially as specified.

2. The combination of the disk *a*, tube *b*, spring *d*, and plate *e*, whether the spring is inclosed within or without the casing, substantially as and for the purposes herein set forth.

3. The combination of the disk *a*, with spring *d*, plate *e*, and disk *g*, with lug *p*, and one or more springs, *m*, substantially as specified.

4. The spring-tumbler *o*, whether arranged above or beneath the bolt D, when operated by the recessed and lugged disk *g*, and used to confine or release the bolt D, substantially as specified.

5. The combination of the disk *a* with spring *d*, plate *e*, disk *g*, bolt D, spring *n*, locking-device and spring *s*, all constructed and operated substantially as specified.

97,876.—S. O. Campbell, Tipton, Mo.—*Railway-Car Coupling.*—December 14, 1869.

Claim.—1. The perforated plate E, pivoted in a partition of a coupling-box, and weighted at one end to hang vertical, and to sustain the coupling-pin as long as the link is not introduced, allowing the link to be applied either above or below the said partition, as specified.

2. The perforated partition D, arranged in a coupling-box, for supporting the weighted pivoted perforated plate E, as set forth.

97,877.—George J. Capewell, West Cheshire, Conn.—*Wrench and Saw-Set Combined.*—December 14, 1869.

Claim.—1. The sides composed of grooved handle-part A, having prolongation B, and the tongued handle-part C, having prolongation D, connected at their inner ends by rivet *h*, and opened or closed by screw E, when constructed and arranged to operate substantially as set forth.

2. Providing in one and the same implement, a wrench and saw-set, when the parts are constructed and arranged substantially as illustrated and described.

97,878.—J. S. Carr, Alliance, Ohio.—*Machine for Dressing Millstones.*—December 14, 1869.

Claim.—1. A machine for dressing millstones, constructed substantially as described, so that the rotation of the driving-shaft, which imparts a reciprocating movement to the pick, shall also cause a curvilinear movement of said pick, substantially as is herein specified.

2. The platform N, provided with the fixed gear-rim M, and turn-table O, substantially as and for the purpose specified.

3. The spring-arm U, when used in combination with the pick-shaft S, for the purpose of regulating the intensity of the blows given by the pick, substantially as is herein specified.

4. The combination of the pick-shaft S, with pick-arm Q and spring-arm U, cord or chain D, and lever C, the several parts being arranged substantially as and for the purpose specified.

5. The arrangement of the shaft F, provided with pinion L and worm-wheel G, in the standards E *l*, so that it may be slid up and down, for the purpose of throwing said pinion and worm-wheel out of gear with the fixed gear-rim M and worm *h*, substantially as is herein specified.

6. The combination of the pick-shaft J, provided with pick-arm Q and tilting-arm T, fly-wheel J with tappets *b b*, shaft H with worm *h*, shaft F with worm-wheel G and pinion L, and fixed gear-rim M, the several parts being arranged substantially as and for the purpose specified.

7. The combination of shaft H provided with the crank I and fly-wheel J, with tappets *b b*, pick-shaft S with pick-arm Q, tilting arm T, and spring-arm U, cord or chain D, and lever C, the several parts being arranged substantially as and for the purpose specified.

8. The combination of the fixed gear-rim M, shaft F with pinion L and worm-wheel G, shaft H, with worm *h*, and fly-wheel J with tappets *b b* thereon, pick-shaft S with tilting-arm T, spring-arm U, and pick-arm Q, cord or chain D, and lever C, the several parts being arranged substantially as and for the purpose specified.

97,879.—L. C. Cattell, Cleveland, Ohio.—*Car-Tank Cover.*—December 14, 1869.

Claim.—The collar B, provided with the groove *a* and packing-ring *c*, in combination with the cover C, having a bead, *b*, fitting the groove *a*, and the lug *c'*, all constructed and arranged to operate as and for the purpose set forth.

97,880.—Edwin Chesterman, Tremont, N. Y.—*Manufacture of Rubber Sponge.*—December 14, 1869; antedated November 17, 1869.

Claim.—1. Treating a rubber compound that has been more or less perfectly vulcanized in a hot-water, steam, or other bath, for the purpose of increasing its volume, as described.

2. Setting or fixing a rubber compound that has been extended in volume by the process last above named, by vulcanizing the same in its extended form, for the purpose set forth.

3. The use of golden sulphuret of antimony incorporated with the compound from which the artificial sponge is made, in the manner and for the purpose specified.

4. An artificial sponge, made by incorporating into a homogeneous mass, on hot rollers, the ingredients hereinbefore mentioned, and afterwards expanding, revulcanizing, and "setting" the same, in the manner described.

97,881.—Abraham Coates, Watertown, N. Y., assignor, for one half, to Jamet Martin Hunt, same place.—*Valve for Water-Engines.*—December 14, 1869

Claim.—The valve A, consisting of the plate *a* and the bars *c c*, as and for the purpose described.

97,882.—JOHN H. COBURN, Lowell, Mass.—*Shuttle for Looms.*—December 14, 1869.

Claim.—The spindle A, provided with the spring *d*, constructed substantially as described, and with the holding-projection *c*, whether on the spring *d*, or on the end of the spindle A, for the purposes set forth.

97,883.—CHARLES COLLINS, Vernon Centre, N. Y.—*Wagon-Seat Fastening.*—December 14, 1869.

Claim.—1. The detent E, arranged on a wagon-seat, and operating in the manner described.

2. The combination of the detent E with a hooked lever, D, and eye F, each constructed as and for the purpose specified.

97,884.—ROBERT CONARROE, Camden, Ohio, assignor to himself, HOWARD YOUNG, and ABRAHAM C. STAUFFER, same place.—*Harvester.*—December 14, 1869.

Claim.—A sheet-metal sheaf-dropper, constructed substantially as shown, and for the purpose specified.

97,885.—PHILIP COOK, Jr., Sioux City, Iowa.—*Mop.*—December 14, 1869; antedated December 10, 1869.

Claim.—1. In combination with a mop, the rollers D D, double springs F, and the compresser G, arranged and operating substantially as and for the purposes set forth.

2. The cross head E, the bands *i* and *k*, and the wires *h h* and *j j*, in combination with the rollers D D and the compresser G, arranged substantially as and for the purposes described.

97,886.—J. B. COX, JAMES O'CONNOR, and MICHAEL CAHALAN, Columbus, Ga.—*Railway-Switch.*—December 14, 1869.

Claim.—The combination of the switch-bars A A, B B, and B′ B′, stop-chairs *b* and *e*, with the coupling-bars D and D′, links H H′, cranks E′ E″, rock-shaft E, and lever F, all constructed and arranged to operate in the manner and for the purpose substantially as described.

97,887.—ISAAC CRAFT, Cincinnati, Ohio, assignor to himself, THOMAS J. WILLIAMS, and CHARLES M. GREVE, same place.—*Slide-Valve.*—December 14, 1869.

Claim.—1. The combination of the wings G G′, plate H, and bolts I, when the same are so constructed, with relation to the steam-chest A J, as to be, when in use, surrounded exteriorly by steam, for the purpose specified.

2. In the described combination, with the elements of the preceding clause, the gaskets *a b*, arranged and operating substantially in the manner and for the purpose described.

97,888.—GEORGE W. CRESSMAN and BERT PFLEGER, Barren Hill, and NICE KEELY, Roxborough, Pa.—*Water-Wheel.*—December 14, 1869.

Claim.—1. The hollow wheel, wheel-case, gates, disk E, and ring G, all combined and arranged substantially as specified.

2. The gates D, ring G, pins H, toothed segment I, and hand-wheel and shaft, all arranged as specified.

97,889.—JOHN C. CROSMAN and OBADIAH MARLAND, Boston, Mass., assignors to themselves and ALFRED E. TILTON, New York City.—*Treating Whisky and other Alcoholic Spirits.*—December 14, 1869.

Claim.—The improvement in treating whisky and other liquors, substantially as described.

97,890.—GARRET B. DAVIDS, Baltimore, Md., assignor to himself and TALBOTT DENMEAD, same place.—*Disintegrating-Mill.*—December 14, 1869.

Claim.—1. Recessing the revolving plates or disks of one cage, so as to receive the rings of the other, and thus make a connection between the cages, that will admit of their free motion without allowing the material to escape at the joints, as described.

2. In combination with two or more cages, placed one within the other, and revolving in contrary directions, the alternating annular rims and recesses on and in the flanges, F G H, on the cages, for preventing the disintegrated material from passing between the cages and the casing, substantially as described.

3. The stands O P, when so made and flanged as to form a part of the casing of the mill, and to admit of the other part of the casing being reversed thereon, so as to change and adapt the run of the mill to any special locality, substantially as described, and for the purpose set forth.

97,891.—ISIDORE DELCAMBRE, Paris, France.—*Machine for Composing and Distributing Type.*—December 14, 1869.

Claim.—1. The combination of the keys *b*, type-reservoirs *a*, and lever *c*, substantially as described, referring to Figs. 2, 8, and 9.

2. The combination of hammers *m* and *n*, eccentric *o*, and channel *j*, substantially as set forth, referring to Figs. 1 and 3.

3. The arrangement, in the justifier B, of the movable plate *q* and pusher *v*, in combination with the friction-slide *t*, substantially as described, referring to Figs. 4 and 5.

4. The conical rotating grooved type-cases A, one or more, constructed with horizontal levers *c′*, in combination with apertures *f′* and conducting-chutes *k*, substantially as set forth, referring to Figs. 10 and 11.

5. The combination, with the galley *a*, of the follower *w*, elevating-screw *b*, disk *x*, and spring-stops *z*, substantially as set forth, referring to Figs. 13 and 15.

6. The combination of channel *c* with the abutment *h* and levers *k k′ r″*, substantially as set forth, referring to Figs. 13 and 17.

7. The combination, with the channel *c*, of the sliding pusher *e*, retaining-spring *f*, and restoring-spring *g*, substantially as set forth, referring to Fig. 13.

8. The combination, with the central groove *o*, of the inclined grooved platform *j*, gates *n*, and type-cases *p*, substantially as set forth, referring to Figs. 14 and 16.

97,892.—MARY DEWEY, New Albany, Ind.—*Soap-Holding Attachment for Sewing-Machines.*—December 14, 1869; antedated December 10, 1869.

Claim.—A soap-holder attachment, constructed as described, and arranged on the presser-foot of a sewing-machine, substantially as herein shown and described.

97,893.—JULIUS EDMUND DOTCH, Washington, D. C.—*Concrete for Paving and for other Purposes.*—December 14, 1869; antedated October 14, 1869.

Claim.—1. The mixture of fibrous animal or vegetable matter, such as tan-bark, sawdust, flock, wool-waste, straw, or similar material, either in a dry state or the same treated with boiled linseed or other oils, with asphaltum, coal-tar, pitch, resin, or any other hydrocarbon, either used alone or in combination with peat, turf, coal-ashes, cinder, gravel, broken stone, sand, hydraulic cement, gypsum, infusorial earths, slate, marble-dust, brick-dust, or any other mineral.

2. The treatment of this mixture with sulphur, in the fluid state or dry.

3. A foundation for streets and sidewalks, of fascines, with slag or cement on the top.

97,894.—JOSEPH W. DOUGLAS, Middletown, Conn., assignor to W. DOUGLAS and B. DOUGLAS, same place.—*Apparatus for Extinguishing Fires by Means of Chemical Agents.*—December 14, 1869.

Claim.—The combination of the chemical-charging or gas-generating vessel or vessels A, A, the independent water-pipes *f f*, and a system of separate connections with the inlet and outlet pipes, to operate substantially as and for the purpose herein described.

97,895.—WARREN WHITNEY DUTCHER, Hopedale, Mass., assignor to DUTCHER TEMPLE COMPANY, same place.—*Loom-Temple.*—December 14, 1869.

Claim.—1. In combination with the temple, a mechanism, substantially as described, for holding back the slide when retracted in the stand.

2. The arrangement of the catch E, and its application to the temple, so as to operate with the

back-stop *a*, in manner and for the purpose as set forth.

3. The catch E, so constructed, that when in use it shall not only perform the function of a catch, or operate with the back-stop *a*, as set forth, but shall act as an intercepter of any oil which may be ejected from either or both the stops, or the slide between them, and prevent such oil from getting upon the cloth carried by the temple.

97,896.—CHARLES P. EAGER, Boston, Mass., assignor to P. B. EAGER, same place.—*Ventilating Horse-Cover.*—December 14, 1869.

Claim.—1. The horse-cover, composed of the sections A A and B, when connected longitudinally by the cover *c*, attached to the rigid braces *e e*, substantially as herein shown and described, for the purpose specified.

2. The horse-cover, provided with elastic straps, substantially as and for the purpose herein shown and described.

97,897.—WILLIAM ENNIS, Philadelphia, Pa.—*Manufacture of Iron and Steel.*—December 14, 1869.

Claim.—In the manufacture of iron and steel, subjecting the mass of molten metal to the action of hydrogen-gas alone, forced up through the mass, in combination with a current or currents of atmospheric air, or oxygen, introduced over the molten metal within a chamber of reflecting character, producing combustion of the carburetted hydrogen, sulphureted hydrogen, phosphoreted hydrogen, &c., above the metal, substantially as and for the purpose specified.

97,898.—JAMES FINLAYSON, Albany, Oregon.—*Seeding-Machine.*—December 14, 1869.

Claim.—1. The adjustable shaft *b*, provided with the spurs b', in combination with the springs a^1, substantially as set forth.

2. The slotted bar *h*, provided with a stop, in combination with the lever *c*, substantially as specified.

97,899.—M. M. FOLLETT, Lake City, Minn.—*Clothes-Wringer.*—December 14, 1869.

Claim. — The combination of the rollers of a wringer, with the pressure-rod E, lever F, spring G, screw-rod H, and nut *b*, all arranged and operating substantially as herein shown and described.

97,900.—C. A. GALE, Demopolis, Ala.—*Blotting-Pad.*—December 14, 1869.

Claim.—1. Forming the cylinder A, to which the blotting-pad is attached, in two segments hinged to each other at one edge, and secured to each other when closed by the spring-latches B C D, or equivalent fastenings, substantially as herein shown and described, and for the purpose set forth.

2. The spring-fastenings B C D, constructed and operating substantially as herein shown and described, in combination with the hinged parts of the cylinder A, as and for the purpose set forth.

97,901. — JOSHUA W. GASKILL and JAMES CHRISTIE, Phillipsburgh, N. J. — *Manufacture of Nuts.*—December 14, 1869.

Claim.—1. The mode or process, herein described, of forming nut-blanks, that is to say, first indenting the metal while it is hot, and afterward, when the metal is cold, or nearly so, subjecting it to the action of a punch, which completes the hole by removing the indented portion of the metal, and shaving the sides of the indentation, all substantially as set forth.

2. As a new article of manufacture, a nut-blank, formed partly by indenting and pressing the metal when hot, and partly by punching and shaving the same when cold, as herein set forth.

97,902.—EDWIN H. GIBBS, New York, N. Y.—*Fire-Place.*—December 14, 1869.

Claim.—1. The fire-back B B', made of iron, and having a hot-air chamber therein, extending on the sides of, over and beneath the grate, as represented and described, for the purposes set forth.

2. The combination of the hollow grate A A' and hollow fire-back B B', as constructed and arranged, substantially as set forth.

3. The combination of the water-coil d^1, and hollow fire-back B B', as and for the purposes specified.

4. The oven E, constructed as represented and described, so as to rest on the basket-grate B, as set forth.

5. The aperture *e*, for conducting fumes and smoke from the interior of the oven to the chimney.

97,903.—JACOB F. GIBSON, Chestnut Level, Pa.—*Grain-Drill.*—December 14, 1869.

Claim.—The clamping-bolt *c*, toothed wheel C, and chain D, arranged with reference to the seed-tube and drag-bar of a grain-drill, substantially as described and for the purpose set forth.

97,904.—JABEZ H. GILL, Philadelphia, Pa.—*Cartridge-Machine.*—December 14, 1869.

Claim.—1. The combination of the rotating disk F, slide *p*, and rod T, for feeding the shells into the carrier-disk D, said parts being arranged to operate substantially as described.

2. The combination of a carrier-disk D, and the reciprocating powder-charger or slide *d*, arranged to operate as set forth.

3. The combination of the carrier-disk D and the testing-plunger *t*, arranged to operate as set forth.

4. The combination of the carrier-disk D, provided with the dies *o*, the rotating disk O, and the bullet-plunger *q*, all arranged to operate as set forth.

5. The combination of the carrier-disk D, provided with taper or crimping-dies *o*, and the sliding rod U, for fastening the bullets in the shells, substantially as described.

6. The combination of the disk D and the tube P, constructed and arranged to operate as described, for withdrawing the cartridges, as set forth.

7. The cam Q, provided with the projections *n*, arranged to operate the powder-slide *d*, and impart thereto the vibratory movements, substantially as described.

8. The combination of the sliding plunger *t* and its weight C', having the spring-pawl o' attached with the pivoted hammer h' and bell J', when arranged to operate as herein described.

9. The combination, in a cartridge-machine, of a carrier-disk, D, a powder-charging and testing apparatus, a bullet-feeding and pressing device, a crimping-device, and a withdrawing-apparatus, when the said several parts are constructed and arranged to operate substantially in the manner herein set forth.

97,905.—ROBERT GLOVER, Tonawanda, N. Y.—*Field-Roller.*—December 14, 1869.

Claim.—1. The triangular frame or derrick E, having windlasses *c* c', with ropes or chains *d* d', when combined with the rollers D D' and A, in the manner and for the purpose specified.

2. The balance-wheel F, in combination with the rollers D D' A, arranged and operating as described.

3. The arrangement of the machine, as a whole, consisting of the hinged frames B C C', rollers A D D', balance-wheel F, derrick E, with windlasses *c* c', and ropes *d* d', the whole operating in the manner and for the purpose specified.

97,906.—HENRY GORTNER, Nashport, Ohio.—*Corn-Planter.*—December 14, 1869.

Claim. — 1. The sides A A, constructed as described, in the shape of sleigh-runners, and provided with shares C C, and pins or teeth *a a*, substantially as shown and described.

2. The dropper E, provided, on its inner side, with a recess, having an adjustable spring, *d*, and pivoted to the inclined bottom of the hopper or box D, substantially as and for the purposes herein set forth.

3. The hinged foot-board G, held in an upright position by the spring H, and connected with the droppers E E, substantially in the manner and for the purposes herein set forth.

4. The combination and arrangement of the sides A A, cross-pieces B B, shares C C, hoppers D D, droppers E E, foot-board G, spring H, and seat I, all constructed as described, and operating substantially in the manner and for the purposes herein set forth.

97,907.—D. R. GOULD, Chestertown, N. Y., assignor to himself and OSCAR H. GREEN, same place.—*Hinge.*—December 14, 1869.

Claim.—The combination of the parts A A′, barrel B, slotted as described, bolt C, pieces *b b*, and the ring or washer D, all substantially as set forth.

97,908.—GEORGE A. GRAY, Jr., Cincinnati, Ohio.—*Radial Drilling-Machine.*—December 14, 1869.

Claim.—1. In connection with a radial drilling-machine constructed to operate substantially as described, the cylindrical column B *b*, interior sleeve S, and arm C, having a spring-socket, *c*, the whole being arranged substantially in the manner and for the purpose stated.

2. In combination with the column B *b*, and bolts and nuts V *u* for securing the same, the groove *h*, and flange *s*, constructed as described, and operating substantially as set forth.

3. In combination with the bed-plate A and bolt W, the drilling-table V, constructed as described.

97,909.—FREDERICK FRANCIS GREENWOOD, Hornsey, England.—*Buckle.*—December 14, 1869; patented in England, September 16, 1868.

Claim.—1. The combination of the lock, the buckle-frame having a loop at one end for engagement with the tongue, and the movable tongue, in such manner that the lock is fixed to the buckle-frame, and the tongue is held in engagement with the loop by the action of the lock, as before represented and described.

2. The combination of the buckle-frame, constructed with a loop at one end, for engagement with the tongue, and a second loop at the other end, for engagement with the strap, a lock fixed to said frame between the said two loops, and a tongue engaging with the first of said loops, and controlled by said lock, as before described.

3. The combination of the buckle-frame, the lock fixed thereto, and the tongue connected with the bolt of said lock by a hinge, so that the said bolt may be turned from and toward the loop of the buckle-frame when not secured by the lock, as before described.

97,910.—LOUIS L. GUNTHER, Chicago, Ill.—*Tool for Carving Wood.*—December 14, 1869.

Claim.—1. The knife E, provided with filling K, when constructed and operating as above described.

2. In combination with the knife E, provided with filling K, the hub G, provided with the studs H and F, and the aperture I, each constructed, and arranged and operating together as and for the purposes aforesaid.

97,911.—JAMES R. HAMMOND, Sedalia, Mo.—*Portable Derrick.*—December 14, 1869.

Claim.—1. The car G, and ropes H and I, in combination with the recessed inclined cross arm F of the vertical pivoted shaft D, substantially as herein shown and described, and for the purposes set forth.

2. The double-inclined plane L, and weighted car K, in combination with the cross-arm F of the vertical shaft D of the derrick, substantially as herein shown and described, and for the purpose set forth.

3. An improved portable derrick, formed by the combination of the truck A B C, stand E, shaft D, cross arm F, car G, ropes H I, rope J, weighted car K, and double-inclined plane L, with each other, substantially as herein shown and described, and for the purpose set forth.

97,912.—B. R. HAWLEY, Normal, Ill.—*Coal-Stove.*—December 14, 1869.

Claim.—The vertical curved flanges B B, extending from the grate to the top of the stove, and surrounded by an outside drum C, with a space between the edges of said flanges and drum, all as herein shown and described.

97,913.—WILLIAM J. HAYS, New York, N. Y.—*Gas-Stove.*—December 14, 1869.

Claim.—The combination of the fire-box A with the vertical pipes B, C, D, E, &c., which form series of annular air and gas passages, and with the transverse pipes *g h* and *j k*, all arranged substantially as herein shown and described.

97,914.—AMBROSE HAZZARD, Saint Louis, Mo.—*Condensing-Column for Stills.*—December 14, 1869.

Claim.—The chambers B, C, and D, tubes *e e*[1], &c., coil H, water-jacket A, and pipe *p*, when arranged in the manner described, for the purpose set forth.

97,915.—WILLIAM HEARLE, Beamsville, Canada, assignor to CHARLES L. SPENCER, trustee, assignor to WILLIAM HEARLE and ALFRED B. JOHNSON.—*Stove-Pipe Drum.*—December 14, 1869.

Claim.—The radiating-drum herein described, consisting essentially of the cylinder A, with smoke-inlet and exit pipes E F, air-pipes B, perforated heads C and D, or equivalents, and deflectors J J, constructed, arranged, and operating as and for the purposes set forth.

97,916.—JAMES HEBRON, Buffalo, N. Y.—*Means for Attaching Mosquito-Bars to Window-Blinds, Doors, &c.*—December 14, 1869.

Claim.—A mosquito-bar, A, sewed spirally to one rod, fastened on one side by staples, and on the other by grooves, and applied to suitable frames, in the manner described.

97,917.—EDWARD HEIM, Pittsburgh, Pa.—*Washing-Machine.*—December 14, 1869.

Claim.—1. The suds-tub A, having steam-tight cover C, vertical corrugations D, and perforated and ribbed false bottom E, all constructed as described, in combination with the disk G, ribbed with rubber, in the manner set forth.

2. The improved mechanism for operating the disk G, consisting of bar F, gears H I, handle L, and spring-collar M N, all constructed, combined, and arranged as set forth.

97,918.—NOAH HILL, Leavenworth City, Kansas.—*Railway-Car Coupling.*—December 14, 1869.

Claim.—The arrangement, with the jaws C D and spring E, of the lever H, connecting-bar K, and lifting-bar L, constructed as described, and arranged to operate in connection with the link G, as set forth.

97,919.—RICHARD HOADLY, Toulon, Ill.—*Fifth-Wheel for Carriages.*—December 14, 1869.

Claim.—1. The forked division G of the forward end of the lower stay F, beneath the axle-tree, in combination with the projections of transverse head I I of carriage-beam, provided with eyes H H by which they are attached, substantially as described.

2. The employment of rubber or spring stops K, so arranged with the fifth-wheel or reach of a vehicle as to dispense with rub-irons, and thus avoid the jerking motion consequent upon the turning of the vehicle, substantially as set forth.

3. The angular projections or clamps *i*, having set-screws, for holding the rubber stops K, in combination with the circle or fifth-wheel L′, substantially as set forth.

4. The guards L, or extension of the axle bearings, beneath the circle L′, in combination with the rubber stops K, constructed substantially as described.

5. The king-bolt A, with clips C, stay or bridge E, with shackles D, forked division G, transverse head I I, with eyes H H, rubber buffers K, clamps *i*, guards L, or extension of axle-bearings, constructed and arranged substantially as described.

97,920.—D. IRVING HOLCOMB, Henry County, Iowa.—*Fruit-Jar.*—December 14, 1869.

Claim.—The metal cap D, provided with the projections or supporting-lugs *d d*, in combination with fastener E, ring C, and jar A, the whole constructed and operating substantially as and for the purpose specified.

97,921.—JOHN C. HOLMES, Wyoming, Pa.—*Corn-Cultivator.*—December 14, 1869.

Claim.—1. The beams A A, constructed as described, each consisting of two bars *a a*, connected together at suitable distance apart, and provided at one end with ears *b b*, by means of which the beams are joined together, substantially as shown and described.

2. The combination of the beams A A with ears *b b*, clevis B with ears *c c*, curved bars C C, and bar G with ears *f f*, all constructed as described and for the purposes set forth.

3. The reversible handles E E, connected by means of the rod F, and provided with the rods D D, substantially as and for the purposes herein set forth.

4. The combination of the beams A A with loops *d d*, clevis B, curved bars C C, bar G, reversible handles E F, and rods D D and F, all constructed and arranged substantially as and for the purposes herein set forth.

5. The reversible plows H H, secured to the beams A A, by means of the shanks I I, and plates *h k*, substantially as shown and described.

6. The plate *h*, provided with projections *i i*, and passed over the plow-shank I, substantially as and for the purposes herein set forth.

7. The combination and arrangement of the beams A A, clevis B, bars C C and G, reversible handles E E, and plows H H, all constructed and connected substantially as and for the purposes herein set forth.

97,922.—THOMAS HOUGHTON and HENRY H. HOUGHTON, Philadelphia, Pa.—*Fruit-Jar.*—December 14, 1869.

Claim.—The band F, with beveled or inclined edge, and the bail G hinged thereto, in combination with the overhanging dome L, having an inclined bearing-surface for said band, substantially as and for the purpose described.

97,923.—JOHN HOUPT, Springtown, Pa.—*Condenser.*—December 14, 1869.

Claim.—1. Chamber A, pipe D, and tubes B C, so arranged that a stream of water is forced through the said chamber, directly into the mouth of the tube D, substantially as described.

2. A rose *h*, constructed and applied to the condenser, substantially as set forth.

3. The valves *k* and *l*, arranged at the lower end of the tube D, substantially as specified.

4. The chamber A, its tube D, and supply-pipe C, in combination with the primer *s*, as described.

5. The combination, with the tubes B, C, and D, arranged as described, of a chamber, A, having a funnel-shaped bottom, for the purpose set forth.

97,924.—ROBERT HUNTER, New York, N. Y.—*Propelling-Apparatus.*—December 14, 1869.

Claim.—The combination and arrangement of the long lever-arm A, short arm A′, propeller-rod C, pivot-float propeller G, and guides S or T, operating substantially as and for the purposes herein set forth.

97,925.—ASAHEL H. HUSSEY, Mount Pleasant, Ohio.—*Hedge-Trimmer.*—December 14, 1869.

Claim.—A hedge-trimmer, so constructed as to be carried by the operator, and provided with harvester-like cutters, operated by a crank, serpentine-grooved pulley, and elbow-lever, substantially as shown and described.

97,926.—DANIEL JOHNSTON, Cranberry, Ohio.—*Fence.*—December 14, 1869.

Claim.—The combination and arrangement of the sills A A, cross-pieces B B, uprights C C, and braces D D, all as shown and described.

97,927.—JAMES M. JONES, Commerce, Mo.—*Saw-Set.*—December 14, 1869.

Claim.—1. The two shafts D, when provided with the movable bearings C and H, and when used to operate the markers G, substantially as and for the purpose described.

2. The slotted standards B and F, in combination with the movable bearings C and H, and shafts D, when used in the manner and for the purpose described.

3. In combination with the markers G, the table L and guides N, substantially in the manner and for the purpose specified.

4. The arrangement of slotted standards B and F, movable bearings C and H, markers G, table L and gauges N, when all are combined to operate in the manner and for the purpose set forth.

97,928.—JAMES A. JOYNER, New York, N. Y.—*Rubber Spring for Use in Ships, Cars, and for other Purposes.*—December 14, 1869.

Claim.—1. The improved spring, herein described, composed of the parts A, B, *b c*, D, E, and F, or their equivalents, combined and arranged substantially as described.

2. The combination of the spring, herein described, with a chain, cable, or the like, in the manner and for the purpose set forth.

97,929.—FREDERICK W. JUDD, New Britain, assignor to himself and EDWARD M. JUDD, New Haven, Conn.—*Carpet-Stretcher and Tack-Holder.*—December 14, 1869; antedated December 9, 1869.

Claim.—The spring *e*, formed with the slot *o*, for suspending the tack, in combination with the carpet-stretcher *b*, as and for the purposes specified.

97,930.—WILLIAM M. KEPLER, Cincinnati, Ohio.—*Public Urinal.*—December 14, 1869.

Claim.—The arrangement of the urinal A and curved shield B, composed of two parts, *b b′*, the said parts being hinged together at or near the center of the shield, and the part *b′* being provided with hinges *c′*, for attachment of the shield to the wall, substantially as and for the purpose specified.

97,931.—JOHN J. KIMBALL, Naperville, Ill.—*Washing-Machine.*—December 14, 1869.

Claim.—1. The combination of the slotted vibrating block E, crank provided with wrist *c*, curved friction-bars I and I′, and sectional frictional disk H, all constructed and arranged as shown and described, whereby either a uniform rotary or an intermittent rotary motion may be imparted to the rubber.

2. The washing-machine consisting of the several parts, all constructed, arranged, and operating as shown and described.

97,932.—JOHN O. KING and HIRAM A. RICE, Louisiana, Mo.—*Grain-Stripper.*—December 14, 1869.

Claim.—The arrangement of the detent-bar M, lever L, links K, arms I, and rock-shaft H, to slide the bar G, in the manner specified.

97,933.—W. T. KIRKPATRICK, Tamaroa, Ill.—*Bee-Hive.*—December 14, 1869.

Claim.—The combination of the bee-hive B, and the lighted moth-box A, when arranged as described, and provided with the moth and bee passages, all substantially as specified.

97,934.—GEORGE W. LARGE, Yellow Springs, Ohio.—*Latch.*—December 14, 1869.

Claim.—The employment, in combination with a rigid latch, D, on the gate, and a gravitating-catch, I, arranged on the face of the latch-post, and dropping in front of the latch, to retain it, of a pivoted or rolling lifter, F, as and for the purposes set forth.

97,935.—L. W. LATHROP, Nyack, N. Y.—*Sewing-Machine.*—December 14, 1869.

Claim.—1. The combination of the grooved vibrating looper D, and its actuating-cam, with the open spool-carrying frame, having its ends beveled, and against which ends the looper operates as described.

2. The combination of the grooved vibrating looper and open spool-carrying frame, having beveled ends, and constructed and operating together as described, with the way N, having the opening O for the passage of the looper, all substantially as described.

3. The arrangement of the needle-guiding plate, the grooved vibrating looper, the slotted way through which the looper vibrates, and the shuttle-carrying frame, when all are constructed as described.

97,936.—GEORGE T. LEWIS, Philadelphia, and EAYRE O. BARTLETT, Birmingham, Pa.—*Manufacture of Dry White-Lead.*—December 14, 1869.

Claim.—1. The manufacture of the basis of a pigment, by mixing finely-divided lead with carbon, and subjecting the mixture to the action of heat in a compound reducing and oxidizing furnace, and collecting the fumes, as above described.

2. The employment of lime in the form of caustic lime or the carbonate of lime, or metallic iron, or its oxides, whether native or artificial, in combination with carbon and finely-divided metallic lead, in a

compound reducing and oxidizing furnace, substantially as described.

3. Subliming the metallic lead, oxidizing the vapors, and collecting them as formed in a separate chamber, for the purpose of forming a basis of pigment and for other purposes, substantially as set forth.

4. As a new manufacture, a white oxide of lead, produced by subliming metallic lead and oxidizing the vapors, and collecting them in a separate chamber.

97,937.—F. A. Lindal, Stockton, N. Y.—*Churn.*—December 14, 1869.

Claim.—1. The body of a churn, constructed of two semi-cylindrical parts, one of which is so hinged to the other as to be swung over and form a receptacle for the butter, and likewise perforated at *a*, to allow the escape of milk and water, as and for the purpose described.

2. The bar D, fitted between cross-pieces of the frame-work, and arranged, in relation to the hinged cover B, so as to support it when open in either a vertical or horizontal position, substantially as and for the purpose described.

97,938.—M. F. Lowth and T. J. Howe, Owatonna, Minn. — *Seeding-Machine.* — December 14, 1869.

Claim.—A gate, placed in such relation to the hopper and cylinder of a seeding-machine as to yield sufficiently to allow caught kernels to pass under it without injury, substantially as described.

97,939.—Orazio Lugo, Baltimore, Md.—*Fertilizer or Guano.*—December 14, 1869.

Claim.—1. The use of hot air, for the purpose and in the manner substantially as herein set forth.

2. The use of the hydrocarbons, or their equivalents, in the connection herein described, and for the purpose set forth.

3. The use of phenol, (carbolic acid,) or its equivalent, for the purpose herein specified, and in the manner substantially as herein described.

4. As a new article of manufacture, the antiseptic fertilizer, the process for the manufacture of which is herein set forth.

97,940.—Henry A. Ludwig, New York, N. Y. — *Furnace for the Manufacture of Ultramarine.* — December 14, 1869.

Claim.—The combination and arrangement, in the one furnace, of the central fire-place A, the ovens B C, the side-flues *b*, and the outlet or outlets *c* to the escape-flue or passage D, substantially as and for the purpose herein set forth.

97,941.—Henry A. Ludwig, New York, N. Y. —*Manufacture of Ultramarine.*—December 14, 1869.

Claim.— The combination of ingredients, herein named, mixed and treated substantially as specified.

97,942.—A. G. Mack, Rochester, N. Y., assignor to himself and George Shelton, same place.—*Wardrobe.*—December 14, 1869.

Claim.—The skeleton-reel B, in combination with the fixed shelf-closets C and drawers D, of corner cabinet-cases, as set forth.

97,943.—George C. Manner, New York, N. Y. —*Upright Piano.*—December 14, 1869.

Claim.—1. The supporting-beams D, when placed so that their ends occupy points between the front and rear sides of the top and bottom pieces, substantially as and for the object explained.

2. The frame E, provided with the concave rabbet *e''*, for the purpose of giving the sounding-board a bellying form, substantially as and for the object specified.

97,944.—Freeman P. Marcy, Keokuk, Iowa.—*Boot-Crimper.*—December 14, 1869; antedated December 4, 1869.

Claim.—1. The hand-lever H and cam G, combined with the jaws E and F, made and adapted to use, substantially as set forth.

2. The combination and arrangement of vise B, hook C, jaws E F, cam G, and lever H, substantially as herein set forth.

97,945.—William L. May, Linwood, Ala., assignor to William J. May.—*Mechanism for Driving Cotton-Gins.*—December 14, 1869.

Claim.—The combination of the band-wheel A', wheel B, idler-pulley *b''*, gin-head *b'*, frame A, and bands *a b*, all arranged substantially as and for the purpose described.

97,946.—Arthur McCarter, Salem, Ohio.—*Meat-Chopper.*—December 14, 1869.

Claim.—1. The vibrating arm *z*, adjustable rod Y, ratchet-wheel I, pawls J K, for operating the worm H, in combination with wheel G, shaft F, and knives *k*, when constructed and arranged to operate as herein described, for the purpose set forth.

2. In combination with the jointed links P P', jointed arms W X, and guide-way R', operated by the crank-shaft T and sliding block S, the arrangement of the gearing U U' X, *v v'*, in connection with the fly-wheel *m*, as herein described, for the purpose specified.

97,947.—Frank H. McGeorge, Corning, N. Y. —*Gate.*—December 14, 1869.

Claim.—1. The combination of the pulleys D D with the slotted wheel *c'*, when arranged as described, and used in connection with a gate and bearing-post, for the purpose set forth.

2. The slotted plate *b*, with its catch b^2, as described, for the purpose set forth.

3. The hollow cap B^1, in combination with the pulleys and wheel, when provided with a cover, as and for the purpose set forth.

97,948.—Alexander McPherson, Santa Cruz, Cal.—*Construction of Buildings.*—December 14, 1869.

Claim.—Binding together the different parts of foundations and walls of brick, stone, concrete, adobe, or other similar material, by interlaying through the work, in one or in several directions, strips of wood or metal, substantially as and for the purpose herein set forth.

97,949.—James R. McPherson, Beloit, Wis.—*Galvanic Battery.*—December 14, 1869.

Claim.—The iron jar A, filled with metal chips saturated with a weak solution of muriatic or sulphuric acid, or strong solution of sal-ammoniac, in combination with the inner porous jar C, filled with black oxide of manganese and nitric acid, and the conductor E, all arranged to operate as herein described and shown.

97,950.—Rufus N. Meriam, Worcester, Mass. —*Gauge for Circular-Saw Table.* — December 14, 1869.

Claim.—The bracket C, pivoted as at *c*, and provided with a slot *d*, and lock-nut c^1, in combination with the sliding block B and face-piece D, all arranged and operating substantially as shown and described.

97,951. — Daniel Mills. New York, assignor to Charles Goodyear, Jr., New Rochelle, N. Y.—*Sewing-Machine for Sewing Boots and Shoes.*—December 14, 1869.

Claim.—1. An organization, substantially as described, consisting of the following elements in combination: First, a barbed needle, mounted on an oscillating arm or lever, operated by a suitable cam, in such manner that the power is applied to the needle-arm, between the needle and its center of oscillation; secondly, a looper, and its actuating-mechanism, so as to effect the chain-stitch, in connection with said needle; thirdly, a top-feed mechanism, propelling the work during the intervals of stitches; fourthly, one or more gauges for guiding and holding the work in the line of the seam to be made.

2. The arrangement, substantially as herein described, of a cam-disk or disks, mounted on one and the same shaft, and to operate as and by the means hereinafter shown and set forth: First, the needle-arm, when the same is a lever of the third order; secondly, the looper having a reciprocating rotary motion; thirdly, the feed, with its up-and-down and back-and-forth movement; fourthly, the edge-gauge,

with its locking-mechanism; and fifthly, the barb-coverer.

3. The combination, with a barbed needle mounted on an arm, being a lever of the third order, and a barb-coverer, mounted in like manner, and upon the same fulcrum with the needle-arm, of independent cams, mounted on the same shaft, to operate the needle and the barb-coverer, in the manner and for the purposes herein set forth.

4. The combination, with the needle and barb-coverer, oscillating upon the same fulcrum, and operated by cams, as described, of a spring and a slot and stud, or their mechanical equivalents, formed on the barb-coverer and needle-levers respectively, whereby, at the proper intervals, the action of the barb-coverer is regulated and controlled by the movement of the needle-arm, as herein set forth.

5. The looper, mounted on the end of a tubular shaft, through which the thread with which the looper is supplied passes, when said shaft is arranged to pass through the cavity in the frame, and there exposed to the action of the flame, substantially as herein shown and described.

97,952.—SIMON B. MOREY, San Francisco, Cal. —*Propeller.*—December 14, 1869.

Claim.—The floats or buckets, formed by the convolutions of the circular spiral E, substantially as and for the purpose set forth.

97,953.—CYRUS B. MORSE, Rhinebeck, N. Y.—*Cast-Steel Tube or Ingot.*—December 14, 1869; antedated December 8, 1869.

Claim.—As a new article of manufacture, a cast-steel tube, which is produced substantially as described.

97,954.—JOHN MCLEOD MURPHY, New York, N. Y., assignor to JAMES LORIMER GRAHAM, same place.—*Packing-Case for Oil-Cans.*—December 14, 1869.

Claim. — The combination, with a tin or other sheet-metal packing-can, provided with a turning cut-off nozzle, C G, of an exterior packing-case, provided with a door F, arranged, relatively to the said nozzle, substantially as specified.

97,955.—CHARLES K. MYERS, Pekin, Ill., assignor, for one-half, to PETER WEYHRICH, same place.—*Tightening and Guiding Belt.*—December 14, 1869.

Claim.—1. The combination of the slotted "shoe" F, and its bed *f f*, with the slotted arm D, pulley E, left-hand nut *b*, adjusting-bolt *d*, and slot *g g*, in frame A.

2. Adjusting-plate G, with its bolt-slot *n*, and pulley-rod slot *l*, in combination with the mortise *k k*, pulley H, and its rod *c*, all substantially as described, and for the purposes set forth.

97,956.—JOHN J. MYERS, Baltimore, Md., assignor to BENTLEY C. BIBB, same place.—*Fire-Place Fuel-Magazine Stove.*—December 14, 1869.

Claim.—1. The gas-escape passage of the feed-chute fire-place magazine-stove, substantially as and for the purpose herein described.

2. The curved door *e*, substantially as and for the purpose described.

3. The arrangement of the door *e* to open by a circular movement in the paths of a vertical plane, substantially as shown and described.

4. Making the chute-door *e* a permanent part of the stove, and yet movable, substantially in the manner and for the purpose described.

5. The combination of the screen or screens and the attached yet movable door *e*, substantially in the manner and for the purpose described.

6. The screen connected to the door *e*, so as to be readily disconnected therefrom, by means substantially as described.

7. The combination of the pipes S, combustion-chamber B B′, hollow flue-base A, return-columns E, and direct-draught damper, J, substantially in the manner and for the purpose described.

8. The combination of the damper J, feed-chute with gas-escape through it, the flue-chamber K, passage *t*, and main draught-flue H, substantially in the manner and for the purpose described.

9. In a fire-place top-feed fuel-magazine stove, the combination of the following elements, to wit, the flue-extension K, the gas-escape *t*, direct damper J, the extension B′, and the pipes S S, substantially as and for the purpose described.

10. In a fire-place top-feed fuel-magazine stove, the combination of the following elements, to wit, an inclined chute, with a gas-passage leading therefrom into the main flue, a single cover or plate permanently attached to the stove, but movable so as to be made to close both the feed and gas passages, or to open the same, and screen-sections G G, substantially as and for the purpose described.

97,957.—JAMES B. PARKER, Knob Noster, Mo. —*Corn-Planter.*—December 14, 1869.

Claim.—1. The arrangement, upon the cross-bar G, of the boxes H H, hoppers I I, plungers *a a*, and connecting-bar N, all substantially as and for the purposes herein set forth.

2. In combination with the bar N and plungers *a a*, the rod *d*, lever S, pins *b b*, cog-wheel P, platform R, cog-wheel O, and spring T, all substantially as and for the purposes herein set forth.

3. The arrangement of the frame J with bar *h*, seat-standard W, and lever Z, all constructed as described, substantially as and for the purposes herein set forth.

4. The combination and arrangement of the main frame A B E G, wheels C C, scrapers D D, frame J, plows K K, boxes H H, hoppers I I, plungers *a a*, bar N, cog-wheels O P, lever S, platform R, rod *d*, spring T, seat-standard W, lever Z, and bar H, all constructed as described, and operating substantially in the manner and for the purposes herein set forth.

97,958.—ARCHIBALD PERRY, Richland, Ind., assignor to himself and JACOB FISHER, same place.—*Sawing-Machine.* — December 14, 1869; antedated December 3, 1869.

Claim.—1. The lever L, slotted or open at each end, in combination with the crank K, arm L, and clamp N, when used in the manner and for the purpose as specified.

2. The forked lever L, crank K, arm M, and clamp N, in combination with the rocking lever F, shaft G, crank K, pitman E, and wheel D, all constructed and operating substantially as set forth.

3. The arm M, so arranged and constructed as to be moved nearer to and further from the center of motion, in combination with the clamp N, springs P and *a*, and cord *c*, when used in the manner and for the purpose as specified.

4. The arrangement of the lever *d*, cords *e* and *f*, brake *g*, and arm M, when all are used in the manner and for the purpose as set forth.

5. The saw H, connected at the top and bottom to the slides I I on the same side, and operated by the rocking lever F, all substantially as set forth.

6. The combination of the lever L, arm M, clamp N, springs *a* and P, cords *c*, *e*, and *f*, lever *d*, and brake *g*, all constructed and arranged to operate substantially in the manner and for the purposes herein set forth.

97,959.—OSGOOD PLUMMER, Worcester, Mass. —*Mechanical Movement.*—December 14, 1869.

Claim.—1. The mechanical movement, substantially as above described.

2. The combination of the slotted rack-piece H, in combination with the bell-crank piece F, substantially as described.

97,960.—W. S. POULSON and W. N. POULSON, Cadiz, Ohio. — *Teachers' Register.*—December 14, 1869.

Claim.—The teachers' register herein described, having slots *a a′*, loops *d d*, and *c*, and sliding scale B, constructed and arranged to operate as specified.

97,961.—JAMES H. PRESTON, Jefferson City, Mo.—*Side-Saddle Tree.*—December 14, 1869.

Claim.—1. The adjustable leg-rest B, when combined with a tree-body, A A′, substantially as set forth.

2. The leg-rest B, the plate C, tablet D, pin *d*, and slot *c*, when arranged and combined with the tree-body, substantially as set forth.

3. The adjustable stirrup-strap F, arranged with an adjustable leg-rest B, and tree-body C, all as and for the purpose set forth.

97,962. — PROSPER VINCENT RAMEL, Paris, France.—*Process of Preparing Plants to be Used in Cigars, Snuff, &c.*—December 14, 1869.

Claim.—The new application of the leaves of the eucalyptus and of the family of myrtles, and their treatment herein described, to all the purposes for which tobacco has been hitherto used, and for tobaccos in rolls or in slabs, and for snuffs. After having submitted the leaves of the eucalyptus to the preparatory processes above described, they are treated in the same way as the leaves of the tobacco-plant are now treated for the various purposes for which they are intended.

97,963.—LEONARD W. REED, East Cambridge, Mass.—*Pipe-Coupling.*—December 14, 1869.

Claim.—The within-described adjustable coupling, consisting of the sections A and B, secured together by means of the clamp-ring D and screw E, substantially as and for the purpose specified.

97,964. — S. B. ROWLEY, Philadelphia, Pa.—*Fruit-Jar.*—December 14, 1869.

Claim.—The combination of the screw-ring D and its flange *j*, the thin metal cap B and its flange *h'*, the rib *d*, shoulder *b*, and screw-thread *a* of the jar, and the gum ring *h*, the whole being constructed, arranged, and adapted to each other, as and for the purpose herein set forth.

97,965.—EDWARD P. RUSSELL, Manlius, N. Y.—*Clothes-Wringer.*—December 14, 1869.

Claim.—The combination of the rollers A B, tube *a*, swing-levers F F', main levers M, auxiliary lever W, cam-lever X, and standards S and S', constructed as described, and operating as and for the purposes set forth.

97,966.—WATSON SANFORD, New York, N. Y.—*Coal-Stove.*—December 14, 1869; antedated September 3, 1869.

Claim.—1. The arrangement of a series of openings in the neck, and between the fire-pot and the body of the stove, substantially as described.

2. The combination and arrangement of the body and fire-pot with the neck, with or without a series of openings, substantially as described.

97,967.—WATSON SANFORD, New York, N. Y.—*Base-Burning Stove.*—December 14, 1869; antedated September 15, 1869.

Claim.—1. The arrangement of open-work at the upper portion of the chute, substantially as described.

2. The arrangement of an additional opening or passage-way to the chute, and in direct contact therewith, and of larger diameter, to admit of a more convenient withdrawal or replacement of such chute, substantially as described.

3. The arrangement of divisional plates or strips longitudinally between the chute and body of the stove, substantially as described.

4. Making such divisional plates or strips adjustable, substantially as described.

5. The arrangement of a slide-damper horizontally between the chute and body of the stove, substantially as described.

6. The construction of the grate and rim containing the trunnions, to admit of the removal of the grate, substantially as described.

7. The arrangement of the foot-ring, when combined with the brackets *q q' q*, substantially as described.

97,968.—AMBROSE H. SASSAMAN, Scranton, Pa.—*Journal-Box.*—December 14, 1869.

Claim.—The combination and arrangement of the grooved journal-box and shaft, herein described, with the rollers *a*, all constructed and operating substantially as and for the purposes specified.

97,969.—JACOB SCHMIDLAPP, New York, N. Y.—*Hook-and-Ladder Truck.*—December 14, 1869.

Claim.—1. The combination of the reach F and G with the trestle-work truck-body or carriage H, all constructed substantially as hereinbefore set forth.

2. In combination with the carriage H, as hereinbefore set forth, the permanently fixed pilot-seat P attached thereto, and elevated above the ladders, for the purposes set forth, and substantially as described.

97,970.—Suspended.

97,971.—THOMAS L. SHAW, Omaha, Nebraska.—*Snow-Plow for Railways.*—December 14, 1869.

Claim. — 1. The pivoted plow-frame B, toggle-levers *r b*, connecting-bars *b'*, and rotating disk C, all constructed and arranged substantially as and for the purpose set forth.

2. The means herein described of operating the leaves B' B' through the agency of the locomotive-wheels, substantially as and to the end specified.

3. The divided pinion *i*, toothed wheel *h'''*, shafts I *h*, and lever *k*, combined and arranged substantially as described.

97,972.—WILLIAM ANTHONY SHAW, New York, N. Y., assignor to PETER NAYLOR, same place.—*Composition Metal for Tubing, Pipes, and Sheeting.*—December 14, 1869.

Claim.—1. An alloy or composite metal, adapted to the manufacture of pipes, tubing, sheet-metal, and other articles, as specified, composed of lead, block-tin, and antimony, in the proportions substantially as set forth.

2. The manufacture of pipes, tubing, sheet-metal, and other articles for conducting or receiving water or other fluids, of an alloy or composite metal such as herein described.

3. Pipes or sheets composed of an alloy such as herein described, when faced on one or both sides with pure lead, substantially as and for the purposes stated.

4. The formation, upon composite-metal tubing, such as described, of one or more longitudinal ribs or ridges, as and for the purposes specified.

97,973.—JOHN H. SHEHAN, Lima, Ind., assignor to himself, GEORGE W. EDGECOMB, and THOMAS J. BULL.—*Pruning-Shears.*—December 14, 1869.

Claim.—The arrangement and combination of the shears D, bar A, and straps F F, as shown and described, and for the purpose set forth.

97,974. — ALBERT SINCLAIR, West Waterville, Me.—*Price-Calculating Device.*—December 14, 1869.

Claim.—1. The combination of an auxiliary indicator, K, with a table of rates, C, and numerals on the revolving cylinder, and the fixed opening G, and table of numerals E of the inclosing-case B, substantially as described.

2. The cylindrical fixed slotted case B, secured to flanged head-plate H, for the purpose of facilitating the removal of the cylinder, substantially as described.

97,975.—C. SHALER SMITH, C. H. LATROBE, and FREDERICK H. SMITH, Baltimore, Md.—*Construction of Bridges.*—December 14, 1869.

Claim.—1. In a system of wrought-iron piers or continuous trestle, such as described, the combination, with the cast-iron joint-boxes, interposed between and forming the bearings for the column-sections, of longitudinal diagonal ties, connecting, substantially in the manner specified, the joints of any one tier with those of another tier, or with the caps or feet of the columns, for the purposes set forth.

2. The combination, with the piers and system of longitudinal diagonal ties, connecting the same, of the wooden chord-sticks and longitudinal system of wooden struts, for supporting the roadway and stiffening the piers.

3. The construction of the cast-iron post-caps, foot-boxes, and joint-boxes, substantially as shown and described.

4. The combination of a series of independent or isolated bridge-piers, formed, as described, with an intermediate span or spans of truss, connecting the same, substantially as set forth.

5. Uniting the longitudinal diagonal ties with the columns, or boxes of said columns, by means of the yoke and screw-nut attachment, substantially as shown and described, so as to admit of the ready adjustment of said ties, for the purposes stated.

6. A system of continuous trestle, for bridges, in which the longitudinal diagonal rods or ties, which connect the caps and feet or joints of the columns, are combined with intermediate spans of truss, extending between said columns, substantially as shown and set forth.

97,976.—SIMON SMITH, Clarksburgh, N. Y.—*Churn.*—December 14, 1869.

Claim.—The combination of the hollow dashers E E, standard C, lever F, and churn-body A, all constructed and arranged as described.

97,977.—WILLIAM M. SMITH, Augusta, Ga.—*Cotton-Bale Ties.*—December 14, 1869.

Claim.—An improvement upon rectangular cotton-bale ties, with V or X-shaped slots, said improvement consisting in striking off the interior point or angle *a*, while the point or angle *a'* is left entire, for the ready and secure adjustment of the loop-band D, as herein shown and described.

97,978.—W. A. WORKMAN, Fairfield, Iowa.—*Grain-Measuring Attachment to Thrashing-Machines.*—December 14, 1869.

Claim.—A sliding cut-off, D, provided with spouts E E, and combined with a reciprocating table A', a grain-spout, G, and a registering-device, substantially as described.

97,979.—ANDREW J. WRIGHT, Cleveland, Ohio.—*Scaffold for Gathering Fruit, and for other Purposes.*—December 14, 1869.

Claim.—The notched standards E and braces H and I, in combination with the platform A, guards B, guides F, and keys G, arranged essentially as and for the purpose set forth.

97,980.—WENDELL WRIGHT, Bloomfield, N. J.—*Revolving Cupboard.*—December 14, 1869.

Claim.—The arrangement of a revolving closet within a stationary chamber that opens into two adjoining rooms, as and for the purpose specified and shown.

97,981.—CHARLES S. SNEAD, Louisville, Ky.—*Barrack or Hospital-Bedstead.*—December 14, 1869.

Claim.—The combination of the bands *a b*, for connecting the side and end rails to the posts, the forked and tempered ends B and E to the side and end rails, the clasps *s* and *r* for holding the lockers and the musket-rack, and holder K and *m*, as specified and described, for the purposes set forth.

97,982.—C. F. TH. STEINWAY, New York, N. Y.—*Piano-Forte.*—December 14, 1869.

Claim.—1. Extending the sounding-board bridge of an overstrung piano-forte, in an unbroken curve, from the treble to the bass end, substantially as and for the purpose described.

2. In combination with the continuous sounding-board bridge, the arrangement of a raised part on the top plate of the metal frame, the strings running under the plate instead of over, substantially as set forth.

3. The treble-bar *h* of the metal frame D, arranged, in relation to the strings *s s' s''*, substantially in the manner shown and described.

4. The semi-cylindrical edge or rim *f* of the metal frame D, as set forth.

5. The braces *o*, forming the connection between the bottom plate *e* of the metal frame and the tuning-block extension of the top plate *d*, and forming shoulders or abutments for the front edge of the sounding-board, substantially as described.

6. The arrangement of blocks or standards *i*, rising from the bottom of the case A, through apertures in the bottom plate of the metal frame, and forming the connection between said bottom and sounding-board, substantially as set forth.

7. Subjecting the bottom of the case A, together with the sounding-board, to a compressing-force produced by screws, wedges, or other suitable devices, substantially as shown and described.

8. The detached blocks *a*, rising from the bottom of the case A, and forming the supports of the metal frame D, substantially as set forth.

9. The metal bands or braces *n*, extending from the rim *f* of the metal frame to that side of the case A which is situated under the open end of the metal frame, said braces serving to counteract the compressing-force to the screws or other devices bearing on the sounding-board and bottom C of the case, as set forth.

97,983.—JOHN STEINHOUSE, 17 Rodney street, Pentonville, London, England, assignor to ARTHUR CHENEY and ALONZO MILLIKEN, Boston, Mass.—*Water-Proofing Fabrics.*—December 14, 1869; patented in England, January 8, 1862.

Claim.—The employment and application of paraffine, in a solid state, to wood, leather, paper, or textile fabrics, composed of cotton, linen, wool, or silk, by means of a metal plate, heated to a temperature from 130° to 250° Fahrenheit, the article to be treated to be stretched thereon, and then manipulated, substantially as and for the purpose set forth.

97,984.—ELIZABETH MARY STIGALE, Philadelphia, Pa.—*Rails for Ornamental Fence.*—December 14, 1869.

Claim.—A recessed rail, adapted to columns, posts, or frames, substantially as described.

97,985.—JOHN W. STILL, San Francisco, Cal.—*Latch for Double Doors.*—December 14, 1869.

Claim.—The combination, with the spring stem D, of the wedge-shaped head G, forming a shoulder on each side of the stem, with its face at right angles to the stem, so as to make a secure fastening for two contiguous doors, substantially as described.

97,986.—JAMES G. STOWE, Providence, R. I.—*Lathe-Fastening.*—December 14, 1869.

Claim.—The combination of the tail-stock A, cam-surfaces I I, cam-block D, lever E, rod H, and shoe F, or their equivalents, constructed and arranged substantially as and for the purpose described.

97,987.—A. D. STRONG, Ashtabula, Ohio.—*Vinegar-Apparatus.*—December 14, 1869.

Claim.—A vinegar-apparatus, constructed with broad, slanting shelves B, provided with marginal grooves or channels C, pins *a*, and case A, in the manner substantially as described, and for the purpose set forth.

97,988.—GEORGE C. TAFT, Worcester, Mass.—*Wrench.*—December 14, 1869.

Claim.—1. The combination and relative arrangement, with the parts A and B, of the screw C and rosette D, substantially as and for the purpose set forth.

2. The combination of the semi-cylindrical parts *a b*, of the divided wrench A B, with the flanges or rings *e*, substantially as and for the purposes set forth.

97,989.—WILLIAM TANSLEY, Salisbury Centre, assignor to "STARBUCK BROTHERS," Troy, N. Y.—*Bark-Mill.*—December 14, 1869.

Claim.—1. Constructing the upper conical ring of the runner with a series of steps, supported on a continuous concentric base, and providing with interior and exterior grinding-teeth, substantially in the manner and for the purpose set forth.

2. In combination with the above, the upper and lower grinding-surfaces C and D', one directly over the other, the upper discharging the coarsely-ground material into the lower, substantially in the manner and for the purpose set forth.

3. The central hollow bearing L of the core M, in combination with the ring or annular journal K, arms G, (having stops H,) and shaft B, with the driver J, all constructed and operating substantially as described, for the purpose set forth.

4. In bark or other mills, the combination and arrangement of the upper and lower continuous grinding-surfaces, the base of the former resting upon and slightly projecting over the top of the latter, grinding coarsely and evenly, and discharging into the lower, where the bark is finely ground and finished, substantially as and for the purpose set forth.

97,990.—JEREMIAH H. TARPLEY, Greensborough, N. C.—*Clevis for Plows.*—December 14, 1869.

Claim.—1. The curved plate D, when provided with a socket B, and with one or more notched ribs E on its face, substantially as and for the purposes set forth.

2. In combination with the plate, socket, and ribs, above claimed, the clevis-strap F, substantially as described.

97,991.—ALBERT L. TAYLOR, Springfield, Vt.—*Handle for Knives.*—December 14, 1869.

Claim.—The filling B, inserted in the handle A, and projecting at the sides thereof, and held tightly in said handle by the tapering tang *k*, which, when driven into the filling, expands the same, and renders it permanently rigid, the blade being secured in the handle by the rivet *a* passing through the part A and the tang, all as herein described.

97,992.—DANIEL THACKARA, Woodbury, N. J.—*Making Bricks, Tiles, &c.*—December 14, 1869.

Claim.—The manufacture of bricks, tiles, and other earthenware, from the sediments or settling which have been deposited on the beds of rivers and other streams of water, or on their shores by the overflowing of the streams, and is commonly called "mud," as above set forth.

97,993.—JAMES P. TIBBITS, New York, N. Y.—*Foot and Kneeling Stool for Churches.*—December 14, 1869.

Claim.—The stool B, constructed with sides *a b*, at right angles, or thereabout, to each other, and hinged, pivoted, or otherwise connected with the floor, in combination with the partition C, substantially as shown and described, for the purposes set forth.

97,994.—CHARLES DARWIN TISDALE, Boston, Mass., assignor to himself and JOSEPH HENRY CLAPP, same place.—*Railway-Carriage Wheel and Axle.*—December 14, 1869.

Claim.—The combination of the tightening-screw *d*, or *d'*, or its equivalent, with the wedge-keys *b b'*, the grooves *a o*, in the wheel-hub and axle, and the stop-piece *c*, substantially as described.

97,995.—CASPER VAN HOESEN, Catskill, assignor to himself, JOHN H. BURTIS, Brooklyn, and M. W. STAPLES, Catskill, N. Y.—*Suspenders.*—December 14, 1869.

Claim.—The combination of the spring A, straps C C, and tension-regulator D, all substantially as and for the purposes herein set forth.

97,996.—FRANCIS H. WALKER, Boston, Mass.—*Button-Hole Cutter.*—December 14, 1869.

Claim.—The combination of adjustable cutter-bed D, with a cutter-carrying-jaw, C, which is connected to a lever-handle, A, by a loose joint, substantially as and for the purpose described.

97,997.—C. E. WALKES, Elyria, Ohio.—*Bed-Bottom.*—December 14, 1869.

Claim.—A bedstead, constructed with cams I, ratchet-wheel and pawl K K, springs D, and slats E C, arranged in the manner as described and for the purpose specified.

97,998.—JOHN WARNER, Flushing, N. Y.—*Still for Oil, &c.*—December 14, 1869.

Claim.—1. Setting a still so that the outer edge and center only of its bottom are supported substantially as and for the purpose specified.

2. The employment of one common convex perforated arch over all the fires, substantially as shown and for the purpose set forth.

3. The hollow central pier D, constructed as shown and for the purpose specified.

4. Withdrawing the heated products of combustion from the circumference of the combustion-chamber, substantially as shown and described.

5. Causing the smoke-flues from the combustion-chamber to center in one common chamber within the foundation of the still, substantially as shown and for the purpose specified.

6. The arrangement of the flues I and *m*, and the chambers K and L, within the foundation of the still, substantially as and for the purpose set forth.

7. The employment of a hinged or removable jacket around the base of the gooseneck, substantially as shown and for the purpose specified.

8. The arrangement of the ventilating-pipes S within and through the casing-wall, substantially as shown and for the purpose described.

9. The arrangement of the doors or traps O upon and within the casing N, substantially as and for the purpose shown.

10. The combination of the ventilating-pipes S with traps O, substantially as and for the purpose shown.

11. The combination of the convex perforated arch F, with the flues I, substantially as shown and described.

12. The general construction and arrangement of the various parts hereinbefore described, substantially as shown and for the purpose specified.

97,999.—CHARLES W. WEST, Shiloh, assignor to himself and OSCAR A. DOUGLAS, Bridgeton, N. J.—*Paper-File.*—December 14, 1869.

Claim.—A paper-file, consisting of the bars A B, having the pins *a a*, and of the strings *b c*, which are interlocked, as set forth, so that they tie the bars together without piercing the paper, substantially as herein shown and described.

98,000.—THOMAS A. WESTON, Ridgewood, N. J., assignor to WILLIAM SELLERS and JOHN SELLERS, Jr., Philadelphia, Pa.—*Hoisting-Apparatus.*—December 14, 1869; patented in England, August 28, 1868.

Claim.—The combination, with a hoist, of helical inclines, frictional surfaces, and a pawl and ratchet, or their equivalent, operating substantially as set forth.

98,001.—CORYDON WHEAT and ALFRED CATCHPOLE, Geneva, N. Y.—*Coke-Wagon.*—December 14, 1869.

Claim.—1. The dumping-box A, swung upon trunnions, substantially as described, and composed of frame *e*, and lining *i*, for the purposes specified.

2. In combination with the dumping-box A, and its suspending-frame, the cranked bail *d*, and carrying-wheel, C, substantially as and for the purposes set forth.

98,002.—DARIUS WILCOX and R. MCCHESNEY, Derby, Conn., assignors to D. M. BASSETT and DARIUS WILCOX, same place.—*Machine for Making Carriage-Clips.*—December 14, 1869.

Claim.—The combination of the holder C, arranged as described, so as to be raised or lowered, and constructed so as to receive and hold the blank, with the segmental roll F, the said roll being hung in the carriage G, so as to pass over the blank on the table C, all substantially as herein set forth.

98,003.—WILLIAM E. WOOD, Baltimore, Md.—*Door for Fire-Place Stove.*—December 14, 1869.

Claim.—The combination of the front opening *a' b'* and the detachable or removable coverings C D E F F', with a "fire-place stove," substantially as and for the purposes hereinbefore set forth.

98,004.—JOHN CHANDOS WOODHEAD, Pittsburgh, Pa.—*Interchangeable Boot and Shoe Heel.*—December 14, 1869.

Claim.—In a changeable boot and shoe heel, the combination of the socketed metallic plates in the upper and lower portions of the heel, when constructed as described, and secured in the manner set forth.

98,005.—SAMUEL WOOLSTON, Vincentown, N. J.—*Camel for Raising Vessels.*—December 14, 1869.

Claim.—1. The arrangement of the camel in two parts, so hinged together as to be opened to receive the vessel, and then rigidly united like a single boat, substantially as set forth.

2. The central elevations E, substantially as set forth.

3. The cross-beam C, arranged substantially in the manner and for the purposes set forth.

98,006.—ISAAC ADAMS, Jr., Boston, Mass., as-

signor to UNITED NICKEL COMPANY.—*Manufacture of the Metallic Parts of Fire-Arms.*—December 21, 1869.

Claim.—The improvement in the manufacture of fire-arms, hereinbefore described, the same consisting in the application to their metallic parts, or any portion of them, of a compact, coherent, tenacious, and flexible coating of nickel, for the purposes specified.

98,007.—H. C. ALEXANDER, New York, N. Y.—*Toy-Velocipede.*—December 21, 1869.

Claim.—The improved velocipede toy, each of its parts being constructed and arranged, with respect to the others, in the manner specified.

98,008.—DANIEL ARMSTRONG, Chicago, Ill.—*Machine for Making Wrought Nails.*—December 21, 1869.

Claim.—The combination of wheel G, frame A, shafts D C, pinion F, and housing I, constructed and arranged as and for the purpose set forth.

98,009.—JAMES ARMSTRONG, Bueyrus, Ohio.—*Wash-Boiler.*—December 21, 1869.

Claim.—1. The bottom B, when constructed substantially as and for the purpose shown and described.

2. The removable adjustable top D, when constructed substantially as shown and described.

3. The combination of the bottom B, top D, and end pieces C C, when constructed and arranged substantially as shown and described.

98,010.—SAMUEL AYRES, Danville, Ky.—*Refrigerator.*—December 21, 1869.

Claim.—1. The combination of the exterior case B, cylindrical case A, fixed rack Q, and revolving rack T, and ice-basket W, when arranged for access through the top and side, and with non-heat-conducting packing in the space between the two cases, as specified.

2. The arrangement of the hollow shaft S, shelves T, fixed rack Q, and ice-basket W, substantially as specified.

3. The arrangement, with the hollow shaft S, and shelves T, of the ice-basket W, oscillating cut-off X, spout Y, and water-passage Z′, substantially as specified.

4. The arrangement, with the shelves T, of the hollow posts *a a′*, in the double capacity of water-conductors and connecting supports, substantially as specified.

5. The arrangement, within the cylinder A, on a revolving central tube, resting upon a center at the bottom, of an ice-basket and a series of shelves, the said shaft being arranged to convey the water from the basket to the shelves, substantially as specified.

6. The arrangement, with the upper wired edge of the cylinder, of the lid E, provided with packing, as described, and hinged in slotted bearings, substantially as specified.

7. The combination, with the case A and door *h*, of the door or lid *l*, connected to the said door *h* by the central loose stud-pin *k*, and one or more pins *k′*, and provided with the spring *p*, all substantially as specified.

8. The combination, with the door L and case B, of the prop-rod M, slotted bar N, and spring hinge-joint O′ P, arranged and operating substantially as specified.

98,011.—GEORGE C. BAILEY, Pittsburgh, Pa.—*Hydrant.*—December 21, 1869.

Claim.—1. The lug *s*, attached to or forming part of the hollow plunger and discharge-pipe, in combination with the removable valve-chamber *f*, having a corresponding lug *s′*, all arranged and combined substantially as set forth.

2. The discharge-pipe *b*, lugs *s s′*, valve-chamber *f*, and joint *d′*, when combined in the manner substantially as shown and described.

3. A hydrant-valve seat inserted in or forming part of a removable valve-chamber, and a vertically-moving plunger or discharge-pipe, in combination with a locking-device constructed and operated substantially as described.

4. The discharge-pipe *b*, valve *a*, movable annular packing-ring *o*, and waste-passage *i*, when combined as shown.

98,012.—JOSEPH BALSLEY, Bedford, Ind.—*Washing-Machine.*—December 21, 1869.

Claim.—The combination of rope H, treadle K, roller or round J, slides F, and springs M, with the roller E, handle N, and rubber standards D, when arranged and operating as shown and described.

98,013.—ASHBELL P. BARLOW, Kalamazoo, Mich.—*Saw-Mill.*—December 21, 1869.

Claim.—The combination of the straight single inclined upper guides *a′ a′* and cross-head *a″* with the saw C and pitman *e*, when the saw is pivoted to the pitman, either above or below the pitman-fulcrum or guide-pins *d*, in the manner and for the purpose substantially as described.

98,014.—E. C. BARTON, Bloomsburgh, Pa.—*Boring-Machine.*—December 21, 1869.

Claim.—The mandrel E and its pinion, the yoke D D′, and collared screw-bolt H, in combination with the worm C and frame A, when constructed, arranged, and operating substantially as herein shown and described.

98,015.—THOMAS BERNHARD, Hartford, Conn.—*Padlock.*—December 21, 1869.

Claim.—The combination of the springs *o o o*, more or less in number, and strengthened by the notched bar *i*, with the sliding bolt *c* and the sliding bar *d*, actuated by the spring *e*, the whole being constructed, arranged, and operating substantially as described, for the purpose set forth.

98,016.—INMON BLACKABY, Civer, Ill.—*Fence.*—December 21, 1869.

Claim.—The panel *a*, sill *f*, short bar *c*, and brace *d*, constructed and arranged as and for the purpose specified.

98,017.—ALBERT BONDELI, Philadelphia, Mo.—*Plowing-Machine.*—December 21, 1869.

Claim.—1. The spade-wheels A *a′*, one or more, constructed substantially as herein shown and described, and set at an angle with the vertical line, and with the line of draught, substantially as and for the purpose set forth.

2. The combination of the circular revolving cutters D with the spade-wheels A *a′* and frame C, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the adjustable caster-wheel E F G and adjustable hinged or jointed tongue H, with the frame C, circular revolving cutters D, and spade-wheels A *a′*, substantially as herein shown and described, and for the purpose set forth.

4. Adjustably connecting the truck-wheels I with the frame C, to which the spade-wheels A *a′* and the circular revolving cutters D are attached by the pivoted arms J and guide-slides K, or equivalent devices, substantially as herein shown and described, and for the purposes set forth.

5. The combination of the levers L, or equivalent device, with the arms J, to which the axles of the truck-wheels I are attached, and with the frame C, to which the spade-wheels A *a′* and circular revolving cutters D are attached, substantially as herein shown and described, and for the purposes set forth.

98,018.—A. S. BOYER, Bernville, Pa.—*Carriage-Brake.*—December 21, 1869.

Claim.—As my invention, in combination with the body of the vehicle, the braking-levers A A, constructed, applied, and operated by a foot-lever, so that they may be entirely withdrawn under the bottom of the said vehicle, or out of sight, when not required or used in braking, substantially as herein-before set forth and described.

98,019.—WILLIAM A. BRADFORD, Cincinnati, Ohio, assignor to C. G. PEASE, trustee for MALONE SAFETY-VALVE COMPANY.—*Low-Water Indicator.*—December 21, 1869.

Claim.—In combination with the expansion-tube L, fitted with a steam-whistle, P, and valve-seat

H, the pendent stationary valve H′, when said valve has a screw-threaded stem, I, and adjusting-nuts N N, arranged and operating in the manner and for the purpose specified.

98,020.—Robert Briggs, Philadelphia, Pa.—*Machine for Making Ferrules.*—December 21, 1869.

Claim.—1. The combination of the annular cutter with the swaging-roll, and of these with the supporting-rolls and mandrel, as herein described, for the manufacture of sockets or ferrules of wrought iron, from tubes previously either but or lap welded, by cutting off the same, simultaneously with the swaging or closing down upon a mandrel, as hereinbefore described.

2. The arrangement of the mandrel J, in combination with the rolls H H H′ and the withdrawing-lever K, substantially as and for the purpose described.

98,021.—M. S. Bringier, Ascension Parish, La.—*Steam-Generator.*—December 21, 1869.

Claim.—1. The application of the waste steam to increase and control the draught of the furnace of a boiler or evaporator, constructed substantially as herein described, when the same is done by the means and in the manner substantially as herein described, for the purpose set forth.

2. The combination of the boiler A, groups of tubes B B′ B″, and connecting vertical pipes C C′ C″ C‴, when used in connection with a furnace, provided with a vertical wall, E, and horizontal divisional plates D D′, with a pipe or drum, *c*, when the latter is provided with the issue-pipes or nipples *d*, and the several parts are constructed, arranged, and operated substantially as and for the purpose specified.

98,022.—Theodor Brinkmann, Greeneville, Tenn.—*Fire and Water Proof Paint.*—December 21, 1869.

Claim.—A compound for painting roofs and houses, when made in the manner substantially as set forth.

98,023.—Adam Brown, Bridgeport, Oregon.—*Animal-Trap.*—December 21, 1869.

Claim.—1. In combination with a box, barrel, or other suitable case, of a detachable chute, B, provided with spring-points D, perforated sheet-metal flooring E, and bait-chamber F, constructed and arranged to operate as herein shown and described, for the purpose specified.

2. The arrangement, in connection with the above, of the metal sheets I and tilting-tables K, all as specified.

98,024.—Augustus Brown, Dryden, N. Y.—*Hair-Spring Adjustment for Watches.*—December 21, 1869.

Claim.—1. The method of securing the outer end of the hair-spring by means of the clamp *c d* pressing upon the edges of said spring, substantially as described.

2. The adjustable link *f* to the regulator, whereby the curb-pins are adjusted to the position of the outer convolution of the hair-spring, substantially as and for the purpose set forth.

98,025.—Charles F. Butterworth, Troy, N. Y.—*Expanding Muff-Block.*—December 21, 1869.

Claim.—The combination of the two cylindrical blocks A B, one recessed and the other shouldered, as set forth, with the threaded, swiveled, and shouldered shaft C F, plate G, and threaded nut E, and the collar or sleeve *i*, all of said parts being arranged and brought together in the manner specified, to form an adjustable muff-block.

98,026.—George L. Cady, Lowell, Mass.—*Sap-Spout.*—December 21, 1869.

Claim.—The combination of the spout *a*, spur *d*, and hanger *f*, constructed and arranged to operate together substantially as and for the purpose herein specified.

98,027.—James Capen, Charlton, Mass.—*Hay-Loader.*—December 21, 1869.

Claim.—The combination of the rake E, case D, and elevator B, with the vertically-sliding frames L and sheets M, all constructed and arranged together, as described, to collect, load, and protect the hay from winds, and in the manner described.

98,028.—George T. Chattaway, Brooklyn, E. D., and John Dickinson, N. Y., assignors to George S. Chattaway.—*Grinding-Machine.*—December 21, 1869.

Claim.—The rest *g*, set upon trunnions in the movable bearings *h*, and adjusted by the screws *t m*, in combination with the grinding-wheel *c* and bed *a*, as and for the purposes specified.

98,029.—John Christy, Clyde, Ohio.—*Coopers' Tool.*—December 21, 1869.

Claim.—The combination of shanks *d* and *e*, when both are constructed and arranged to operate in the manner described.

98,030.—Frank O. Claflin, New York, N. Y.—*Nail and Peg Driver.*—December 21, 1869; antedated December 18, 1869.

Claim.—1. The punch *f*, in combination with the swinging-arm *d*, and mechanism for presenting to the punch one nail or peg to be driven, substantially as set forth.

2. The arrangement of the slide *n*, pawl *r*, die 5, and punch *f*, substantially as and for the purposes set forth.

3. The combination of a wheel with size-marks with lasting-pincers, substantially as set forth.

98,031.—Spencer M. Clark, Washington, D. C.—*Self-Canceling Postal and Revenue Stamp.*—December 21, 1869.

Claim.—A postal or revenue stamp, composed of two layers, one of which is perforated, the two being united and printed on the perforate side, and gummed on the imperforate side, substantially in the manner and for the purpose herein set forth.

98,032.—David N. B. Coffin, Jr., Newton, assignor to himself and Irah D. Spaulding, Boston, Mass.—*Capstan-Windlass.*—December 21, 1869.

Claim.—1. The combination of the capstan-windlass with the double-acting cam and the rocking-shaft, substantially as described.

2. The rocking-shaft *d*, constructed with wrists and rolls or sliding blocks, (see Figs. 16, 17, and 18,) and furnished with arms or head *e e*, in combination with a double-acting cam and shaft, *c b*, substantially as and for the purposes set forth.

3. The combination of the vibrating beam, irrespective of its lever-sockets, with the rocking-shaft and pawl-cases or primary levers of the windlass.

4. The arrangement of the flanged intermediate gear or gears *s*, in combination with the space between the teeth of the center gear and its ratchet-plate or other adjacent part, substantially as described.

5. Constructing the locking or sliding bolts of a capstan, (see Figs. 13, 14, and 19,) with expanded ends, substantially as and for the purpose set forth.

98,033.—François Coignet, Paris, France.—*Metal-Clad Artificial Stone.*—December 21, 1869.

Claim.—1. Protecting the exposed corners, sides, edges, or angles of artificial stones by means and with the use of metallic shields fastened thereto, in the process of manufacturing said stone, substantially in the manner herein set forth.

2. As a new article of manufacture, a metal-clad artificial stone, made substantially as herein described, for building purposes, or other wants of the arts, industry, or commerce.

98,034.—François Coignet, Paris, France.—*Making Artificial Stone and Concrete.*—December 21, 1869.

Claim.—The herein-described mode of obtaining a masonry or block of artificial stone, of the character known as Coignet's agglomerate, without seams, beads, or partings, by means of the system of roughening of the surfaces of the strata, substantially as herein set forth.

98,035. — François Coignet, Paris, France. — *Malaxator for the Preparation of Plastic Materials for Artificial Stone, and for other Purposes.* — December 21, 1869.

Claim.—1. The inclined body or case P Q Q′, in combination with the conjoint helices D S D S, substantially as and for the purpose set forth.

2. The regulating sand-hopper, with its gate *t*, or equivalent device, in combination with the helices D S D S and case P Q Q′.

3. The use of one or more screws S′, with hopper R, and of definite rotated spur-wheels and pinions t^1 t^2, in combination with the helices D S D S, substantially as specified, and to the end of securing automatic feed to the malaxator.

4. The water-pipe Z and variable overflow W, or their equivalent, to obtain the effect specified upon the sand in the malaxator.

5. The conical adjustable sleeves *q q*, in combination with the piece Q′ and conjoint helices D S D S.

6. The combination of the wheels K K, body P Q Q′ and shafts H H, in the manner and to the end set forth.

98,036.— E. R. Colver, New London, Conn. — *Hasp-Lock.*—December 21, 1869.

Claim.—In a hasp-lock, constructed as described, securing the hook and the hasp upon the same pivotal support, substantially as set forth.

98,037.—William S. Colwell, Pittsburgh, Pa. — *Device for Conveying Sawdust from Saws.* — December 21, 1869.

Claim.—1. A conducting, forcing, or ventilating fan or blower, provided with chambers A, B, and C, fan *x*, and clearing-arms *s*, as herein described.

2. The openings *f*, in the ends *f′* of the casing A′, and partitions *l*, arranged, with relation to the fan *x* and discharging aperture *e*, substantially as herein described, and for the purpose set forth.

3. The fan *x*, provided with wings, curved, substantially as herein described, and for the purpose set forth.

4. A fan or blower, provided with a chamber or chambers, separated by means of a perforated partition or partitions from the fan or blower, or apparatus used as the suction and forcing medium, substantially as hereinbefore described and for the purpose set forth.

98,038.—Edward Cotter, Boston, Mass.—*Combination of Piano-Forte and Cabinet.*—December 21, 1869.

Claim.—A "square" piano-forte, in combination with closets G and H, and upright extension-frame N, provided with shelves, when combined and arranged together, forming one piece of furniture, as and for the purpose described.

98,039.— J. P. Crawford, Carmichaels, Pa. — *Curtain-Fixture.*—December 21, 1869.

Claim.—1. The combination of the thumb-nut *e*, shaft *a*, flange *d*, disk *b*, washers *c e*, and socket C, all constructed and operating substantially as and for the purpose described.

2. In combination with the foregoing, the sliding pin *f*, or its equivalent, constructed and operating as described, whereby the disk *b* can be revolved in a given direction only, substantially as described, and for the purpose set forth.

98,040.—Edwin Crawley and Thomas L. Baylies, Richmond, Ind.—*Vise.*—December 21, 1869.

Claim.—1. The combination of boss F, spring *c*, and cam-wheels I I′, with the jaws, screw, and nut of a vise, substantially as set forth.

2. The combination of the cam-wheels I I′, collar *h*, springs *u u′* and *c*, and boss F, with the jaws, screw, and nut of a vise, substantially as described.

3. The combination of the cam-wheels I I′, springs *u u′* and *c*, collar *h*, plate *b*, and boss F, with the screw and movable jaw of a vise, substantially as herein described.

98,041.—William L. Dearth and G. P. Rondebush, Jefferson, Ind.—*Clod-Fender.* — December 21, 1869.

Claim.—1. A fender or plant-shield, constructed, substantially as herein described, of a single bar of rod-iron bent to form an outer frame carrying two interior longitudinal bars, and provided with suitable loops formed by twists in the bar, to receive supporting and adjusting rods or bolts, as herein set forth.

2. The supporting-device A, in combination with a fender constructed as above described, when said device is formed of a single rod, twisted, substantially as herein described.

3. The combination of the fender with its supporting-device by means of the arm *o* and loose bolt *k*, playing in eyes or loops *d f g* in the fender-bars, whereby the fender is made self-adjusting, substantially as herein set forth.

98,042. — John Dennis, Oswego, N. Y. — *Hay and Grain Elevator.*—December 21, 1869.

Claim.—1. The track B C, constructed as described, and car D, in combination with the frame of a barn, when used in connection with my improved hay and grain elevator, patented September 21, 1869, substantially as herein shown and described, and for the purpose set forth.

2. The aprons or slides E, in combination with the frame A, track B C, and car D, substantially as herein shown and described, and for the purpose set forth.

98,043. — James Emerson, Lowell, Mass. — *Dynamometer.*—December 21, 1869.

Claim.—1. The combination of a hydraulic cooling-apparatus, as described, or its equivalent, with the wheel of the dynamometer, to operate with and keep such wheel cool, under circumstances as specified.

2. The combination of a hydraulic cooling-apparatus, as described, or its equivalent, with the friction-band of a dynamometer, to operate therewith, substantially as specified.

3. The combination, as well as the arrangement of the dip trough or channel *t* with the dynamometer-wheel and friction-band, as described.

4. The combination of the auxiliary worm, or its equivalent, with the mechanism for measuring the velocity of the wheel.

5. The combination of the friction-clutch, or its equivalent, with the mechanism for measuring the velocity of the wheel.

6. The combination of the quadrant limb, the index-pendulum, or weighted arm, its pulley and chain, and the main weight, with the lever, combined with, or to be combined with a dynamometer, as set forth.

7. In the dynamometer, the application of the handle-wheel a^2 to its shaft *m*, so that the two shall revolve together, but the wheel be movable endwise on the shaft, as and for the purpose as specified.

98,044.—John Esch, Milwaukee, Wis.—*Dumping-Wagon.*—December 21, 1869.

Claim.—1. A dumping-wagon, consisting of the axle-trees A A, iron I, reach R, iron K, king-bolt Q, bolsters B and S, roller C, body D, E, F, and G, substantially as described.

2. Axle-trees A A, reach R, and irons I and K, and king-bolt Q, substantially as described.

98,045. — George W. Everhart, Louisville, Ky.—*Fire-Place Grate.*—December 21, 1869.

Claim.—1. The arrangement of the grate-basket A, with the wall of the fire-place, to provide the air-space at the ends and the rear, substantially as specified.

2. The arrangement of the recess C and ash-pan, D, in the hearth or bed, substantially as specified.

98,046. — Henry R. Foote, Boston, Mass. — *Vaporizing Petroleum, &c.*—December 21, 1869.

Claim.—1. For the purpose of increasing the heat of a furnace, and improving the combustion of its charge of coal or other fuel when on its grate, the employment of superheated steam in the manner set forth, to vaporize petroleum in a vessel or tank outside of and separate from the furnace, and the introduction of the combined steam and petroleum-vapor from such vessel into the furnace, or into and over the fuel thereof when in combustion therein.

2. The combination as well as the arrangement of

the superheating-steam pipe with the furnace, its boiler and fuel-supporting grate, the petroleum-tank, (separate from and outside of the furnace,) and the system of pipes or means of distributing the combined steam and vapor from the petroleum tank into the furnace, and the fuel when on the grate thereof, the whole being substantially as hereinbefore specified.

3. The arrangement of each of the discharge-pipes *b*, within a groove of the fuel-grate of the furnace, or within the grate and below its fuel-supporting surface, the same being as hereinbefore explained.

98,047.—Charles T. Ford and Edward Trask, Salem, Mass.—*Toy-Gun.*—December 21, 1869; antedated December 7, 1869.

Claim.—The "kerfs" *a* and *b* in the head of the plunger and in the breech of the gun, in combination with the elastic or rubber B, substantially as and for the purpose specified.

98,048.—Harlow French and Robert Meyer, Buffalo, N. Y.—*Shifting Rail for Buggy.*—December 21, 1869.

Claim.—The removable shifting-rail D, provided with the holes E, and having the projections J J and K K, (or slat-irons and props for the top,) all formed or constructed of one piece, substantially as and for the purposes described.

98,049.—Perry G. Gardiner, New York, N. Y.—*Railway-Car Truck.*—December 21, 1869.

Claim.—1. The combination of the springs *b* with the cases and the plungers or spring-heads, constructed and operating as described. Also, particularly, as my invention, the construction of a bolster-buffer or spring, made with a projecting head or plunger, to act upon the plated face of the side-truck frame-piece, in the manner and for the purposes described.

2. The combination of the springs, the bearing-plate or table, and the sockets for supporting and carrying the springs within the checks of the pedestal, constructed, arranged, and operating in the manner and for the purpose described.

98,050.—Perry G. Gardiner, New York, N. Y.—*Car-Springs.*—December 21, 1869.

Claim.—1. The combination of the perforated cellular India-rubber cylinder, surrounded and compressed by the rings, or exterior spiral spring, with the packing of the cells with cotton, or other similar fibrous material, with or without spiral springs in the cells, and with a central spiral in a central cell, through which the bolt passes, constructed, arranged, and operating substantially as described.

2. The combination of rubber cylinder with its equidistant perforation, surrounding a central perforation, packed as aforesaid, without the exterior spiral or rings.

3. The dovetailed lip or rim on the cap, in combination with the rubber cylinder and packing, constructed and operating in the manner and for the purposes described.

98,051.—Melvin J. Gaskill, William Yost, and John Ferris, Pleasant Plain, Ohio.—*Railway-Switch.*—December 21, 1869.

Claim.—The combination of the lugs B, cross-beams C, shaft D, arm E, perpendicular shaft F, screw G, hand-wheel H, and index I, all constructed and operated as and for the purpose described.

98,052.—Thomas L. Gray, Thomasville, Tenn.—*Miller-Trap for Bees.*—December 21, 1869.

Claim.—The combination of inclined entrance-tubes G, apron E, and chamber C, having transparent ceiling and floor, arranged as shown and described.

98,053.—Charles Green, Philadelphia, Pa.—*Stuffing-Box.*—December 21, 1869.

Claim.—1. The use and application of cork and water in a stuffing-box, substantially for the purpose shown and described.

2. A stuffing-box, composed of packing and water-chambers, substantially as shown and described.

3. The packing-chambers *b b'*, with converging tops and bottoms, c^1 c^2, substantially as shown and described.

4. The chambers *b b'*, in combination with the cork packings *d*, button-plates *e*, packing-screws *f*, covers or caps D, jam-nuts *g*, and the gum packings *h*, substantially as and for the purpose shown and described.

5. The packing-chambers *b b'*, water-chamber *c*, packings *d*, supply-pipe E, check-valve F, and the cock G, when combined and arranged as and for the purpose shown and described.

98,054.—Harry S. Griffiths and J. C. Cary, New York, N. Y.—*Suspension-Clip.*—December 21, 1861.

Claim.—The show-card suspension-ring A a^1, constructed and secured to the show-card substantially in the manner herein shown and described, and for the purpose set forth.

98,055.—John Hall, Watertown, Mass.—*Toy-Safe or Bank.*—December 21, 1869; antedated December 7, 1869.

Claim.—1. The combination and arrangement of the platform C with the box A, its cover B, and the means as described, or the equivalent therefor, for raising the cover.

2. The combination of the figure F, or "cashier," with the box and the cover, or the same and the platform, provided with means, as described, for operating such cover in manner as explained.

3. The combination of the pendulum *l*, the spindle *i*, and its arm *k*, with the head and body of the figure or "cashier" F, combined and arranged with the cover and platform applied to the box so as to operate as specified.

98,056.—Amos R. Harper and Charles B. Dake, Hobart, Ind.—*Lounge and Bedstead.*—December 21, 1869.

Claim.—1. The construction of the bedstead, with divided head and foot boards A A, and bottom B B, and movable extension portions *a a* and *b b*, as and for the purposes herein specified.

2. In combination therewith, the construction and arrangement of the mattress with a stiffening-piece, *r*, in one division, D, of the two parts, as and for the purpose herein set forth.

98,057.—Albert S. Hart, San Francisco, Cal.—*Machine for Upsetting Tire.*—December 21, 1869.

Claim.—1. The arrangement, relatively to each other, of the several parts of the above-described machine, substantially as set forth.

2. In combination with the faces D and E, and the projecting heads G, the wedges H, when provided with a flange, *a*, fitting in a groove, whereby the wedges are lifted clear of the faces, when drawn back, so as to leave a clear space to receive the tire, substantially as described.

98,058.—Albert S. Hart, San Francisco, Cal.—*Railway-Car Coupling.*—December 21, 1869.

Claim.—1. The combination and arrangement of the sliding plates G and F, the latter being provided with the spring *d* and lugs *c*, substantially as described.

2. In combination with the plates G and F, the hinged plate I, arm K, and weight J, arranged and operating substantially as set forth.

98,059.—David Hathaway, Troy, N. Y.—*Stove-Grate.*—December 21, 1869.

Claim.—1. The central sliding bars B C, the outer edges of which revolve on the journals D E and F G, the inner edges dropping down into the ash-pit, leaving a wide opening between said bars, constructed, arranged, and operating as set forth.

2. The clasp, Fig. 2, in combination with the rod T and arm S, by which the grate is dumped, and the sliding bars again replaced in working position, substantially as described.

98,060.—John F. Hechtle, Waterbury, Conn.—*Holding-Device for Lamp-Chimneys.*—December 21, 1869.

Claim.—1. The band C, connected to the burner

by means of spring-standards B, and operated upon the chimney, substantially in the manner as described.

2. In combination with the band C, the operating-device, consisting of the racks and pinion D, operated by means of the wheel E, and held in position either by the friction-sleeve *b* or the spring F, when the same is applied to a lamp-burner, in the manner and for the purpose as herein described.

98,061.—Alexander Hendry, Victoria, British Columbia.—*Steam and Caloric Engine.*—December 21, 1869.

Claim.—1. The combination of the furnace, the vertical and horizontal water-jackets, and the cylinders F F^1, when the latter are provided with induction-ports, leading from the combustion-chamber, to which the steam is first conducted and superheated, and exhaust-ports, and when the said jackets provide water and steam spaces around the furnace and cylinders, substantially as specified.

2. The combination, with the water-jacketed cylinders, of the hollow pistons, whether provided with chambers *k* or not, when the said hollow pistons have pipes communicating with the water-space G, and maintaining a circulation in the said pistons, substantially as specified.

3. The combination, with the valves for the induction and exhaust ports, of the hollow stems *a* and water-supply tank, substantially as specified.

4. In combination with the hollow stems *a*, the induction and exhaust valves, and combustion-chambers B, cam-shaft Z, cams Z^1, wipers Z^2, and tappets Z^3, the latter either adjustable or not, when said parts are arranged substantially as herein shown and described, and for the purpose specified.

98,062.—Davis Hurd, Lockport, N. Y.—*Rein-Holder.*—December 21, 1869.

Claim.—The rein-holder, constructed substantially as herein fully described.

98,063. — Abel L. Hurtt, Monticello, Ind.—*Spring-Seat for Wagons.*—December 21, 1869.

Claim.—The double bent vertical rods C, having a free oscillation through the bottom B, in combination with the seat A and springs D, as and for the purpose herein shown and described.

98,064. — Auguste Jacques Hurtu and Victor Joseph Hautin, Paris, France.—*Sewing-Machine.*—December 21, 1869.

Claim.—1. The needle and awl-carriers *f g*, when adapted to be rotated in a horizontal plane, during their vertical movement, by means of the collar *j* and the cam-grooves *x*, working upon the pins *y* in the head *c*, for the purpose of insuring the passage, alternately, of the awl and needle through the leather at the same point, substantially as herein shown and described.

2. The combination of the shuttle 10 with the semi-cylindrical race 8, having the ring 8^1 and opening 8^2, the slotted race 9 upon the spindle 15, the sliding ring 11 carrying the hook 11^1, stem 12, and pinion 14, the oscillating toothed segment 31, the semi-cylindrical spring-jaw 16, and the shuttle-driver 23 and 24, all arranged and operating as described for the purpose specified.

98,065.—Carleton B. Hutchins, Ann Arbor, Mich.—*Roofing-Compound.*—December 21, 1869.

Claim. — The compounding of the before-named ingredients, to make a covering to be used as before named, for roofs and other structures.

98,066.—Robert V. Jenks, Paterson, N. J.—*Dental Impression-Cup.*—December 21, 1869.

Claim.—An improved dental impression-cup, for the lower jaw, made in two parts, substantially in the manner herein shown and described, and for the purpose set forth.

98,067. — A. C. Judson, Grand Rapids, Ohio, assignor to himself and E. O. Judson, same place.—*Pump.*—December 21, 1869.

Claim. — The improved lifting-pump valve, comprising two metal disks, A D, and diaphragms E, &c., all arranged and applied to the pump-rod, as specified.

98,068.—Charles Keniston, Somerville, Mass.—*Leather-Splitting Machine.*—December 21, 1869.

Claim. — A leather-splitting machine, having a stationary knife or cutter, and reciprocating feed-rolls, operating substantially as described.

98,069. — Elhidge S. Kimball, Springfield, Mass.—*Spring-Bed Bottom.*—December 21, 1869.

Claim.—The double-coil lifter-spring *c c′*, formed as at *e e′ f*, in combination with the superincumbent slot-loop *g*, all constructed and arranged in the manner and for the purpose specified.

98,070.—Charles P. Kimball, Portland, Me.—*Whip-Socket.*—December 21, 1869.

Claim. — The improved mode of securing whip-sockets, by means of the ring *c* and its shank *b*, these being made a part of the dasher-frame, as and for the purpose set forth.

98,071. — Abraham L. King, Farmersville, Ohio.—*Flood-Gate.*—December 21, 1869.

Claim.—The combination of gates *a a*, provided with floats *e* and bolts *d*, arranged in the inclined frames *b b′*, and operating in the manner and for the purpose substantially as specified.

98,072.—J. George Knapp, Woodhaven, N. Y., assignor to The Lalance and Grosjean Manufacturing Company, New York City.—*Manufacture of Scoops.*—December 21, 1869.

Claim. — The mode of forming the blank scoop-bowls, by first striking the sheets up into the trough-shaped blanks for two scoops, as herein described, and then separating the blanks, all substantially as specified.

98,073. — D. R. Knight, Akron, Ohio.—*Drive-Well Tubes.*—December 21, 1869.

Claim.—The perforated shield or sheath A, so constructed as to fit closely between the ranges of holes D, as shown in Fig. 4, and to swell outward immediately over said holes, as shown at *e*, for the protection of the holes from dirt, sand, &c., in the manner substantially as described, and for the purpose specified.

98,074. — Abraham Lang, Buffalo, N. Y.—*Device for Preventing Leakage about Chimneys.*—December 21, 1869.

Claim.—The combination of the adjustable box B, with the cement surrounding the chimney, constructed and arranged as described, and for the uses set forth.

98,075. — T. F. Lippencott, Conemaugh, Pa.—*Harvester-Dropper.*—December 21, 1869.

Claim.—1. The combination of the rod E, spring G, adjusting-nut F, eye-plate H, sliding plate I, and spring-catch, J, with the dropper B C, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the jointed rod K and spring L with the dropper B C, substantially as herein shown and described, and for the purpose set forth.

98,076.—Joseph Long, Mechanicsburgh, Pa.—*Car-Coupling.*—December 21, 1869.

Claim.—1. The combination of an open link with a bar, having the surface of its sides corrugated and adapted to spring-jaws, substantially as described.

2. In a car-coupling, the combination of a coupling-bar, having the surface of its sides corrugated, with spring-jaws, having the surface of their faces corrugated in a corresponding manner, substantially as and for the purpose set forth.

98,077. — Charles B. Loveless, Syracuse, N. Y.—*Head-Rest.*—December 21, 1869.

Claim.—The hoop and diaphragm-cushion or rest A with the sustaining-frame B *b b*, provided with a joint, *a*, for folding the parts together, in the manner and for the purpose herein specified.

98,078.—Moses Lunt, Cambridgeport, Mass.—*Burglar-Alarm.*—December 21, 1869.

Claim.—A burglar-alarm, consisting essentially of a frame, B, with its strap *a*, in combination with one

or more springs, *g h*, and tappet-wheels G H, operated by a weight, I, or its equivalent, released by the dropping of a hook, L, from the door-handle, substantially as described.

98,079.—G. MAYER, Sullivan, Ill.—*Folding and Extension Table.*—December 21, 1869.

Claim.—The table formed essentially of the hinged, sectional, detachable top A, the hinged side-rails D D′, arranged for extension by means of the slotted plates N or Q, and pins O or R, and the hinged legs T, all constructed and arranged as herein shown and described, and for the purpose specified.

98,080.—ISRAEL C. MAYO, Gloucester, Mass.—*Lantern.*—December 21, 1869.

Claim.—The combination and arrangement of the lower air-register N and the foraminous chamber S, with the lamp L of the lantern, as set forth, the whole being substantially as explained.

98,081.—HENRY W. MCAULEY, De Soto, Wis.—*Water-Wheel.*—December 21, 1869.

Claim.—The spiral chutes C, fixed in the case of flume F, the short buckets E, and the long buckets A, the latter being curved and widened toward their lower edges, and united with the hub or rim B in a tangential, and the outer rim D in a radial direction, all constructed, arranged, combined, and operating as herein shown and described.

98,082.—EPHRAIM MCDANIEL, Lowell, Mass.—*Let-Off Mechanism for Looms.*—December 21, 1869.

Claim.—The arrangement of the strap or chain *d*, drawing from the fixed end thereof, and in the direction in which the yarn-beam turns, and the arm *o* having an inclined bearing on the yarn-roll, in combination with the lever *g*, weight *h*, and cord *j*, as and for the purpose herein specified.

98,083.—JACOB K. MENTZER, New Holland, Pa.—*Lamp.*—December 21, 1869.

Claim.—A lamp-extinguisher, A B E, affixed by a pivot, *b*, and operated so as to cover the top of the burner *c*, in the manner and for the purpose specified.

98,084.—CARL C. P. MEYER, Yankton, Dakota Territory.—*Surveyors' Mark.*—December 21, 1869.

Claim.—1. As a new article of manufacture, a surveyors' mark, made of burnt clay, porcelain, or similar materials, or coated with the same, and provided with impressed or projecting inscriptions on each end, as herein described.

2. A surveyors' mark, consisting of two heads, A and B, and an intermediate connecting-piece, C, all made of the materials and in the manner herein shown and described.

98,085.—RICHARD R. MILES, Wabash, Ind.—*Tailors' Crayon-Sharpener.*—December 21, 1869.

Claim.—The hollow weight A, with its stopper B, provided with the beveled notch *b*, cutting-faces C C, and opening *c*, all combined and arranged as described, for the purpose set forth.

98,086.—JAMES H. MITCHELL and THOMAS S. MITCHELL, Pittsburgh, Pa.—*Cooking-Stove.*—December 21, 1869.

Claim.—1. In an extension-top stove, the arrangement of horizontal side flues, leading from the chamber *h* to the chamber *h′*, with dampers *i* at either end of such chambers, substantially as and for the purposes set forth.

2. In an extension-top stove, the arrangement of horizontal and diving flues and dampers, such, that whether the dampers be open or closed, the smoke and other products of combustion will enter the chamber *h′* of the extension, at or near its sides, and under the holes *g*, substantially as described.

98,087.—CHARLES MONTAGUE, Boston, Mass., assignor to CYRIL C. CHILD, same place.—*Printing-Press.*—December 21, 1869.

Claim.—1. The extensible vibrating lever C, in combination with a reciprocating type-bed, substantially as described.

2. In combination with the impression-cylinder of a cylinder-press, the gears H and I, connected together by the slot *e* and pin *d*, constructed and operated substantially as described.

3. Raising the cylinder J, to arrest the impression at the will of the operator, by means of the cam-levers *m* and m^1, and the hand-lever m^2, substantially as described.

4. In combination with the cam-levers *m* and m^1 and hand-lever m^2, the cam *q*, for throwing on the impression, substantially as described.

5. In combination with the cylinder J, the pin d^1, set in the end of said cylinder, and the spring-hook c^1, spring *g′*, and arm *b′*, constructed and operated substantially as described, for the purposes specified.

98,088.—CHARLES MONTAGUE, Boston, Mass., assignor to CYRIL C. CHILD, same place.—*Printing-Press.*—December 21, 1869.

Claim.—1. The combination of the cam-levers e^1 and e^2, dog *j′*, bed B, and cylinder L, constructed and operating substantially as described, for the purpose specified.

2. The spring-wedge *k′*, for arresting the action of the dog *j′*, constructed and operating substantially as described, for the purpose specified.

3. In combination, with a reciprocating type-bed, the cam-wedge *n*, pins *m* and *k*, lever *l*, spring *o*, and arm or dog *h*, constructed and operating substantially as described, for the purposes specified.

98,089.—JAMES MONTGOMERY, Sing Sing, N. Y.—*Steam-Generator.*—December 21, 1869; antedated December 17, 1869.

Claim.—1. The combination of the hopper B, chutes or passage C, and generator A, substantially as shown and described.

2. The concavo-convex flue-sheets, substantially as shown and described.

3. The combination of the combustion-chamber D^1, passage D^2, and chamber D^3, substantially as shown and described.

4. The rotating gate D, arranged in the upper portion of the generator, substantially as shown and described.

5. The arrangement of the deflecting or guiding plate A′, with reference to the chamber D^3 and the combustion-chamber D^1, substantially as shown and described.

6. The arrangement of the chamber D^3, with reference to the tubes or flues E and the chamber F, substantially as shown and described.

7. The combination of the reservoir G with the tube-sheet of generator A, substantially as shown and described.

8. A steam-generator, combining in its construction a hopper or reservoir for coals arranged around its upper end, chutes for conducting the coals to the grate, a rotating grate arranged above the tubes, a chamber above and below the tubes, and a reservoir attached to the central portion of the lower tube-sheet for the reception of the sediment, substantially as shown and described.

98,090.—EPHRAIM MYERS, Creagerstown, Md.—*Harvester-Dropper.*—December 21, 1869; antedated December 4, 1869.

Claim.—1. The arrangement, with a harvester, of the grain-board E, hung by journals *b b′*, in the frame *a*, in such a manner that the said grain-board shall have the three distinct and separate motions of falling, raising, and turning, almost at the same time, substantially as and for the purposes herein set forth.

2. In combination with the frame *a* and grain-board E, the collar *c*, placed on the journal *b′*, and having an arm *d*, to the outer end of which the bar *e* is pivoted, all substantially as and for the purposes herein set forth.

3. The bar *e*, constructed as described, and provided at its rear end, where it is pivoted to the arm *d*, with a latch *e′*, and on the under side of its front end, with a hook *g*, to catch on the pins *i i* of the wheel B, substantially as and for the purposes herein set forth.

4. The lever *h*, extending in rear of the harvester, and provided with a hook *m*, substantially as and for the purposes herein set forth.

5. The curved arm *n*, attached to the frame *a*, as described, and provided with one or more hooks *o o*, said arm operating at or near the upper edge of the

dividing-board D, substantially as and for the purposes herein set forth.

6. In combination with the arm *n*, having one or more hooks *o*, the shield *p*, attached to the dividing-board D, substantially as and for the purposes herein set forth.

98,091.—R. L. MYERS, Washington, N. C.—*Cotton-Basket.*—December 21, 1869.

Claim.—A basket, constructed with a large hole, A, in the bottom, as shown and described.

98,092.—ROBERT NEALE, Brooklyn, N. Y.—*Velocipede.*—December 21, 1869; antedated December 4, 1869.

Claim.—The pinions *i i*, guide-flanges *o o*, and disk *s*, in combination with the ratchet-wheels *e*, pawls *r*, and racks *k*, united to the lever *f* by a joint, so that the movement of the lever *f* gives a rotary motion to the shaft or axle *b*, in the manner specified.

98,093.—THOMAS NEWELL, Oskaloosa, Iowa.—*Stove-Pipe Thimble.*—December 21, 1869.

Claim.—The tube A, provided with flange *a* and ring B, in combination with the tube *f*, when the space between the said tubes is filled with some non-conducting substance, and the thimble or flue-supporter is arranged in the manner set forth.

98,094.—JAMES NICKLIN, Cleveland, Ohio.—*Curtain and Shawl Stretcher.*—December 21, 1869.

Claim.—The adjustable sides A, when constructed with slots B, rabbet E, and pins *a*, and screwed to each other in the manner substantially as described, and for the purpose set forth.

98,095.—EDWIN NORTON, Brooklyn, N. Y.—*Railroad-Car Ventilator.*—December 21, 1869.

Claim.—A car-window guard, with projections B thereon, arranged at the side of the window, and held at about a right angle thereto, as shown and described.

98,096.—BENJAMIN NOTT, Albany, N. Y.—*Illuminating-Stove.*—December 21, 1869

Claim.—1. A portable fuel-feeder for stoves, provided with a valve for regulating the supply of fuel, said valve to act as a bottom for the feeder when it is removed for filling.

2. A stove provided with a series of portable feeders, G, whereby various kinds of fuel may be supplied to the combustion-chamber, substantially as shown and described.

3. A stove provided with two or more fire-pots *o*, combustion-chambers, one above another, and separated from each other by means of a crown-sheet provided with a damper, substantially as shown and described.

4. The illuminators or windows K K^2 and L, made of glass, mica, or any transparent translucent substance, and placed at intervals in the back, and sides, and at the front of stove, substantially as shown and described.

5. The fire-pot or chamber B^2, above the crown-sheet E, surrounded by an air-space *c*, to which air is supplied by means of the air-pipe *d*, substantially as and for the purposes described.

6. The door *y*, forming the lower front of the stove, constructed so as to allow of the removal of the fire-pot or furnace B, substantially as set forth.

7. The removable fire-pot or furnace B, substantially as described.

8. The air-chamber C, and pan *x*, for the circulation of the air, substantially as and for the purposes described.

9. The hydrocarbon-feeder *a*, for supplying fuel to the upper combustion-chamber B^2, substantially as shown and described.

10. A reflector, of tin or other suitable material, placed opposite a translucent surface of a stove, as described.

98,097.—JOHN W. ODANIEL, Cloverdale, Ind.—*Hay-Elevator.*—December 21, 1869.

Claim.—1. The sills A, staples K, upright posts B, false post C, cap *s*, revolving beam E, catch-pulley *c*, the braces for upright posts *g*, and beam A, all combined and arranged substantially as specified.

2. The false post C, with metal plate and attachments, constructed as shown.

3. The hay-derrick, consisting of all the parts shown, and constructed, combined, and arranged as specified.

98,098.—THOMAS OLLIS, Netherfield Road South, Liverpool, England.—*Passenger-Register for Vehicles.*—December 21, 1869; patented in England, March 31, 1868.

Claim.—In combination with a series of numbered disks or wheels, arranged side by side on the common axis *b*, the spring *q* on each of said wheels, operated at each revolution thereof by the stationary projection *r*, so as to bring the said spring into engagement with the adjoining left-hand wheel at that point, the whole forming a numbering-register, operating substantially as and for the purpose described.

98,099.—JOSHUA T. OWEN, Philadelphia, Pa.—*Railway-Car Wheel.*—December 21, 1869.

Claim.—As my invention, a car-wheel, which consists of the casting *a*, provided with a central recessed aperture, in combination with the springs *h*, sleeve and shoulders *f c d*, and cap *i*, substantially as set forth.

98,100.—GEORGE PADDINGTON, Springville, Iowa.—*Harrow.*—December 21, 1869.

Claim.—A harrow-tooth, formed of the tube *e*, revolving about a central pin, *h*, as shown and described.

98,101.—FRANCIS L. PALMER, Sr., New York, N. Y.—*Packing and Atomizing Can for Insect-Powder.*—December 21, 1869.

Claim.—1. A packing-can for insect and other powder, provided with the nozzle F, at or near the bottom, and a stopper, C, containing a nozzle, arranged in the same, substantially as specified.

2. The combination with the above of a tube, C, and plug H, arranged as described, for attachment to the nozzle F, as specified.

98,102.—WILLIAM PATTBERGER, Philadelphia, Pa.—*Combined Oyster-Knife and Ice-Pick.*—December 21, 1869.

Claim.—The blade A, hollow handle B containing the bent spring C, held in place by the cork or stopple E, and ice-picker D, arranged substantially as described.

98,103.—Suspended.

98,104.—THOMAS B. PEDDIE, Newark, N. J.—*Trunk.*—December 21, 1869.

Claim.—A trunk, provided with recessed trays C D, and straps F, the said parts being constructed, arranged, and fitted together in the manner described.

98,105.—CHARLES E. PHILLIPS, South Deerfield, Mass.—*Bolt-Clamp.*—December 21, 1869.

Claim.—A tire-bolt clamp, formed of the frame A, branched at the lower, and having a threaded nut in the upper end thereof, combined with a clamping-screw, B, having a hard point at its extremity, the said parts being constructed and operating together in the manner described.

98,106.—JOSIAH POTTS, Milwaukee, Wis.—*Combined Square and Caliper.*—December 21, 1869.

Claim.—1. In combination with a try-square, the surface-gauge E, connected with the square by means of the slide F and thumb-screw G, and arranged and operating substantially as described.

2. The combination of the gauge E and the spirit-level, (as seen at C,) with a try-square, substantially as described.

98,107.—AUG. A. RANDALL, South Braintree, assignor to himself and CHARLES F. WHITCOMB, Boston, Mass.—*Metal Alloy for Harness-Trimmings, &c.*—December 21, 1869.

Claim.—The metal alloy, substantially as set forth.

98,108.—ROYAL B. RICE, Williamsburgh, Mass.—*Carpenters' Plow.*—December 21, 1869.

Claim.—The colter *k*, constructed and arranged, with reference to bit *d*, as herein specified.

98,109.—Levi Richards, Providence, R. I., assignor, by mesne assignments, to himself, Oliver A. Washburn, George S. Perkins, and Frederick S. Roscoe, same place.—*Cut-Nail Machine.*—December 21, 1869.

Claim.—1. The mechanism, substantially as herein described, through the media of which to impart the proper motions to the jaws *b b'* and barrel *c* of a nail-plate feeder, which consists of the following elements or organism in combination: first, a rocking platform, E, upon which the devices to hold the nail-plate are mounted; second, a vibrating rack, F', giving a rotary movement to the barrel *c*; and third, the link G, all performing the functions herein set forth.

2. In combination with the rocking platform E, lever K, and stop-rod N, the griping-jaws *h*, operated by a cam or wedge L, for the purpose of producing a positive intermittent forward movement of the nail-plate to the cutting-machinery, substantially as described.

98,110.—Samuel Rust, Jr., Cincinnati, Ohio.—*Electro-Plating with Brass and other Alloys.*—December 21, 1869.

Claim.—1. The process of electro plating with brass or other alloy, substantially as herein described.

2. In combination with the solution of cyanide of potassium for preparing the depositing-bath, the employment of sulphuret of carbon, substantially as herein described.

3. The process of preparing the depositing-bath by dissolving the brass or other alloy directly by the electro-process in the solution of cyanide of potassium and sulphuret of carbon, substantially as herein described.

4. As new articles of manufacture, metallic or other articles coated with brass or other alloy by the process herein described.

5. The apparatus for heating the depositing-bath, consisting of the vat A and steam-coil B, substantially as herein described.

98,111.—George Selden, Erie, Pa.—*Indicator for Saw-Mill Head-Blocks.*—December 21, 1869.

Claim.—1. The dial A, graduated, so as to indicate the several thicknesses of lumber which may be sawed from a log, with an allowance made for saw-kerf, as described, when used in connection with saw-mill head-blocks.

2. The rim B and index-bar C, in combination with the dial A, when constructed and operated in connection with a saw-mill head block, for the purposes set forth.

3. The shaft Y, pinion E, and frame D, in combination with the plate N, dial A, rim B, and index-bar C, all constructed and operated as and for the purposes set forth.

98,112.—James B. Skinner, Rockford, Ill.—*Cultivator.*—December 21, 1869.

Claim.—1. The combination of caster-wheels with a rigid frame, having vertical movement, substantially as described.

2. The combination of a cultivator-frame having vertical movement, with a lever, where said frame is adjusted vertically by said lever, substantially as and for the purpose described.

3. The combination of a cultivator frame resting upon wheels attached by swinging bars, with levers, when said levers operate to raise or depress the frame, substantially as described.

4. The cultivator-frame described, consisting of the cross-beams B B, shovel-beams C C, and cross-bars *c c*^{1}, when arranged for adjustment, substantially as described, for the purpose set forth.

5. The adjustable standard *f*, in combination with the levers F and wheels A, as and for the purpose described.

6. The levers F, with spring-stop devices described, in combination with the standard *f* and yoke-standard *a'*, substantially as described.

7. The washer G, when constructed as described, and used in connection with the levers F and the frame, as and for the purpose described.

8. The machine described, consisting essentially of the wheels A *a a'*, frame B B C C *c c*^{1}, lifting-devices F *f*, H *h*, standards M, and shovels *m*, the whole being combined and arranged as described, for the purpose set forth.

98,113.—A. L. Smith, Bristol Centre, N. Y.—*Harvester.*—December 21, 1869.

Claim.—The arrangement of the pivoted pawl *w*, wheels *o p*, shaft *n*, and spring *s*, when the said parts are combined with the gavel-discharger E G and aprons D D', in the manner and for the purpose specified.

98,114.—John C. Smith, Brooklyn, N. Y.—*Electro-Magnetic Lock.*—December 21, 1869.

Claim.—1. The combination of the electro-magnet C and the bolt B, substantially as described, for the purposes set forth.

2. The combination of an electro-magnet with a permutation-lock, whereby the bolt of the lock may be thrown in either direction by means of forming or breaking a circuit on certain combinations of figures, letters, numbers, or signs, substantially as described.

3. In combination with a permutation-lock, the circuit-wheels P, and the dial-wheels S, arranged, combined, and operating substantially as and for the purposes described.

4. The weighted lever D, the plate J, and the armature L, in combination with the bolt B, arranged and operating substantially as and for the purposes set forth.

5. The method of communicating the electric current to the circuit-wheels, and thereby completing the circuit, substantially as and for the purposes described.

98,115.—Thomas Smurfit, Davisville, Mich.—*Brick-Machine.*—December 21, 1869.

Claim.—1. The combination of the bar R and rods S with the separator L, cord N, pulley O, lever M, and sweep C, all constructed and arranged to operate as shown and described.

2. The separator L, rope or chain N, pulley O, and lever M, with the press F, rack K, case A, and sweep C, substantially as herein shown and described, for the purpose set forth.

3. The oscillating lever I, connected with the slides G by links H, and having the shaft B as its fulcrum, when extended laterally through a slot in the side of the case A, to allow the supply of clay to the molds to be regulated at the will of the operator, as set forth.

98,116.—Joseph B. Spencer, Norwich, Conn.—*Floor-Clamp.*—December 21, 1869; antedated December 17, 1869.

Claim.—The combination of the lever A, with the pressure-frame *d d'*, gripping-cams *c c*, and connecting-rods *b b*, arranged and operating substantially as described.

98,117.—Aurelius Sperry, Tremont, Ill.—*Churn-Dasher.*—December 21, 1869.

Claim.—The combination, in a horizontal churn-dasher B, of the vertical half-round recesses *c c*, with radiating perforations *e e*, and the cutting-edges *d d*, substantially as and for the purposes hereinbefore described.

98,118.—Amos Stevens, Fitchburgh, Mass., assignor to E. A. Whitney, same place.—*Gas-Generator and Carbureter.*—December 21, 1869.

Claim.—1. The arrangement of four cylinders, of unequal diameters, two connected with the bottom B, and two with the top L, for the purpose above described.

2. The position and form of the oil-tank I, being formed of two cylinders, with the top G, and being placed in the center of the space of water, is completely covered and surrounded by it, substantially as and for the purpose hereinbefore set forth.

3. Passing the gas up through the water, by means of the perforated pipe S, substantially as and for the purpose hereinbefore described and set forth.

98,119.—Alexander W. Stewart, Boston,

Mass.—*Rocking and Easy Chair.*—December 21, 1869.

Claim.—1. A rocking-chair, having rockers jointed to stationary rails by pairs of crossing links, and having stops or projections, *e*, to check the forward and back motions, substantially as shown and described.

2. The combination of the rack *o*, pawl *r*, and cam or crank shaft *p*, constructed and arranged for locking an easy or reclining chair in position, substantially as described.

98,120.—RANSOM E. STRAIT, Galesburgh, Mich.—*Plow.*—December 21, 1869.

Claim.—1. The slotted platform *a*, provided with a curved groove on its upper side, substantially as and for the purposes herein set forth.

2. The box *b* and cap *d*, constructed as described, and made adjustable upon the platform *a*, substantially in the manner and for the purposes herein set forth.

3. The disk E, provided with shaft *c* and rim *e*, substantially as and for the purposes herein set forth.

4. The combination and arrangement of the plow-beam A, landside B, handles C C, braces D D, platform *a*, box *b*, wheel mold-board E, and scraper *f*, all constructed as described, and operating substantially in the manner and for the purposes herein set forth.

98,121.—JOHN TAGGART MELROSE, assignor to himself and WILLIS N. BRINK, Boston, Mass.—*Machine for Scouring, Setting Out, and Finishing Hides or Skins.*—December 21, 1869.

Claim.—1. The combination and arrangement of the rotary series of slickers or tools, mechanism for revolving them, and mechanism moving them endwise, as described, with a platform, and mechanism for imparting to it reciprocating circular movements, as specified.

2. And, in combination therewith, the mechanism, substantially as described, for raising the tools away from and for depressing them toward the platform, as explained.

98,122.—MICHAEL C. TAYLOR, Grass Valley, Cal.—*Variable Cut-Off for Steam-Engines.*—December 21, 1869; antedated December 17, 1869.

Claim.—The arrangement, with reference to the projections B and B′, and the cam C, of the cylinder F, provided with the cam D, and spiral grooves *a*, and the arrangement, within said cylinder, of the follower G, screw H, and sliding stem N, whereby the position of the cam D, relatively to C, may be readily adjusted, substantially as described.

98,123.—ROBERT B. TAYLOR, Pensaukie, Wis.—*Shingle-Packer.*—December 21, 1869.

Claim.—The combination, with a frame A, and elevated central transverse bar D, of the sliding bars E, clamping-bar K, shaft H, pinions, and hand-lever, all substantially as specified.

98,124.—HIRAM THOMPSON, Worcester, Mass., assignor to R. BALL AND COMPANY, same place.—*Cutter-Head.*—December 21, 1869.

Claim.—1. The cutter-frame D, made with the recessed base C, holding-bars I I, and open end or top H, for the reception of the tightening-wedge E, substantially as shown and described.

2. The combination, with the spindle A, provided with the collar or shoulder B, screw-thread *a*, and nut F, of the cutter-frame D, and tightening tubular wedge E, substantially as and for the purposes set forth.

98,125.—WILLIAM J. THOMPSON, Springfield, Mo.—*Water-Wheel.*—December 21, 1869.

Claim.—1. The combination, with a wheel arranged to receive the water as described, of the gates G, pivoted between the rims C and E, and arranged for operation substantially as specified.

2. The combination, with the gates G and rim C, of the movable rim I and pins *a*, when arranged for opening and closing the said gates, substantially as specified.

98,126.—ROBERT WILLIAM THOMSON, Edinburgh, Great Britain.—*Wheel for Steam-Carriage.*—December 21, 1869; patented in England, April 21, 1868.

Claim.—1. The applying of separated segmental metal shoes to rubber tires of road-steamer wheels.

2. The perforating of the shell on which the rubber tire bears, in the manner and for the purpose described.

98,127.—JOHN TRUNICK, Muscatine Iowa.—*Circular-Saw Mill.*—December 21, 1869.

Claim.—The forked guide D, springs H, and screw-guide G, provided with collar and screw-nuts, combined and arranged with the saw C and arbor B, as shown and described, and for the purpose specified.

98,128.—JOHN W. TULL, Zionsville, Ind.—*Clod-Fender.*—December 21, 1869.

Claim.—A clod-fender, consisting of bar D, plate E, hub *j*, provided with arms *g g*, and shield G, all combined and arranged, in combination with the plow, substantially in the manner and for the purpose described.

98,129.—JAMES VARLEY, Hudson, assignor to himself and D. M. SMYTH, Orange, N. J.—*Neck-Tie and Collar Combined.*—December 21, 1869.

Claim.—Uniting one end of the neck-tie to the band of the collar by an eyelet, so that said neck-tie may be turned down for allowing the collar to be buttoned or held up in place by said eyelet, when turned up beneath the collar, as set forth.

98,130.—WILLIAM M. WALTON, Newark, N. J., assignor to JOSEPH J. WALTON, same place.—*Eye for Railway-Car Bell-Rope.*—December 21, 1869.

Claim.—The convoluted frame *a*, supporting the roller *b*, and formed with the tortuous mouth *i*, for the bell-rope to be passed in sidewise, as specified.

98,131.—J. D. WARE, Savannah, Ga.—*Pipe-Coupling.*—December 21, 1869.

Claim.—The pipe-coupling formed by the combination of the projection C on the part B, with the dovetailed and wedged-shape groove of the part A, and with the eccentric-grooved ring E, substantially as herein shown and described, and for the purpose specified.

98,132.—GEORGE L. WATSON, Nesquehoning, Pa.—*Gauge-Cocks.*—December 21, 1869.

Claim.—1. The gauge-cock stem *a*, provided with the stop-cock *b*, and having a projecting seating, *e e*, adapted for use in connection with the cap *c* and stop screw *d*, in the manner and for the purpose specified.

2. The cap *g*, provided with the hollow stop-cock *h*, when said cap is adapted for use upon the gauge-cock stem *a*, fitted with the stop-cock *b*, with or without the seating *e e*, all in the manner and for the purpose specified.

98,133.—JOSEPH W. WATTLES, Canton, Mass.—*Lubricator for the Bolsters of Vertical Shafts.*—December 21, 1869.

Claim.—1. The arrangement of the conduit D, relatively to the bolster, the whirl, and the step of the spindle, the bolster being above and the step being below the whirl, the whole being substantially in manner as specified.

2. The bolster, as made with the oil-intercepting chamber *a*, and the hole *b* leading laterally out of the same, and with the spindle-bearing extended both above and below the intercepting-chamber, the whole being as and for the purpose specified.

98,134.—E. V. WINGARD, Williamsport, Pa.—*Brick-Kiln, &c.*—December 21, 1869.

Claim.—The flues C C, when extending through the interior of the kiln, and provided with the openings *a b j*, for controlling and properly distributing the heat, substantially as shown and described.

98,135.—PHILIP WISDOM, Brooklyn, N. Y., assignor to JOHN SICKLES, trustee, and JOHN SICKLES, trustee, assignor to JOHN WISDOM and JOHN H. WILCOX, New York City.—*Machine for Spinning and Curling Hair.*—December 21, 1869.

Claim.—The combination of the twisted spindle A, rollers *a b*, curling-tube B, and reel C, with the devices described for rotating it, all arranged and severally operating substantially as and for the purposes set forth.

98,136.—DAVID C. WOODS, Waxahatchie, Tex —*Seed-Planter.*—December 21, 1869.

Claim. — 1. The combination of the wheel F, which has the stop *c*, with the toothed disk K and seed-dropper I, all arranged, substantially as described, to automatically drop certain quantities of seed at certain intervals, as specified.

2. The improved seed-planter formed by the combination, with the beam A, of the wheel E, shovel C, hopper G, seed-drooper I, toothed disk K, wheel F, marker M, shovels D, and handles B, when said parts are arranged as shown and described.

98,137.—GEORGE WORKMAN, Rochester, N. Y. —*Harrow.*—December 21, 1869.

Claim. — The arrangement of the hinges B with flanges *f f* and hooks *g g*, the draught-bar D with chains *h h* and attachments *k k l m*, and the teeth-attachments *b b*, the whole operating in the manner and for the purpose specified.

98,138.—EDMUND YARDLEY, Pittsburgh, Pa.—*Railway-Switch.*—December 21, 1869.

Claim.— 1. The arrangement of a switch-bridle, between the movable ends of the shifting-rails of a railroad-switch and the chair or chairs which support such ends, substantially as above described.

2. A switch-chair, having a raised bearing-surface for the stationary rail or rails, and an offset, groove, or depression, in combination with a bridle, interposed between the chair and the ends of the shifting-rails, substantially as above described.

3. The bolts *s*, passing through the webs of the rails *a*, and along notches in the lips *c*, substantially as described.

98,139.—CHARLES ADAMS, Philadelphia, Pa., assignor to himself and CHARLES SHARPE, same place. —*Apparatus for the Manufacture of Iron and Steel.* —December 21, 1869.

Claim. — A converter, consisting of a pipe or chamber, depressed, at or near the middle, substantially as described, and communicating, at one end, with any suitable apparatus for generating carbonic oxide, and having, at its opposite or outlet end a weighted valve, or its equivalent, as set forth.

98,140.—WILLIAM BARRY and GEORGE FRANKLIN, Philadelphia, Pa.— *Railway-Car Spring.* — December 21, 1869.

Claim.—1. A spring, composed of the two bars A and A′, bent and adapted to each other, substantially as set forth.

2. A spring, composed of the said bars A and A′, and intermediate bars B and B′, with or without additional bars *a a′*.

3. The combination of a series of the said springs with a box, D, and sliding plate E.

4. The rounded rib *m′* on the box, and the similar rib *m* on the plate E, the said ribs being adapted to the cavities *y y* of the springs, as described.

5. The intermediate loose rod *n*, adapted to the cavities *y y* of the two sets of springs, as specified.

98,141.—BURROUGHS BEACH, Meriden, assignor to himself and EDWIN I. PYLE, Bridgeport, Conn.— *Folding Chair.*—December 21, 1869.

Claim.—1. In combination with a folding chair, substantially as described, the rocker G, pivoted and swiveled to the leg B, in the manner herein set forth.

2. In combination with the above, the conical key I and pin *f*, to secure the rocker, as set forth.

3. In combination with a folding chair, substantially such as described, the detachable rest, formed by the bars L L, in the manner described.

98,142. — ANN K. BENSON, Allegheny City, Pa. —*Hair-Restorative.*—December 21, 1869.

Claim.—The manufacture or preparation of a compound, which I term Benson's hair-restorative, of the oil and essences herein described, mixed in and about the proportions set forth.

98,143.—ALPHEUS BIGONY, Winchester, Ohio. —*Machine for Laying out Sash.*—December 21, 1869.

Claim.—1. The upper and lower sets of scribing-tools *f*, in combination with a horizontal carriage, H, located and made to slide between said marking-tools, in the manner and for the purpose described.

2. The combination of the fixed and adjustable horizontal supporting bars B C, the adjustable blocks G, the adjusting-screws E, and supporting-springs D, with a horizontal-sliding carriage, H, having adjustable transverse bars J, the whole constructed and arranged to operate as described.

98,144.—JOHN H. BUCKMAN, Cincinnati, Ohio, assignor to himself and PETER W. REINSHAGEN, same place.—*Device for Securing Pulleys to Shafts.*— December 21, 1869.

Claim.—The tapering hub A, provided with slots *a*, in combination with the tightening-rings B B′, operating in the manner and for the purpose specified.

98,145. — ALPHONZO BUTTON, Dunkirk, N. Y., assignor to MATSON O. WILBER, for one-half of said patent.—*Pocket-Book.*—December 21, 1869.

Claim.—The combination of the slotted cylindrical case A, spool E, and note and paper-holding sheet F, substantially as specified.

98,146. — JAMES P. CHAMBERLIN, Abington, Mass.—*Spring-Bed Bottom.*—December 21, 1869.

Claim.—The springs *a*, with their arms *b*, in combination with the slats C, when constructed to operate substantially as and for the purpose described.

98,147.—JOHN CHESNUT, Jr., Hustontown, Pa. —*Safety Harness-Buckle.*—December 21, 1869.

Claim.—1. The combination of a loose, detachable pin with the frame of a trace-buckle, to form an intermediate cross-bar between the ends of the buckle, substantially as and for the purpose herein set forth.

2. The combination of a detachable supporting-plate, G, with the detachable center bar or pin of a trace-buckle, and with the strap or loop supporting the shaft, all substantially as herein described.

3. The detachable keeper-plate H, in combination with the detachable supporting-plate G and detachable center bar B of a harness trace-buckle, substantially as herein set forth.

98,148. — A. P. CINDEL and MARTIN VOGEL, Jacksonville, Ill. — *Washing-Machine.* — December 21, 1869.

Claim.—The washing-machine, herein described, having fixed wash-boards C C, separate from each other, the dasher F, ledge B, bevel-wheels *g* and *k′*, cross-bar H, and cover L, constructed and arranged to operate substantially as specified.

98,149.—BENJAMIN R. COLE, Buffalo, N. Y.— *Operating-Device for Water-Closets.*—December 21, 1869.

Claim.—The combination of the lever C C′, and pan and valve of a water-closet actuated thereby, with foot-board, E, hinged in front, and the adjustable connecting-rod F, when arranged and operating substantially as and for the purpose hereinbefore set forth.

98,150.—E. F. COOPER, Mount Gilead, Ohio.— *Turbine Water-Wheel.*—December 21, 1869.

Claim.—The reversible turbine-wheel, herein described, having reversible casings A A′, with flanches *h h* and gate B, and wheel D, having grooved cylinder-heads D′ D′ and separate reversible buckets *d′ d′*, cast on separate iron staves *d d*, all constructed and arranged to operate substantially as specified.

98,151.—C. O. CROSBY, New Haven, Conn.— *Sewing-Machine for Sewing Boots and Shoes.*—December 21, 1869.

Claim.—1. The combination of the needle-bar C and the sliding bar H′, upon which is formed an incline, and the adjusting-screw C^4, to move the needle, so as to feed the work, substantially as set forth.

2. In combination with the subject-matter of the

first clause of claim, the sewing-needle and awl D, substantially as set forth.

3. The combination, substantially as described, of the vibrating arms K and I^2, with the spring-spindle for supporting and moving the last.

4. In combination with the last-supporting spindle I^1, the wheel N, the ring *n*, and the wedge-shape bar N^1, so as to lock the spindle and prevent its turning, substantially as described.

5. In combination with the arm I^2, the segment L, with the wedge I^1, arranged for clamping and holding the said arm, substantially as set forth.

6. In combination with the arm I^2 and the segment L, the plate L^4, constructed and adjustable so as to permit or prevent, as the case may be, the lateral movement of the arm I^2, substantially as set forth.

7. In combination with the arm I^2, substantially as described, the swinging arm P, so as to hold the spindle I^1, to adjust the shoe for stitching, as set forth.

98,152. — THEOPHILUS CRUTCHER, Edgefield, Tenn.—*Churn-Dasher.*—December 21, 1869.

Claim.—The combination of the conical dasher *h*, when provided with perforations, as shown, cross-bars *k k k k*, the tube *i*, hollow shaft *b*, valve-seat *c*, and valve *g*, as herein set forth.

98,153.—JACOB N. DECK, Buffalo, N. Y., assignor to himself, B. R. COLE, and G. FRANCIS DECK, same place. — *Water-Closet Valve.*—December 21, 1869.

Claim.—The rubber or other elastic ball A, arranged with the seat *h* and bearing *i*, so as to be pressed from the valve-seat by a thrust, substantially as set forth.

98,154.—CHARLES R. DOANE, Brooklyn, E. D., N. Y.—*Card-Holder.*—December 21, 1869.

Claim.—A card-holder, in which the front and rear sides meet at their lower edges, and from thence extend upward and apart at any suitable angle, substantially as and for the purpose specified.

98,155.—JOHN OTTO DONNER, Jersey City, N. J.—*Process of Treating Wines, Beer, and Liquors.*—December 21, 1869.

Claim. —The treatment of wines, beers, or liquors with salts of magnesia, substantially as and for the purpose herein set forth.

98,156. — THOMAS E. EVANS, WILLIAM R. THOMAS, and JOSHUA HUNT, Catasauqua, Pa. — *Valve-Gear.*—December 21, 1869.

Claim.—In combination with a valve-gear, the inclined planes J J, arranged and operating substantially as and for the purposes herein shown and described.

98,157.— D. FITZPATRICK and JOHN KNULL, Saint Paris, Ohio.—*Corn-Planter.* — December 21, 1869.

Claim.—1. The combination of the drag-bars *d* and *e*, having their standards with shovels *m* and *n* attached, and arranged as described.

2. The arrangement of the rock-shaft *r*, provided with treadle *s* and lever *t'*, the slides D, cross-bar P, spring *q*, and link *t*, substantially as and for the purpose set forth.

3. The arrangement of the rock-shaft *v*, with its arms *w e'*, rods *f*, levers *g'*, and hand-lever *x*, for operating the drag-bars *d e*, substantially as described.

98,158.—F. P. FURNALD, Jr., R. W. CHAMPION, and ISAAC N. DAVIES, New York, N. Y.—*Paint-Brush.*—December 21, 1869.

Claim.—The paper cylinder F, in combination with a ferrule, composed of wire covered or wound with thread or twine, as specified.

98,159.—JOHN W. GOODALL, Eldred, Pa.—*Grub-Hook.*—December 21, 1869.

Claim.—1. The herein-described implement, consisting of a short, strong, iron beam A, provided with the curved prong B, and the handles I rigidly attached, substantially as described.

2. In combination with the above, the adjustable side-prongs C and detachable shares D, all constructed and arranged to operate substantially as described.

98,160.—BENJAMIN F. GOTT, Brooklyn, E. D., N. Y.—*Wash-Board.*—December 21, 1869.

Claim.—A wash-board, formed with rubbing-surfaces, of unequal corrugations, when made of tinned plates, without a supporting-panel, substantially as set forth.

98,161.—GEORGE H. GREGORY, North Wilton, Conn.—*Churn.*—December 21, 1869.

Claim. — The arrangement of the horizontally-working churn A, containing three vertical dashers B C D, to be actuated by and in combination with the spring-power machinery, or its equivalent, in the manner and for the purpose substantially as herein described.

98,162.—ANDREW HARRIS, Philadelphia, Pa.—*Hydro-Pneumatic Governor.*—December 21, 1869.

Claim.—A vessel, containing two compartments, communicating with each other, substantially as described, and partly filled with water or other suitable fluid, in combination with an exhausting or blowing apparatus, which is driven by the engine, and by which, in conjunction with an inlet or outlet cock or tube, the air is caused to so act on the water that the latter becomes a medium for operating the throttle-valve of the engine.

98,163.—CHARLES FREDERICK HILL, New York, N. Y.—*Musical Instrument.*—December 21, 1869.

Claim.—1. The arrangement of two or more slides in one and the same guide-way, in combination with the channels *b* b^1 b^2, forming the communication between the wind-chests and the reeds or pipes, substantially as shown and described.

2. The arrangement of two or more sets of ports, consisting of two or more openings in each slide, to control the admission of the wind to two or more reeds to each note, each separately or in combination, as set forth.

3. The arrangement of levers E in the wind-chest, to open communication with reeds, arranged in two or more lines or rows to a register, in combination with stops G, substantially as set forth.

4. The arrangement of the valves F, so constructed that they open by suction and gravity, as set forth.

98,164.—J. S. HUSTON, Mechanicsburgh, Pa.—*Securing the Lash in Fly-Nets.*—December 21, 1869.

Claim.—The manner of securing the ribs of fly-nets together, by passing the lash singly through the hole in the rib, thence entirely around the rib, from right to left, or *vice versa*, and interlocking the lash, at the point of juncture, immediately opposite the hole in the rib, as shown and described, and for the purpose specified.

98,165. — PIERRE JACQUES, Paris, France.—*Process of Purifying and Decoloring Albumen from Blood.*—December 14, 1869.

Claim.—The process for purifying and decoloring blood-albumen, by the combined action of the four physical agents, heat, light, water, and air, as herein described.

98,166. — WILLIAM C. JONES, Quincy, Ill.—*Wire-Handle Former.*—December 21, 1869.

Claim. — The machine, herein shown and described, for forming wire handles, having plate A, chisel C, lever E, sliding blocks G and K, hinged gauge H, and disks Y, constructed and arranged to operate substantially as specified.

98,167.—CHENEY KILBURN and ARTEMAS KILBURN, Philadelphia, Pa., assignors to HALE, GOODMAN AND COMPANY, same place.—*Mechanism for Raising and Lowering Boards.*—December 21, 1869.

Claim. — 1. The vertically-traversing endless chains H and H', with their projections *e e*, in combination with the strips L L', and boards K, or their equivalents.

2. In combination with the above, the shaft E, with its worm-wheel *a*, and the driving-shaft *b*, with its worm.

3. The inclined planes *n*, extending from the tops of the strips L and L′ to the floor, as described.

4. The curved projections *h h* above the tops of the said strips.

5. The arms *p p*, arranged, in respect to the strips L and L′ and endless chains, as set forth.

6. The arms *q q*, arranged, in respect to the said strips and chains, as specified.

98,168.—Linn Laurie, Washington, D. C.—*Egg-Beater.*—December 21, 1869.

Claim.—1. The frame, composed of the handle H, the rods *f f*, and braces *b b*, in combination with the lever L, with its rods *c r*, pin *i*, and cord C, to produce the double or compound motion described, when constructed and arranged substantially as described.

2. The described lever, with its parts, including the cord C, and the described frame, when in combination with the described shaft S, and its parts, when constructed and arranged substantially as described.

98,169.—Edwin S. Lenox, New Brighton, N. Y.—*Wire Bale-Fastening.*—December 21, 1869.

Claim.—A wire bale-band, formed at one end into the loop B, with its recess *b*, and at the other with the cross-head C, when said parts are constructed, combined, and operated as and for the purpose herein set forth.

98,170.—Calvin A. Leonard, Rochester, N. Y.—*Insole for Boots and Shoes.*—December 21, 1869.

Claim.—The metallic stiffener *a*, of removable insoles, when its attachment thereto is effected by means of projecting points at the ends, as shown and described.

98,171.—Hippolite Levasseur, Brooklyn, N. Y.—*Globe-Valve.*—December 21, 1869.

Claim.—1. The construction of the valve-stem G, with a collar, *n*, fitting into a corresponding seat, in combination with the gland J, acting upon the top of said collar *n*, operating together in the manner and for the purpose described.

2. The arrangement and use of the pin N, operated through its collar *w*, or its equivalent, by a screw-thread, cut upon a projecting tube fast to the stationary gland J, and passing through the handle or wheel H, which operates the valve, the whole being combined and operating in the manner and for the purpose specified.

3. The friction-clutch *v*, in the nut or collar *w*, acted upon by a spring or set-screw, and operating in the manner and for the purpose set forth.

98,172.—George A. Lloyd, San Francisco, Cal., assignor to himself and Anthony Rosenfield.—*Lubricating-Sleeve.*—December 21, 1869.

Claim.—1. Dividing the sleeve longitudinally, and holding it in position, when in operation, by means of lugs and recesses *f f*, substantially as described.

2. The end recesses *d d*, and spaces *f′ f′*, in a lubricating-sleeve, as set forth.

98,173.—George Washington Lord, Philadelphia, Pa.—*Composition for Preventing Incrustation in Steam-Boilers.*—December 21, 1869.

Claim.— A scale-detaching or anti-incrustation powder, when composed and used in the manner and for the purpose above set forth and described.

98,174.—Charles B. Loveless, Syracuse, N. Y.—*Gas-Generator and Burner.* — December 21, 1869.

Claim.—The combination of the pipes D and E with generator F, supply-pipe A, and burner *b b*, and chimney G, substantially as described, and operating as and for the purposes set forth.

98,175.—Orozi Lugo, Baltimore, Md.—*Extinguishing Fire in Buildings.*—December 21, 1869.

Claim.—The arrangement of pipes and outlets to the same, substantially as herein set forth, in connection with the application of steam from a steam fire-engine or portable steam-boiler.

98,176.—John Matthews, Jr., New York, N. Y.—*Apparatus for Dispensing Soda-Water Sirups.*—December 21, 1869.

Claim.—1. The arrangement, in a soda-water apparatus, of the cooler B, the cooling-worm C, and the sirup-cans or vessels, entirely below the cooler, and within the box or case containing the latter, substantially as specified.

2. The arrangement of the door F, in the case A, of a soda-water apparatus, with relation to the sirup-cans or vessels E, and hung to open inward over the filling-ends of said cans, as shown and described.

3. The sirup-cans or vessels, constructed of a boat or trough-like form, having openings at their tops in the rear, but of spout-shape in front, and hung so as to rock or tilt on suitable pressure being applied, with freedom to adjust themselves on such pressure being removed, essentially as herein set forth.

4. The combination, with the tilting sirup-cans or vessels, of tumbler-guards J, connected with or carried by said cans in front, substantially as and for the purpose or purposes herein set forth.

5. The combination of the stationary tumbler-gnide I with the tumbler-guards J, for adjusting and holding the tumblers in place beneath the delivery-ends of the sirup-cans or vessels, essentially as specified.

98,177.—John Matthews, Jr., New York, N. Y.—*Sirup-Dispensing Apparatus.*—December 21, 1869.

Claim.—The combination of the trap C, tube or vessel A, and flexible bulb or piston-like device B, all arranged for operation as shown and described.

98,178.—John Matthews, Jr., New York, N. Y.—*Sirup-Reservoir for Soda-Fountains.*—December 21, 1869.

Claim.—1. The combination, with the dispensing-vessel or reservoir, provided with a measuring-nozzle, for action, as described, of a movable or adjustable trap, operating, when closed, to seal said nozzle, and serving, when open, to effect discharge of liquid lying between the trap and orifice in the bottom of the vessel, and to admit air to the latter, substantially as specified.

2. The trap D, hinged or pivoted, as described, and provided with a weighted extension or lever, *f*, in rear of its fulcrum, in combination with the vessel A and nozzle B thereto, essentially as and for the purposes herein set forth.

3. The combination, with the dispensing-vessel or reservoir, and its measuring-nozzle, and trap thereto, of a device operating to constrict the area of the discharging-orifice in the vessel, when the latter stands in working position, but allowing of said orifice being fully or freely opened, when the vessel is inverted for filling, substantially as specified.

4. The combination of the tumbler guide-rods *g g* with the trap D, constructed to operate essentially as herein set forth.

98,179. — Charles P. McGimsey, Memphis, Tenn.—*Soap.*—December 21, 1869.

Claim.—The herein-described compound of Colgate's soap and extracts, as described.

98,180. — Daniel T. Munger, Waterbury, Conn., assignor to himself and Rufus E. Hitchcock, same place. — *Method of Heading Screws.*—December 21, 1869.

Claim.—The method herein described of making blanks for screws, rivets, and like articles of manufacture.

98,181. — Matthew Newlove, Burlington, Iowa, assignor to himself and Samuel Gilbert, same place.—*Brick-Mold.*—December 21, 1869.

Claim.—1. The arrangement of the levers H H, having round knobs, L L, on their handles, independently, and so as to operate from both ends of the mold, in the manner set forth.

2. The combination of levers H, followers C, subdivided mold-box A, frame E D, and slotted plates F F, all constructed and arranged as described.

98,182.—Theodore Neys, Menomonee, Wis., assignor to himself and Alexis I. Brunell.—*Harvester-Cutter.*—December 21, 1869.

Claim.—The guards A, made in an oblique form,

having their lateral surfaces continuous, and provided with tongues F on top and bottom, by which they are connected to the bar G, and with a recess, E, between their forward parts, and the tongues, through which passes a shaft, C, having a series of circular vertically-placed knives, B, which operate under the ribs I, and through slots in guards, all substantially as specified.

98,183.—A. R. NIXON, Memphis, Tenn.—*Cotton-Seed-Planter.*—December 21, 1869.

Claim.—1. The slotted hopper G, constructed as described, and provided with tube H, and slotted side-plates *d d*, substantially as and for the purposes herein set forth.

2. In combination with the hopper G and tube H, the toothed wheel I, mounted upon the axle B, substantially as and for the purposes herein set forth.

3. The arrangement of the shaft *J*, teeth or arms *f f*, lever K, pin *h*, and spring *i*, all constructed and operating substantially as and for the purposes herein set forth.

4. The combination and arrangement of the frame A, axle B, wheels D D, collar *b*, lever E, seat F, hopper G, tube H, wheel I, agitator *J f*, and the device for operating the same, shaft L, lever M, furrow-plow N, and covering-plow P, all substantially as herein set forth.

98,184.—WILLIAM J. OSBOURNE, New York, N. Y., assignor to himself, GIDEON B. MASSEY, and WILLIAM F. SHAFFER, same place.—*Hose-Coupling.*—December 21, 1869.

Claim.—1. The arrangement of the ring H with inclined planes, upon the tube A, as set forth, so that the said ring moves independent of the hose, and *vice versa*, all as shown and described.

2. The combination of tubes A B, with ring H, hooks E E, packing G, and collar D, all constructed and arranged as specified.

98,185.—CHRISTOPHER OSTRANDER, Lodi, Wis.—*Farm-Gate.*—December 21, 1869.

Claim.—The gate C, hung on the two rollers *c c*, mounted in a swiveled case, B, and provided with roller E and pivoted latch F, to engage in post A′, all constructed and arranged as herein described.

98,186.—S. N. PARK, Bloomsbury, N. J.—*Railway-Rail Chair.*—December 21, 1869.

Claim.—The combination of the chair A, projections *a a*, rails B B, with notches *b b*, false bottom C, and key D, all constructed and arranged substantially as and for the purposes herein set forth.

98,187.—MORGAN PAYNE, Cardington, Ohio.—*Nut Lock.*—December 21, 1869.

Claim.—The combination of the nut D, washer G, with its projections, and spring-key H, all constructed as shown and described, and for the purposes set forth.

98,188.—DAVID PICKMAN, Lowell, Mass., assignor to himself and STUART BISHOP, same place.—*Shuttle-Check for Looms.*—December 21, 1869.

Claim.—The arrangement, within the shuttle-box, and on opposite sides thereof, of the spring *f* and adjustable block *e*, when the said parts are constructed and operate to check the movement of the shuttle, as described.

98,189.—C. PURDY, Bedford, Ohio.—*Saw-Guide.*—December 21, 1869.

Claim.—1. The adjustable guide-wheels C C, for the sides of saw, with the conical bearings D D, made substantially in the manner and for the purposes specified.

2. The eccentric bearing-boxes E E, provided with screws or other equivalents, for adjusting the conical bearings D D, and provided with self-oiling devices, all constructed and arranged substantially as and for the purpose specified.

3. The back-guide wheel H, arranged with adjustable slide I, held in position with screw *h*, and provided with groove *i*, substantially in the manner and for the purposes specified.

98,190.—FITCH RAYMOND and AUGUST MILLER, Cleveland, Ohio.—*Grain-Bin.*—December 21, 1869.

Claim.—1. A grain-bin, or a series of bins, constructed with a revolving perforated hollow shaft, E, radial arms I′, and air-vents *a*, all arranged and combined to operate in combination with an air-pump or blower, in the manner substantially as described, and for the purpose specified.

2. A grain-bin or bins, constructed with branching perforated distributing-tubes J L L, when provided with rose-heads M M K, and arranged, in relation to and in combination with an air-pump or blower, in the manner substantially as described, and for the purpose set forth.

98,191.—IRA REYNOLDS, Dayton, Ohio, assignor to REYNOLDS AND REYNOLDS, same place.—*Book-binding.*—December 21, 1869.

Claim.—1. A book-cover, the back of which is formed of metal, or equivalent material, forming an integral part thereof, and supporting the two leaves of the cover, when such back is so shaped as to span and grasp the back of a book, combined with a removable book, correspondingly so shaped, with lips or ribs upon its back, as to be sprung or slidden into and held firmly by such cover, substantially as shown and described.

2. A cover and book, substantially such as specified in the above claim, when each has a longitudinal groove or indentation, as described, and shown in Fig. 3, so that the two, when united, form a tube or chamber to receive a pencil or similar article.

3. In combination with a book removable from its cover, and constructed as described, the indorsement upon its back, arranged with blank spaces, substantially as and for the purpose set forth.

98,192.—WILLIAM H. RUDOLPH, Saint Louis, Mo.—*Vapor-Burner.*—December 21, 1869.

Claim.—1. The head-piece B, combined with the cap-plate C and the receiving-plate B′, when the latter has cups D situate both sides of the discharge-orifice *b′* of the head-piece, substantially as set forth.

2. The head piece B, screw *c*, and orifice *b′*, when the screw *c* is placed in line with the orifice *b′*, substantially as set forth.

98,193.—C. B. RUTH, Doylestown, Pa.—*Corn-Planter.*—December 21, 1869; antedated December 11, 1869.

Claim.—1. The seed-box F, divided into compartments for both compost and seed, in combination with the shaft I, wheels K, H, and D, axle C, and drums G, when used substantially as set forth.

2. The funnels L, boots M, levers P and N, hook S, and chain or cord R, when combined in the manner and for the purpose set forth.

3. Box X, wheels C and D, lever V, funnels L, roller W, shaft I, drums G, levers P and N, wheels K and H, and hook S, when all are arranged and combined to form a corn-dropper, substantially as described.

98,194.—CHARLES SAXTON, Fredonia, Ohio.—*Gate.*—December 21, 1869.

Claim.—The arrangement, upon a gate, of the beveled parallel bars D D, cross-bar B, brace G, and beveled and flanged rollers C^1 C^2, substantially as shown and described.

98,195.—SAMUEL SCOTT, Yane, Ohio.—*Farm-Gate.*—December 21, 1869.

Claim.—1. The combination of the lever D, provided with its handle *a* and arm *c*, with the link *i* and staple *e*, as set forth.

2. The gate A, provided with the projections on its front end, resting on catches *j*, when the upper hinge is made adjustable, substantially as described.

98,196.—GEORGE SEEGER and CHARLES H. SHAFFER, Clark's Hill, Ind.—*Post-Auger.*—December 21, 1869; antedated December 11, 1869.

Claim.—1. In combination with the barrow B, the pivoted legs *l′* and curved rack *m*, as and for the purpose described.

2. The conical cleaner *i*, provided with the wings *i′ i′*, as and for the purpose described.

3. The pivoted arm *e*, provided with the pin *e′*, in combination with the groove *d‴* of the shaft *d*, as and for the purpose specified.

98,197.—Reuben Shaler, Madison, Conn.—*Paving-Block.*—December 21, 1869.

Claim.—The paving-blocks herein described, consisting of two thicknesses of wood, combined as described, the upper surface indented or perforated, and coated, substantially in the manner herein set forth.

98,198.—Thomas Shaw, Philadelphia, Pa.—*Cartridge-Feeder for Gun-Hammer.*—December 21, 1869.

Claim.—The combination of the cartridge-tube *f* with the cylinder *d*, plunger *o*, lever *i*, and cam *g*, operated in the manner substantially as and for the purpose set forth.

98,199.—John P. Sherwood, Fort Edward, N. Y., assignor to himself and Benjamin S. Burnham, same place.—*Wash-Boiler.*—December 21, 1869.

Claim.—The two end spouts, D, having their inwardly-projecting upper parts, *d'*, constructed in the manner herein shown and described, in combination with the corrugated and perforated false bottom B, substantially as and for the purpose set forth.

98,200.—David Shive, Philadelphia, Pa.—*Book-binding.*—December 21, 1869.

Claim.—The flaps D, fitting into the recesses *a*, in the backs of the book, and retained therein by the removable fastenings E, substantially as and for the purpose described.

98,201.—Oliver Slagle, London, assignor to himself and Thomas H. Foulds, Cincinnati, Ohio.—*Railroad-Car Ventilator.*—December 21, 1869

Claim.—1. The wind-wheel E, located upon the outside of the car-roof, driven by an outside current of air, produced by the locomotion of the car, coming in contact with the same, in combination with the horizontal fan B, located upon a suitable shaft, geared to the vertical shaft of the wind-wheel E, when said blower is located within the dome of the car, substantially as and for the purpose herein specified and shown.

2. In combination with the wind-wheel E and blower B, the adjustable shield F and plate G, constructed and arranged substantially as described, and for the purpose stated.

98,202.—S. T. Spaulding, North Cohocton, N. Y.—*Cultivator.*—December 21, 1869.

Claim.—The combination, arrangement, and construction of the central beam *a*, cross-bars *b b*, and side beams *c c*, the doubly-adjustable clevis, and the adjustable single and double teeth *d d g*, the whole operating together as described.

98,203.—Francis Stein and Henry Haering, New York, N. Y.—*Elevator.*—December 21, 1869.

Claim.—1. The combination of the posts A, toothed racks B, platform C, shaft D, pinions E, cases or frames F, and operating-gears H I K, and hand-cranks, all substantially as specified.

2. The arrangement, with the wheel K and disks N M, of the lever Q, friction-strap R, pawl O, stud-pin P, pawl T, and ratchet U, substantially as specified.

3. The arrangement, with the posts A and brackets X, of the cases or frames F, for sliding past the said brackets, substantially as specified.

98,204.—Edward Stodtmeister, Cape Girardeau, Mo.—*Tire-Cooler.*—December 21, 1869.

Claim.—1. The frame A, supported by standards D upon rollers *d*, and secured by braces K, when combined with the spindle B, step-tube C, the inclined rails E, and their rest-concavities H, and arranged within the tub partially filled with water, substantially as set forth.

2. The step tube C, arranged with its upper edge to project above the tub-bottom, and its lower end extending below said bottom, substantially as set forth.

98,205.—John W. Sutton, Portland, Oregon.—*Dynanometers.*—December 21, 1869.

Claim.—1. The long end of the hub of B, with feather *a'*, the sliding grooved collar E, the curved springs O O, the cords P P P, sheaves Y Y Y *b b b*, and screws X X X, on the ends of P P P, with their adjusting-nuts, substantially as set forth.

2. The half yoke F, index-rod G, hanging yoke N, scale *e*, in combination with the sliding collar F, and long end of hub of B, substantially as set forth.

3. The frame *a*, rollers L K, friction-wheel M, and pencil-point J, in combination with index-rod G, half yoke F, and sliding grooved collar E, substantially as set forth.

98,206.—John A. Taplin, Carthage Landing, Fishkill, N. Y.—*Machine for Sawing and Splitting Wood.*—December 21, 1869.

Claim.—In a rotary sawing and splitting machine, the combination of an iron disk and splitting-knife with a circular saw, each constructed, and the whole arranged substantially as and for the purposes herein described.

98,207.—George W. Tew, Kansas City, Mo.—*Carriage-Springs.*—December 21, 1869.

Claim.—The straps B, arranged with grooved bearings *b*, combined with the cords C, wrapped and otherwise formed, substantially as set forth.

98,208.—Lovias D. Towsley, Newark, N. J.—*Self-Ventilating Safety-Cans for Filling and Discharging Hydrocarbon-Apparatus.*—December 21, 1869.

Claim.—1. The ventilating-tube B, arranged within the vessel A, having its ends in direct communication with the ingress and egress openings thereof, so as to facilitate the circulation of the air and fluid therein, whether in filling or discharging from or into air-tight vessels, as described.

2. The vessel A, constructed as described, to be used as an intermediate circulating-vessel, in drawing from one air-tight vessel to fill another, substantially as described.

3. The combination of the vessel A, the circulating-tube B, and the stop cocks or faucets C^1 C^2, constructed, arranged, and operating as described.

98,209.—Elisha Turner, Wolcottville, Conn.—*Cord-Tightener for Curtain-Fixtures.*—December 21, 1869.

Claim.—The slide *b*, formed with the ribs 2 2, at the edges of the back, and the holes 3 3 in the raised portion of the back, in combination with the block *c*, pulley *d*, and projection 4, as and for the purposes set forth.

98,210.—George Vining, Pittsfield, Mass.—*Manufacture of Paper-Pulp from Wood.*—December 21, 1869.

Claim—1. In combination with a machine for the manufacture of paper, or paper-pulp, from wood fiber, and other materials, the emery-wheel or cylinder A, as specified.

2. The emery-wheel or cylinder herein described, when used in the manufacture of paper or paper-pulp, from wood fiber and other materials, constructed and arranged to operate as specified.

98,211.—Peter M. Wallower, Smith's Ferry, Pa.—*Compound for Mixing Paints.*—December 21, 1869.

Claim.—The combination of petroleum, linseed-oil, resin, and lacquer, in the proportions and by the process substantially as herein specified, for the uses and purposes set forth.

98,212.—Cornelius Walsh, James F. Connelly, and Alfred Bratt, Newark, N. J., assignors to Cornelius Walsh.—*Hasp-Lock.*—December 21, 1869.

Claim.—The hasp, containing the lock-works, and the case or socket for the reception and retention of the hasp, adapted to slide edgewise, one within the other, for engagement, as herein represented and described.

98,213.—Orrin A. Wheeler, Doniphan, Kans.—*Seed-Drill.*—December 21, 1869.

Claim.—1. The means employed for elevating or

lowering the drills, and for throwing in or out of gear the seeding-devices, consisting of the crank-axle B and lever N, and, in combination therewith, the quadrant O, or its equivalent, substantially as and for the purpose specified.

2. The arrangement of the slide L, provided with the cam-shaped opening *l*, the bottom I, and the lever M, substantially as and for the purpose shown.

98,214.—EDWARD WIARD, Louisville, Ky., assignor to B. F. AVERY, same place.—*Expanding Triple-Shovel Plow.*—December 21, 1869.

Claim.—1. The bars or frame C, constructed and secured to the plow-beam, substantially as herein shown and described, and for the purpose set forth.

2. Adjustably connecting the rear plow-standards G to the rear ends of the bars or frame C, by the tube E and long bolt D, whether made in one piece or separate, and the washers F and set-screws *g'*, substantially as herein shown and described, and for the purpose set forth.

3. Adjustably securing the forward standard L to the forward ends of the bars or frame C, by means of the washers N and bolt M, substantially as herein shown and described, and for the purpose set forth.

4. The notched washers F N, constructed substantially as herein shown and described, when used for securing the plow-standards in place, as and for the purpose set forth.

5. The combination of the slotted and grooved washers K, eye-bolts J, and slotted arms I, with the brace-rods H and bars or frame C, substantially as herein shown and described, and for the purpose set forth.

98,215.—FRANKLIN J. STALEY, Indianapolis, Ind., assignor to himself, GEORGE W. JOSEPH, ISAAC S. LONG, and GEORGE H. CARTER, same place.—*Head-Block of Saw-Mills.*—December 21, 1869.

Claim.—1. The sleeve E, furnished with the flanges F and pawls *s s'* and keys *e e*, concentric piece E, furnished with cogs *i* and ratchets *o*, in combination with the setting-shaft D, furnished with the hand crank wheel P and knees C, all constructed and arranged substantially as and for the purpose set forth.

2. The ratchet-wheel K lever J, pawls H and I, arranged in pairs, as described, in combination with bevel-wheels D and M, setting-shaft D, and the device described, for operating the knees C, constructed and arranged substantially as and for the purpose set forth.

3. The segmental arch Q, lever J, pawls H I, ratchet K, and gears L and M, when all the parts are constructed and arranged as herein specified, and for the purpose set forth.

***97,970.**—SAMUEL B. SEXTON, Baltimore, Md.—*Base-Burning Fire-Place Heater.*—December 14, 1869; antedated November 23, 1869.

Claim.—1. An exposed magazine, in combination with a valve for discharging gas therefrom, and a separate door or conductor for introducing fuel.

2. An exposed magazine, in combination with pipes or columns for conducting the gases from the combustion-chamber beneath or around the lower part of said magazine to the flue-chamber at the base of the stove.

3. The combination and arrangement of the pipes E E, G G, I, and chambers F H, substantially as set forth.

4. The shield or screen O, constructed either with or without perforations, or a door or doors, or both, substantially as set forth.

5. In a fire-place stove, the shoulder between the illuminated walls and the cylindrical fire-pot, arranged, relatively to the flues E, substantially as set forth.

98,216.—CHARLES DOUGHTY ALLEN, New York, N. Y.—*Steam-Engine Governor.*—December 28, 1869; antedated December 24, 1869.

Claim.—The arrangement of the stand A, spindle B, and sleeve F, as herein shown and described.

98,217.—E. AVERILL, Sacramento, Cal.—*Propelling-Apparatus.*—December 28, 1869.

Claim.—1. The vibrating arms B, hinged paddles and reversible slides *k*, combined and arranged substantially as specified.

2. The combination of the vibrating arms B, pinions *d*, wheels *e*, and levers *f*, substantially as specified.

98,218.—JABEZ K. BABCOCK, Shortsville, N. Y.—*Water-Elevator.*—December 28, 1869.

Claim.—1. The crank C, pivoted eccentrically to the loose ratchet *c*, and provided with a projecting stop, *o*, in combination with disk *b* and projection *n*, for the purposes set forth.

2. The flange *d*, in combination with stop *o* and crank C, for the purpose specified.

3. The perforated flange *a'* and hook *l*, when used in combination with the ratchet *c* and winch C, for the purposes set forth.

98,219.—SYLVESTER P. BABCOCK, Adrian, Mich.—*Boot-Jack.*—December 28, 1869.

Claim.—The boot-jack, having extended jaw D and loop-hole E, in combination with movable handle H G, provided with toe-piece H and staple F, constructed and arranged as herein described, for the purpose specified.

98,220.—L. M. BATTY, Canton, Ohio.—*Harvester.*—December 28, 1869.

Claim.—1. The combination with a harvester finger-bar, constructed with a concave rear face, of a toe-plate, fitting into the concave rear face of the finger-bar, and secured to the edge thereof, and a frame piece for the delivery-mechanism, fitting in the concavity in the toe-plate, and secured to said plate, substantially as is herein specified.

2. The combination, with a harvester finger-bar, constructed with a concave rear face, of a heel-shoe, notched and faced to receive the finger-bar, and a retaining-plate, fitting into the concave rear face of the finger-bar, and secured to the heel-shoe, substantially as is herein specified.

3. The combination, with a harvester finger-bar, constructed with a concave rear face, of a shaft or roller, arranged parallel to the finger-bar, and in the concave rear face of the same, substantially as is herein specified.

4. The combination, in a harvester, of a finger-bar constructed with a concave rear face, a roller, arranged in said concave face, a driving-roller, arranged between standards extending from said finger-bar, and a dropping-apron, arranged around said rollers, substantially as is herein specified.

5. The reciprocating rock-bar, acting on the ratchet-wheel on the shaft of the driving-apron roller, and actuated by the driver on his seat on the machine, for the purpose of operating an endless dropping-apron for harvesters, substantially as is herein specified.

98,221.—FRANCIS BOSOM, Saint Louis, Mich., assignor to himself and JOHN W. TACKABURY, same place.—*Churn-Dasher.*—December 28, 1869.

Claim.—1. The spirally-coiled metallic dash B, constructed substantially as described.

2. In combination with a dash, B, secured to a hollow dash-rod, A, the employment of a cylinder, C, on which said rod is sleeved, for containing a liquid for regulating the temperature of the cream in the churn, substantially as described.

98,222.—JOHN BOURNE, No. 1 Northumberland Terrace, Regent's Park Road, England.—*Propelling-Apparatus.*—December 28, 1869.

Claim.—1. The oar I, provided with the pivoted sleeve F, in combination with the bracket G, crank E, rods B and B', and crank-shaft *b c*, when said parts are arranged, with relation to the deck and stern of the vessel, and to operate as shown and described.

2. The pivoted sleeve F and slide M, in combination with the removable bracket G and oar I, provided with collars, and all constructed and arranged as shown and described.

3. The bracket G, arranged on the side of a ship, so as to be easily removed or swung out of the way, and for the purpose of sustaining an oar or oars to be operated by machinery for propelling vessels in calms, as set forth.

*This number should have appeared in its numerical order on page 745.

98,223.—McKendree A. Brooks, La Porte, Ind.—*Water-Wheel.*—December 28, 1869.

Claim.—1. A water-wheel having a series of upward-discharging buckets, B, and a series of downward-discharging buckets, B′, separated by a disk, C, rotating within a case, D, and so arranged that the water may act upon either or both series of buckets, substantially as and for the purpose set forth.

2. In combination with a water-wheel, constructed as herein described, the case D and scroll E, divided into separate chambers by the diaphragm F, and provided with independent gates, G G′, the whole arranged and operating in the manner and for the purpose specified.

98,224.—John Burt, Detroit, Mich.—*Finishing-Case for Railway-Bars.*—December 28, 1869.

Claim.—The case or finishing-carriage A, constructed as described, whereby railway-bars may be straightened, punched, sawn off, upset, hammered, cooled, and hardened while in said case, substantially as herein set forth.

98,225.—George W. Burton, Bordentown, N. J.—*Machine for Laying out Sash and Blinds.*—December 28, 1869.

Claim.—The frame A *d*, the holders B and C, respectively adjustable, and movable horizontally, and provided with dovetailed tenons *g g*, for retaining markers F *h*, the springs D, rods C, and lever E *e*, all constructed and arranged to operate as shown and described.

98,226.—Samuel C. Bruce, New York, N. Y.—*Apparatus for Mixing and Ageing Liquors.*—December 28, 1869; antedated December 21, 1869.

Claim.—1. The aperture E, formed by the cutting of the two circles, forming a connection between the chambers A and B, in the manner and for the purpose substantially as described.

2. Feeding the liquor in at the sides of the chamber A, behind the tappets D, substantially as described.

98,227.—Joseph Busser, Troy, Ohio.—*Railway-Car.*—December 28, 1869.

Claim.—A railroad-car body, having its walls composed of planks, laid flatwise, one upon another, and secured down to the sill-beams of the bed by means of bolts, in combination with the vertical corner-facings *a* and tie-bolts, which are inclosed within the plank walls, substantially as described.

98,228.—L. Chandor, Saint Petersburg, Russia, assignor to Cassius M. Clay.—*Vapor-Burner.*—December 28, 1869.

Claim.—1. The tube B, provided with the springs F, the metallic gauze cap D, arranged within said tube, and the casing E, perforated at its upper end, all constructed as shown and described, and for the purpose specified.

2. The springs F and the perforated casing E, in combination with the tube B, arranged substantially as and for the purposes described.

98,229.—Matthew Clinton, New York, N. Y.—*Self-Adjusting Cart-Saddle.*—December 28, 1869.

Claim.—The padded blocks A A, connected by the curved bars D F, in connection with the curved rod K, fitted on bar D, all constructed and arranged substantially as and for the purpose set forth.

98,230.—Andrew Cole, Mishawaka, Ind.—*Spring-Bed Bottom.*—December 28, 1869.

Claim.—The bed-bottom, consisting of the longitudinal rails C, provided at each end with fixed conical pillars D, to which are secured the cross-pieces E, forming the support of the middle and outer wires F, with which the slats A are interwoven, the latter resting at their ends on spiral springs B, as shown and described.

98,231.—Gideon W. Cole, Canton, Ill.—*Planing-Machine.*—December 28, 1869.

Claim.—The oscillating top-bed A, having the adjustable section B and slotted side frame D, when all the parts are constructed, arranged, and operated substantially as described, and for the purpose set forth.

98,232.—O. Collier, Sacramento, Cal.—*Piston and Piston-Packing.*—December 28, 1869.

Claim.—A piston, provided with end disks A B, ring C, (with three annular recesses *f*,) end rings H H, and adjustable centering-ring I, all arranged and fitted together in the manner described.

98,233.—James P. Coulter, Bloomington, Ill.—*Signal for Railways.*—December 28, 1869.

Claim.—1. The roller D and flag E, arranged to operate automatically as set forth.

2. The roller D, arranged to operate automatically in combination with the lid A H B, shaft M, pinion L, segment G, arm O, boxes A A F, and rope Q, as and for the purpose set forth.

3. The combination of the case S, segment Y, lugs *c*, drum *a*, lantern T, rope V′, and box A′, constructed and arranged as and for the purpose specified.

98,234.—Randolph Raby Craig and Joseph Craig, Nevada, Cal.—*Ball-and-Socket Joint.*—December 28, 1869.

Claim.—The combination of the ball-and-socket joint, consisting substantially of the parts A and B, with the rods D, set-screws D^1 D^2, swivel E, and stay-plate F, substantially as and for the purpose described.

98,235.—Seth Craig, Philadelphia, Pa.—*Spur.*—December 28, 1869.

Claim.—The improved spur above described, formed by the combination of a shank, B, spring-catch *a*, and heel-pin *b*, with heel-arms A A, having the bent ends *c c*, each of said parts being constructed and arranged with respect to the others, as shown and described.

98,236.—James Dampman, Lebanon, Pa., assignor to William A. Moyer, same place.—*Hay-Fork.*—December 28, 1869.

Claim.—The combination, with the tines of a hay-elevating fork, and the hoisting-rope thereof, of a sliding block, A, provided with a fixed and a pivoted jaw, arranged for engaging the tine not connected with the rope, also provided with a spring-catch and trip-rope, all arranged for operation substantially as specified.

98,237.—Charles T. Day, Newark, N. J.—*Skate.*—December 28, 1869.

Claim.—1. The clamping-levers, pivoted together in pairs, substantially as herein shown and described.

2. The combination of the clamping-levers with the swivel-nuts *g h* and diagonal screw G, all arranged as set forth.

98,238.—Richard S. Dillon, Detroit, Mich., assignor to himself and George H. Russell, same place.—*Steam-Boiler Furnace.*—December 28, 1869.

Claim.—In the construction of boiler-furnaces, the flue F and reverberatory chamber G, provided with air-ducts *a*, *b*, *c*, furnished with appropriate valves *a′*, *b′*, and *c′*, or their equivalents, the whole so arranged as to operate in the manner and for the purpose herein set forth.

98,239.—William T. Downs, Saint Louis, Mo.—*Charcoal-Furnace.*—December 28, 1869; antedated December 11, 1869.

Claim.—1. The arrangement of the furnace A and boiler G, substantially as and for the purposes set forth.

2. The body A, grate C, partitions H, smoke-passages H′, cover E, and chimney F, substantially as set forth.

98,240.—Foster Ellis, Sylvania, Ohio, assignor to himself and John S. Ellis, same place.—*Hoop-Cutting and Dressing Machine.*—December 28, 1869.

Claim.—1. The cutter-head E, provided with cutters *g h*, constructed as above described and shown, for the purpose of dressing the face and both edges of a hoop at one operation, as above described and shown.

2. The combination of the saw *d*, the shaft C, the pulley *b*, the belt *c*, and the yoke B, with the cutter-head E, provided with cutters *g h*, the shaft *e*, the pulley F, the belt *f*, the feed-rollers G, and the table

H, in connection with the frame A, when constructed, arranged, and operating as and for the purpose above mentioned.

98,241. — EDWARD FOX, New York, N. Y., assignor to himself and JOSEPH J. WALTON, same place.—*Steering-Apparatus.*—December 28, 1869.

Claim.—The barrels *d*, *e*, *f*, and *g*, of two different sizes, to which the chains *h* and *i* are connected, in combination with the blocks *l*, *m*, *s*, and *t*, that are connected to the rudder, the parts being arranged and operating substantially as set forth.

98,242. — CHARLES FURBISH, Bucksport, Me.—*Truss for Vessels.*—December 28, 1869.

Claim.—The struts or arms G G, with rollers *e e*, the band or collar F, and rollers *h h*, the support or platform H and E, combined and arranged substantially as herein set forth.

98,243. — JOHN GIBSON, Jr., Albany, N. Y. — *Stove-Leg.* — December 28, 1869; antedated December 11, 1869.

Claim.—1. Furnishing one or more edges of either the shank *b* or dovetails *a a* with corrugations, or any other irregular surface-edges, having a uniform line of prominences, substantially as and for the purpose set forth and described.

2. Securing or locking the leg B to the base A of a stove or heater, by pushing or drawing the shank *b*, within the dovetails *a a*, by means of sliding bars, screw-bolts, buttons, pins or keys, dogs or spring-catches, or their equivalents, substantially as set forth and described.

98,244.—JOHN GIBSON, Jr., Albany, N. Y.—*Coffee-Pot, Pitcher, &c.*—December 28, 1869; antedated December 11, 1869.

Claim.—1. The recessed bearings *a a*, with their guiding-slots *s*, inclined in the manner described, and in combination with the vessel A, substantially as and for the purpose set forth.

2. The stop *b*, or its equivalent, in combination with the supporting-base B, or in combination with the vessel A, substantially as and for the purpose set forth.

3. The wheels D, rollers *m*, or their equivalents, in combination with the supporting-base, B, of a tilting-stand, substantially as and for the purpose described.

4. The lamp E, in combination with the supporting-base, B, of a tilting-stand, and a swung vessel, A, substantially as and for the purpose set forth.

98,245. — JOHN GIBSON, Jr., Albany, N. Y. — *Device for Tilting Pitchers, Coffee-Pots, &c.*—December 28, 1869; antedated December 1, 1869.

Claim.—1. The swinging basket B or swinging rest B′, for holding or supporting the vessel C, substantially as described, and working in combination with the pivots *c*, substantially as described, for the purposes set forth.

2. In combination with a stand A, for supporting and tilting a pitcher or other vessel, a water-tight base or receptacle, *g*, made with the said stand A, or fitted to and made detachable therefrom, for the purpose substantially as set forth and described.

3. The stand A, (either with or without the water-tight base or receptacle *g*,) provided with the gallows or supports *a a*, in combination with the swinging basket B, or swinging rest B′, substantially as and for the purposes set forth and described.

4. In combination with the swinging basket B, the screw S or S′, or spring *e* and screw S″, or their equivalents, substantially as and for the purpose set forth and described.

5. The stop *r*, or its equivalent, in combination with the stand A or supporting-standards *a*, or suspending-arms *b*, or basket B, or base B′, as and for the purpose specified.

98,246. — JOHN GIBSON, Jr., Albany, N. Y. — *Rein-Holder.*—December 28, 1869; antedated December 17, 1869.

Claim.—1. In combination with a whip-holder or whip-socket A, the stem S, as described, or its equivalent, made with or attached to a fastening, C or C′, of the said whip-holder or whip-socket A, as and for the purpose specified.

2. The stem S, as described, or its equivalent, in combination with a fastening, C or C′, for a whip-socket, as and for the purpose specified.

3. The driving-reins R and stem S, or its equivalent, in combination with a fastening, C or C′, of a whip-holder or whip-socket, by means of which the reins can be held, substantially in the manner set forth and described.

98,247. — JOHN GIBSON, Jr., Albany, N. Y. — *Hitching-Post.*—December 28, 1869; antedated December 18, 1869.

Claim.—As a new article of manufacture, a hitching-post, formed of wooden posts A, protected by the caps C and plates P, and furnished with the hitching-rod H, with chain *h* attached, connected with the post by means of the eye-staple S, when constructed and arranged as shown and described.

98,248. — JOHN GIBSON, Jr., Albany, N. Y. — *Railroad-Car Heater.*—December 28, 1869.

Claim.—1. The metallic floor *b*, corrugated, or otherwise, not perforated, in combination with the hot-air chambers *a a*, substantially as described, and for the purposes set forth.

2. The adjustable deflector or warm-air spreader *h*, also its standard or support, in combination with any register, placed in the floor of any traveling-conveyance or room, substantially as set forth, and for the purposes described.

3. In combination with any warm-air register, a fixed hood *i*, or reversible hood *i′* for spreading the heat, substantially as described.

4. The pinch-screws *r*, or their equivalent, in combination with the registers *v*, substantially for the purpose set forth and described.

98,249. — JOHN GIBSON, Jr., Albany, N. Y. — *Securing Legs to Stoves.*—December 28, 1869.

Claim.—1. Locating a leg, and preventing it from being moved in any direction on the surface of the base of a stove or heater, by means of the interior, or exterior, or hidden guides, arranged in the manner substantially as described.

2. Binding the angle-piece of a leg to the base of a stove or heater, around the interior guides, or within the exterior guides, or over the hidden guides, or any of their equivalents, by any binding-device, working from the base of such stove or heater, on or over the angle-piece of the leg, or by reversing the order, and attaching the said binder or binders to the angle-piece of the leg, and working them under impinging lips, made on the base of the stove or heater, in the manner substantially as described.

3. The elements herein set forth, to secure the results herein specified.

98,250.—D. R. V. GOETCHINS, Little Falls, N. Y.—*Head-Rest.*—December 28, 1869.

Claim.—1. The combination of plate A and posts C C, connected together by sockets and studs, as shown and described.

2. A removable rest, F, hung adjustably between two detachable posts C C, which are supported upon a separate plate, A, by means of studs and corresponding sockets, in the manner specified.

98,251. — FRANK GOSS, Wexford, Pa.— *Shovel-Plow.*—December 28, 1869.

Claim.—1. The combination, in a cultivating-plow, of a beam, A, standard B, sole-bar F, upright arm H, and tie-bolt G, constructed and arranged as herein described, and for the purposes set forth.

2. The sole-bar F, as constructed, of the form represented and described.

3. The shovel or share E, constructed with the flaring dovetail-attaching socket *e*, substantially as represented and described.

4. The combination, in a cultivating-plow, of a frame, A, B, F, G, H, handles C, clevis D, shovel or share E, wings or scrapers I I, device J J K for adjusting the wings or scrapers, an adjustable gauge-wheel L *l*, and means *a m*, for holding the gauge-wheel, constructed and arranged as herein represented and described, for the purposes shown.

98,252. — A. D. GRAY, Chariton, Iowa. — *Combined Seed Sower and Harrower.* — December 28, 1869.

Claim.—The machine described, consisting of the axle A with wheels *a a*, pole B, frame C C, *c c c*, hinged beams D, toothed roller E, rod F, lifting-lever G, hopper I, spring-slide J, indented wheel K, adjusting-lever L, belt M, and guides *m m*, when combined as described, for the purpose set forth.

98,253.—JOHN H. GRAY and WILLIAM B. TURNER, Saint Anthony, Minn.—*Paper-Feeder.*—December 28, 1869.

Claim.—The feed-board A, obliquely perforated and connected with chamber B, out of which, by means of a pump or other pneumatic apparatus, air-currents may be driven through such oblique perforations, in direction of the guides E^1 E^2, substantially as and for the purpose described.

98,254. — HENRY GREENWOOD, Gilbertsville, Mass.—*Register for Spinning-Jack.*—December 28, 1869.

Claim.—The combination and arrangement of the pawl-clutch E and the gravitating and sliding weight G, with the driving-shaft *c*, the pawl F, and the draw-registering mechanism operated thereby, substantially as described.

98,255.—HENRY S. HALL, Boston, Mass.—*Apparatus for Raising and Lowering Chandeliers and Lamps.*—December 28, 1869.

Claim. — The frame A, in combination with rod C, levers *b*, corrugated rollers *c c*, and nut D, constructed in the manner and for the purpose substantially as described.

98,256. — GEORGE A. HARLEY, New York, N. Y.—*Hair-Cutter.*—December 28, 1869.

Claim.—The clamps C D, in combination with the slotted comb B, for the purpose of adjustably securing a blade, A, in the slot of the comb B, substantially as herein shown and described.

98,257. — AARON HARRIS, Laporte, Cal.—*Hydraulic Nozzle.*—December 28, 1869.

Claim. — 1. The transverse slot B, in the nozzle, through which the gate is raised or lowered, for adjusting the rings, without stopping the flow of water through the nozzle, substantially as and for the purpose described.

2. The adjustable gate C, provided with a ring-seat, C′, rings E E, and spray-ring E′, which are held, when in position, against the shoulder of the nozzle, by the screw-coupling F, as described.

98,258. — ELAM HARTER, Dowagiac, Mich.—*Horse Hay-Fork.*—December 28, 1869.

Claim.—1. The coupling-lever C, bars D and E, friction-roller F, and tripping-lever G, when constructed, arranged, and combined as set forth.

2. In combination with the above-claimed parts, the tines A A, hoisting stem B, loop *i*, pins *j* and L, and hook *d*, substantially as set forth.

98,259. — ELAM HARTER, Dowagiac, Mich.—*Grappling-Hook.*—December 28, 1869.

Claim.—The swivel G, pulley H, and yoke D, carrying the ring I, with the hooks A A, having the slots E E, all constructed, combined, and arranged, as herein shown and specified.

98,260. — ROBERT G. HATFIELD, New York, N. Y. — *Anti-Friction Journal-Bearing for Hoisting-Machines, &c.*—December 28, 1869.

Claim.—In combination with a journal, the track D, roller E, and bearing-rail G, arranged and operating substantially as and for the purposes herein shown and described.

98,261. — RUFUS E. HITCHCOCK, Waterbury, Conn.—*Curtain-Fixture.*—December 28, 1869.

Claim.—The cylindrical roller-end *b*, in combination with the adjustable friction-strap *e* and bracket *d*, as specified, so as to apply a variable friction to the curtain-roller, independent of the device for rotating the roller, as set forth.

98,262.—ARTEMAS HOLBRIDGE, West Burlington, N. Y.—*Curing Cheese.*—December 28, 1869.

Claim. — The above-described process of curing cheese, by cutting the flat cakes into blocks, of rectangular form, covering the said blocks with some fabric, and placing them, two deep, in a mold, with flat plates between them, then subjecting them to pressure, as set forth, the said blocks being afterward turned on shelves in the manner described.

98,263. — CHESTER J. HOLMES and DAVID C. HOLMES, Stafford Springs, Conn.—*Dried-Beef Cutter.*—December 28, 1869.

Claim.—The combination of a table, made as described, having the hook *d*, with the swinging-arm *g*, bearing the knife *o*, fastened and regulated as described, all for the purpose herein set forth.

98,264.—JOHN HORTON, New York, N. Y., assignor to BENNETT B. SCHNEIDER, same place.—*Lamp.*—December 28, 1869.

Claim.—1. Providing the drip-cup F of an Argand-burner with the vertical central tube *m*, in the manner substantially as and for the purpose set forth.

2. The torch or taper G, inserted in the rod B of the lamp, when the former is used with or applied to an Argand-burner lamp, having the drip-cup F of its burner provided with a central tube *m*, substantially as shown and described.

3. The match-box H, taper or torch G, fountain or reservoir D, and the Argand-burner E, when all are constructed, combined, and arranged to form a lamp and convenient lighting-apparatus, substantially as herein shown and described.

98,265. — JOHN HUMPHREY, Ravenna, Ohio.—*Boring and Mortising Machine.*—December 28, 1869.

Claim.—1. The combination of the endless screw G with a series of two or more augers, *a a*, having inclined grooves *c* in the shanks thereof, and arranged in the manner and for the purpose described.

2. The automatic reciprocating table I, in combination with the upper and lower series of boring-augers *a a* and chisels B C, when all the parts are constructed and arranged to operate in the manner and for the purpose described.

3. The combination of the screw G, auger or series of augers *a*, with the chisels B C, when constructed and arranged, with relation to each other, and operating in the manner and for the purpose substantially as described.

4. The combination of the chisels B C, having boring-augers *a*, clamps E, transverse slides D, with the table I, jam S, and cam T, all constructed and arranged to operate substantially as described.

5. The combination of the lever Q, clutch P, and table I, when arranged to operate substantially in the manner and for the purpose described.

98,266. — JOHN C. HUNT, Terre Haute, Ind., and WILLIAM W. INGRAHAM, Chicago, Ill.—*Grain-Smutter, Scourer, and Separator.* — December 28, 1869.

Claim.—1. The scouring knives or beaters I, when constructed and arranged substantially as and for the purposes herein specified and shown.

2. The rings J, when constructed and operating substantially as and for the purposes described.

3. The scouring-drum, provided with an inlet and outlet, and scourers or beaters for scouring the grain, when they are so constructed and arranged that the scourers or beaters revolve in a mass of grain in the drum, substantially as and for the purposes specified and shown.

98,267. — WILLIAM H. JOECKEL, New York, N. Y.—*Reversible Chair.*—December 28, 1869.

Claim.—A reversible chair, on which, by means of cams *f*, the seat will be adjusted when the back is reversed, substantially as herein shown and described.

98,268. — JAMES ALBERT JOYNER, New York, N. Y.—*Propeller-Wheel.*—December 28, 1869; antedated December 18, 1869.

Claim. — The propeller-wheel, consisting of the hub A and blades B, when provided with the tapering cylinder C, substantially as herein shown and described, for purpose set forth.

98,269.—A. N. KELLOGG, Chicago, Ill.—*Rotary Table-Waiter.*—December 28, 1869.

Claim. — 1. The rotary frame D, adapted for adjustment vertically upon the shaft A, as herein shown and described, for the purpose specified.

2. The combination of a rotary dish-holder, C, and a rotary adjustable dish and bottle holding frame, D, upon the same stand, as herein shown and described, for the purpose specified.

98,270.—ALEXANDER W. KELLY and JOHN B. SAMUEL, Philadelphia, Pa.—*Machine for Grinding Glass Jars.*—December 28, 1869.

Claim.—1. The sliding holding-weight F, and the adjustable arm e'', the adjustable ring 3, and arm e', in combination with the rotary shaft E, and as arranged to operate together in supporting and holding the jar x in a vertical position, substantially as and for the purpose hereinbefore described and set forth.

2. The combination of a series of vertical rotating shafts, E, each provided with a series of adjustable arms, e' e'', having, respectively, the rings 3 and weights F attached, for receiving and supporting glass jars thereon in vertical positions, as described, with the central-rotating shaft C, and its horizontal disk D, the said parts being arranged to operate together, substantially as and for the purpose hereinbefore described and set forth.

98,271.—JOHN KENMUIR, Leavenworth, Kansas.—*Button.*—December 28, 1869.

Claim.—A sleeve-button, having an annular spring D, catch E E, hook F, and case B, each constructed and arranged with respect to the other in the manner described.

98,272.—JOHN KENT, New York, N. Y.—*Knitting-Machine.*—December 28, 1869.

Claim.—1. The combination, with a series of plain knitting-needles, of a single revolving-needle arranged and operating as described, for the purpose of producing an imitation seam.

2. The combination of the worm F, the bell-crank G, and the button N, with the mechanism connected therewith, for giving the needle *a* a revolving motion, when the same are combined with a knitting-machine, substantially as and for the purpose herein shown and described.

98,273.—HORATIO KEYS, Terre Haute, Ind.—*Carriage-Wheel.*—December 28, 1869.

Claim. — 1. The spokes C, dovetailed into the groove of a metallic hub, by means of wedges, which expand their ends, as set forth.

2. The spokes B C of a wagon-wheel, fitted alternately secure and loose into an endless groove of a metallic hub, substantially as herein shown and described.

3. The tube D, for holding the inner end of the box E, when countersunk or dovetailed, by means of wedges, into the enlarged part of a chamber in the hub, as set forth.

4. Retaining spokes in the hubs of wheels, by means of wedges forced into them as set forth.

98,274.—JOHN KILLEFER, West Richfield, Ohio.—*Bob-Sled.*—December 28, 1869.

Claim. — 1. The runner-standard B, constructed with legs of a hollow or corrugated section, and with a concave seat for the axle-pipe, as is hereinbefore specified.

2. The axle-pipe A, constructed with two cylindrical axle-bearings, when used in combination with the runner-standard B, constructed with legs of a hollow or corrugated section, as is herein specified.

3. The coupling-piece D and pin E, when constructed as shown, and used in combination with the tongue-roll and independent runners, substantially as is herein specified.

4. The draught-chains C C, when used in combination with the sliding reach-collar, rear runner-axle, and independent rear runners, having their standards constructed of a hollow or corrugated section, as is hereinbefore specified.

98,275. — C. H. KNAPP, Lawrenceville, Pa.—*Pulley-Block.*—December 28, 1869.

Claim.—1. The combination of the divided block A, divided pulley B, stock D, and tripping-clamp F H, all substantially as specified.

2. The arrangement, with the divided block A, of the tripping-clamp F H and spring L, substantially as specified.

98,276. — HEBER F. LEARNARD, Mazo Manie, Wis.—*Table.*—December 28, 1869.

Claim.—1. The table-frame formed of the posts, having the vertical grooves A and the rails D fitting therein, and the angle-plates C provided with dovetailed tongues fitting in corresponding grooves B in said rails, all arranged as shown and described, for the purpose specified.

2. In combination with the table-frame, constructed as described, the curved springs H, attached and arranged to operate the arm I, as shown and described.

98,277.—BENJAMIN F. LEET, Dayton, Nevada.—*Brake for Carriages.*—December 28, 1869.

Claim.—1. The combination, with the brake-shoe, suspended as described, of the knuckle-jointed links, and actuating-bars, connected thereto, and provided with means for operating them, substantially as specified.

2. The combination, with the brake-shoes and knuckle-jointed links, of the operating-bars G, when arranged for operation either by the pinion and hand-shaft, or the oscillating shaft, eccentrics, and hand-lever, all substantially as specified.

3. The combination of the jointed suspending-arms C, brake-shoes, and knuckle-jointed links, when the said links and arms are arranged for adjustment, substantially as specified.

98,278.—CHARLES D. LEET, Vienna, Austria, and B. B. HOTCHKISS, New York, N. Y. — *Metallic Cartridge.*—December 28, 1869; antedated December 15, 1869.

Claim.—The closed or tight-backed cartridge-case A, inner casing D, packing E, the central fulminate B, and anvil O, combined and arranged in the shell of the cartridge, as and for the purposes herein set forth.

98,279.—JOHN A. LIDBACK, Portland, Me., assignor to himself and HENRY BAKER, same place.—*Steam-Pump.*—December 28, 1869.

Claim.—1. A pump with three cylinders inclosed in each other, constituting three chambers connected by ports, one for plunger, one for suction, and one for force, substantially as described.

2. The oscillating conical valve B, in combination with cylinders *a*, *b*, *c*, as described.

3. The combination of the oscillating feed-pump G, and oscillating conical valve B, substantially as set forth.

4. The spiral guide or slot *p*, on feed-pump G, in combination with perpendicular moving cross-head N, sliding on the same, causing the oscillation of the valves B B, substantially as described.

5. The construction and arrangement of sash K and rockers *l l*, substantially as described.

98,280.—GOTTLIEB LUEDKE, Princeton, Wis.—*Axle-Gauge.*—December 28, 1869.

Claim.—1. The combination, with the stock A, made in two parts, adjustable lengthwise, and provided with scales as described, of the gauge-block-supporting arms D E or D′ E′, substantially as specified.

2. The combination, with the gauge-blocks F, when arranged with reference to their supports, and the stock A, as specified, of the pins K L M, when arranged as specified.

98,281.—C. R. MACY, Bedminster, N. J.—*Harrow.*—December 28, 1869.

Claim.—The improved harrow, composed of the parts A and B of the form shown, hinged together and provided with teeth in front and rear of the toothed cylinders C C, which are in alignment when the harrow is open, all constructed and operating as shown and described, for the purpose specified.

98,282.—ANGELINA MADISON, Cincinnati, Ohio.—*Charcoal Cooking-Furnace.*—December 28, 1869; antedated December 15, 1869.

Claim.—The use of a draught-pipe, answering the double purpose of drawing the heat-current through it, and serving also as an opening for cooking-purposes at the same time, in connection with the other parts of the furnace, constructed and arranged to operate substantially as described, and for the purpose specified.

98,283.—WILLIAM W. MALLERY and CHARLES H. SAGE, Copenhagen, N. Y.—*Trace-Fastening.*—December 28, 1869.

Claim.—A trace-fastener, covered on the outside with a smooth-surfaced frame, made in detachable sections, and having a recess to receive the trace, and provided with a forked spring-catch on the inside, all as shown and described.

98,284.—F. H. MANNY, Rockford, Ill.—*Harvester-Rake.*—December 28, 1869.

Claim.—1. The cutter E and springs F F′, arranged to operate substantially as described.

2. In combination with the cutter E and springs F F′, the stem *d* and friction-roller *d′*, as and for the purpose set forth.

98,285.—JOHN C. MARSH, Alexandria, La., assignor to GEORGE R. MARSH, same place.—*Apparatus for Bleaching and Defecating Cane-Juice.*—December 28, 1869.

Claim.—The mode herein described of disseminating sulphurous gases in and through saccharine liquids, when the same is carried into effect by the apparatus herein described, the same being constructed in all its parts and operating as specified, for the purpose set forth.

98,286.—ELEZER MAY, Natick, Mass.—*Welt-Knife.*—December 28, 1869.

Claim.—An improved welt-knife, composed of a stock C, guard *a*, clamp B, screw D, and knife A, constructed and combined as described.

98,287.—EMERSON MCMILLIN, Ironton, Ohio.—*Street-Box for Gas-Pipes.*—December 28, 1869.

Claim.—A street-box for gas-pipes, of the construction herein described, with a cover and slides formed and operated substantially as specified.

98,288.—A. H. MCWAINE, Shickshinny, Pa.—*Churn.*—December 28, 1869.

Claim.—The revolving dashers A and B, when constructed of the flared paddles *o* and *m*, and fastened to the churn-body *a* by the staves *b* and beam *c*, and operated by the driving-wheel C, and cogs *f* and *g*, in the manner and for the purpose specified.

98,289.—AUTON MEYER, Stuttgart, Germany, assignor to THEODORE HAHN.—*Watchman's Time-Detector.*—December 28, 1869.

Claim.—1. The application of a false revolving dial, of card, or other suitable material, Fig. V, in combination with a stationary hand, *r*, and the opening *m*, and a movable stamp, making marks or perforations from the outside.

2. Of the marking-system, detached from the watch, and not attached or combined in it, the whole constructed and operating substantially as and for the purposes set forth.

98,290.—JAMES MONTGOMERY, Sing Sing, N. Y.—*Bar of Horseshoe-Blanks.*—December 28, 1869.

Claim.—As a method, welding together a bar of tough, fibrous wrought iron and a bar of hard-carbonated iron, (not steel,) and converting the same into connected horseshoe-blanks, molded, creased, and notched at points where such blanks are to be separated from one another, by passing said composed bar between rollers, substantially as described.

98,291.—ELIAS NASHOLD, Rockford, Ill.—*Spider.*—December 28, 1869.

Claim.—The combination of a bail and brace-rod with a spider, as described, for the purpose set forth.

98,292.—EBEN W. NICHOLS, Worcester, Mass.—*Hay-Spreader.*—December 28, 1869.

Claim.—1. The adjustable tripping-lever N, in combination with the dogs S and rods *i*, carrying tedder-forks.

2. The adjustable tripping-lever N, in combination with the dogs S, rods *i*, and return-spring L.

3. The arrangement of the hand-lever O and connecting-rod *m*, or their equivalents, in combination with the adjustable tripping-lever N, dogs S, and rods *i*.

98,293.—JOHN S. PATRIC and LEWIS PATRIC, Rochester, N. Y.—*Draught and Spark-Extinguishing Device for Steam-Generators.*—December 28, 1869; antedated December 24, 1869.

Claim.—1. The arrangement of the chamber A with its internal and external co-operative devices, whereby a stratum or spray of water is rendered available in advance of the exhaust-fan or apparatus, by means of which the smoke and other products of combustion are forced through the flue or chamber, substantially as herein set forth.

2. The arrangement of the outer shell or drum A, provided with induction and eduction ports *b* b^1, exhaust-chamber B, and fan D, all constructed substantially as described.

3. The arrangement of heating-flues, provided with valves or dampers, between the furnace and the exhaust, for the purpose of controlling the direction of the current of heat.

4. A floating gauge, E, operating in combination with the exhaust, substantially as described.

98,294.—JOHN PEACE, Camden, N. J.—*Tube-Cutter.*—December 28, 1869.

Claim.—The construction, combination, and arrangement of the box A, follower F, screw B, and sliding bar D, substantially as and for the purposes herein shown and described.

98,295.—WILLIAM H. PHILLIPS, Bridgeton, N. J.—*Shipwrights' Clamp.*—December 28, 1869.

Claim.—The implement herein described, consisting of the screw I, nut-block G, recessed extension E stud *b*, and curved serrated brace-claw H, each constructed and arranged in the manner and for the purpose set forth.

98,296.—HENRY B. PORTER, Chicago, Ill.—*Electrical Annunciator for Hotels.*—December 28, 1869.

Claim.—1. The pivoted and gravitating hooked armature *c*, applied to the helix′ b^3, in combination with a sliding cover, I, substantially as and for the purpose described.

2. The arrangement of lifting-arms *k*, on vertically-sliding bars J, in combination with the gravitating slides I, working over numbered or lettered plates H, said sliding bars J being connected to a key-shaft, L, substantially as and for the purpose described.

3. Covering-slides I, constructed with toes *i* upon them, and arranged so as to move over stationary numbered or lettered plates H, substantially as described.

98,297.—THEOPHILUS PUGH, Chicago, Ill.—*Pulverizing-Chaser.*—December 28, 1869; antedated August 7, 1869.

Claim.—The combination and arrangement of the wheel A, the tire B, the wooden backing *c*, and the wedges *a*, when constructed and operating as and for the purposes above set forth and shown.

98,298.—WILLIAM REICHENBACH and FRIETRICH ROSCHDIANTZKY, Chicago, Ill.—*Sofa and Table.*—December 28, 1869.

Claim.—1. The arrangement, in connection with a sofa or settee, of the sliding hinged drawer D and the drawer *b*, having the pivoted support *c* attached, substantially as shown and described.

2. The detachable table B, in combination with a sofa, when said parts are arranged to be used substantially as herein set forth.

98,299.—WILLIAM ROEMER, Newark, N. J.—*Lock for Satchels and Carpet-Bags.*—December 28, 1869.

Claim.—1. Attaching the lock B, on the outside, against the side of the frame for satchels and carpet-bags, in combination with a staple, D, attached to the top of the frame, operating together in the manner and for the purpose described.

2. The projecting piece or plate C, in combination with the lock B and inner frame A′, substantially as and for the purpose set forth.

98,300.—WILLIAM ROEMER, Newark, N. J.—*Button and Pin for Carpet-Bags, &c.*—December 28, 1869.

Claim.—The button or boss A, when constructed with the inside extended hub *n*, and the outside recess *a*, around the pin-aperture, in combination with the pin *m*, the head *v* of which fits closely in said recess, as specified.

98,301.—JOHN J. ROEPER, Philadelphia, Pa.—*Base-Burning Stove.*—December 28, 1869.

Claim.—In combination with a magazine-stove, the direct flue C, the chimney-flue D, and the space *b″*, outside of the magazine A, substantially as and for the purposes hereinbefore set forth.

98,302.—DANIEL J. ROSS, Havre de Grace, Md.—*Propelling Boats.*—December 28, 1869.

Claim.—In combination with the boat A, propeller-wheel B, and shaft C, the pulleys D and G, and band I, when arranged and operated substantially as and for the purposes set forth.

98,303.—JACOB SCHNEIDER, Canton, Ohio.—*Harvester-Cutter.*—December 28, 1869.

Claim.—1. The combination, on the finger-bar of a harvester, of a set of fingers, provided with dovetail grooves in their necks, an under-plate bar, with a dovetail section, and a set of under-cutter plates, one to each finger, secured on said bar, the several parts being arranged substantially as and for the purposes herein specified.

2. The harvester-finger C, constructed with head D, lip G, slot J, concavity H, and neck E, with dovetail groove F, the several parts being arranged as shown, and the whole being used in combination with the bar B, with plate A secured thereto, substantially as and for the purpose herein specified.

98,304.—WILLIAM F. SEMPLE, Mount Vernon, Ohio.—*Chewing-Gum.*—December 28, 1869.

Claim.—The combination of rubber with other articles, in any proportions adapted to the formation of an acceptable chewing-gum.

98,305.—JAMES A. SEVEY, Boston, Mass.—*Plane for Shaving Whalebone.*—December 28, 1869.

Claim.—1. The combination and arrangement of the spring or elastic throat-piece M, (provided with adjusting-devices, as described,) with the plane-stock E, and the cutter or plane-iron C.

2. The combination and arrangement of the plane-iron supporters A A, and the clamp-screws *g*, and adjusting-screws S S P, with the plane-stock E, the cutter C, and the mouth-piece M, provided with devices for adjusting it, as set forth.

98,306.—ZACHARIAH SHAW, Ypsilanti, Mich.—*Perpetual Brick-Burner.*—December 28, 1869.

Claim.—The combination and arrangement of the curved chamber A, the carrier E, and the fire-chamber C and C′, burning brick upon both sides at once, when constructed and operating as and for the purpose set forth.

98,307.—JOHN SHOREY and FREEMAN H. BUTLER, Lowell, Mass., assignors to said SHOREY and JOHN GRIFFITH, same place.—*Curtain-Fixture.*—December 28, 1869; antedated December 18, 1869.

Claim.—The friction-plates *e* and F, connected with the brackets, strap D, eye or staple H, and pulley B, arranged as shown and described.

98,308.—AUGUSTUS SIMPSON, Woonsocket, R. I., assignor to WOONSOCKET IRON FOUNDERY, same place.—*Machine for Folding Cloth.*—December 28, 1869.

Claim.—1. The knife K, jaws I and I′, in combination with the rolls G and H, brushes F and F¹, friction-rollers D D, stretcher C, and carriage B, all arranged and operating substantially as and for the purposes set forth.

2. The wheel or disk L, in combination with the roll G, knife K, and jaws I and I′, all constructed and operating substantially as described.

3. The combination of the pulleys M², slat M, cords M¹, cords *m*, and springs M⁴, substantially as and for the purpose set forth..

98,309.—GEORGE SINGLETON, Rockville, Conn., assignor to himself, JAMES F. PRESTON, and JOHN N. LEONARD, same place, ROBERT SINGLETON and E. KELLOGG ROSE, Paterson, N. J., and LEONARD & LOCKHART, Chicago, Ill.—*Spindle for Spinning Silk.*—December 28, 1869.

Claim.—The compensating top A, in combination with traveler B, hollow revolving thimble D, and revolving spindle I, all arranged and operating as described, and for the purpose set forth.

98,310.—DAVID L. SMITH, Montana, Iowa.—*Apparatus for Packing Stuffing-Box.*—December 28, 1869.

Claim.—The construction of an apparatus for the purpose described, wherein the sleeve A, arm B, head or traversing follower C, wheels D and E, guide F, and spring I, are arranged substantially as described, and operated by the pawl lever H and hand-clamp G, substantially as set forth.

98,311.—JOHN G. SMITH, Oregon, Wis., assignor to himself and FRANK A. VICKERY, Mason City, Ill.—*Hames and Collars.*—December 28, 1869.

Claim.—1. The swivel and hinge-joint fastening N, constructed substantially as described.

2. The swivel and hinge-joint fastening N, in combination with the adjustable straps E, when constructed and arranged substantially as described.

3. The adjustable wooden collar A, having the leather extension B, in combination with the hames C, when constructed with the swivel and hinge-joint fastening N and adjustable strap E, substantially as and for the purpose described.

4. The adjusting toothed staple F, so constructed and arranged that the trace only can be adjusted when the hames are removed from the collar, substantially as described.

98,312.—LOYST J. SMITH, Whitehall, N. Y., assignor to himself and E. H. GARDINER, same place.—*Railway-Rail Chair.*—December 28, 1869.

Claim.—The arrangement, upon the bases of the jaws A B, and between the cheeks thereof, of a plate, D, with transverse ribs *c c*, and projecting-lugs *d d*, all as shown and described, to prevent the longitudinal displacement of the rails and the constant strain upon the bolts.

98,313.—J. L. STRAIT, Cooksville, Miss.—*Seed-Planter.*—December 28, 1869.

Claim.—1. An improved seed-planter, formed by the combination of the tongue B, side beams A, drive-roller C, pulleys D, bands E, idler K, pulleys G, dropping-cylinder F H, opening-plow I J, coverers L M, concave roller P, and handles N, with each other, said parts being constructed and arranged substantially as herein shown and described and for the purposes set forth.

2. The forked standard J, for the opening-plow, arranged between the drive-roller C and the dropping cylinder F H, and adapted to serve as a guard or fender for the said dropping-cylinder, substantially as herein shown and described, and for the purpose set forth.

98,314.—CHARLES A. SULLIVAN, Starkville, Miss.—*Pneumatic Centrifugal Power-Regulator.*—December 28, 1869.

Claim.—1. A centrifugal power-regulator, consisting of a fan-wheel with wings pressed by springs to its periphery, and rising therefrom automatically when a certain initial velocity is attained, but constantly presenting a more expanded surface and a greater resistance as the said velocity increases, all as shown and described.

2. The combination of a fan-wheel, G, constructed and operating as described, with a spring-propelling wheel, and suitable connecting-mechanism to automatically prevent a too rapid evolution of the spring, as set forth.

3. The combination of the automatic fan-wheel regulator, spring-driving wheel, and a rotating shaft, said instrumentalities being connected by suitable mechanism, and operating together substantially in the manner specified.

98,315.—William H. Tillou, Le Roy, N. Y.—*Hames-Fastener.*—December 28, 1869.

Claim.—A hames-fastener, provided with slotted piece A, having hook *a'* at one end, and perforations through its sides at the other end, so that the fastener may be lengthened or shortened, without changing the leverage, substantially as shown and described.

98,316.—Elisha H. Tobey, Chicago, Ill.—*Breech-Loading Ordnance.*—December 28, 1869.

Claim.—1. The combination of the arms D, piston or recoil-block F, and operating-screw G, with the main portion of the gun A, and the breech-piece C, when the radius of the latter is below the major axis of the gun A, substantially as herein described, for the purpose specified.

2. The weights E, in combination with the breech-piece C and arms D, substantially as described, for the purpose specified.

98,317.—Frederick Townsend, Albany, N. Y.—*Machine for Quarrying and Dressing Stone.*—December 28, 1869.

Claim.—A vibrating loaded arm, carrying one or more stone cutting or dressing chisels, and receiving its movements from a revolving crank-pin, working in a slotted or forked arm, C, substantially as described.

98,318.—George P. Treulieb, Baltimore, Md.—*Meat-Cutter.*—December 28, 1869.

Claim.—1. In combination with the worm K, the frame N O R R, bearings S S, guides L L M, and slides P P P', all constructed and arranged substantially as and for the purposes specified.

2. The combination and arrangement of the block A, rollers *a a a*, worm-wheel B, worm K, its frame N O R R S S, guides L L M, slides P P P', screw I, and female screw U, substantially as and for the purposes herein set forth.

98,319.—R. W. Trude, Clearfield Bridge, Pa.—*Water-Wheel.*—December 28, 1869.

Claim.—1. The double wheel C, provided with vents or openings, for the escape of the water around the shaft B, and constructed substantially as herein shown and described, in combination with the casing D, as and for the purpose set forth.

2. The combination of the wheel C, casing D, and gate E, with each other, said parts being constructed and operating substantially as herein shown and described, and for the purpose set forth.

98,320.—Ludwig Ignatius Trueg, Saint Vincents, Pa.—*Sun-Dial.*—December 28, 1869.

Claim.—The graduated arc D, provided with slotted ends, in combination with the quadrant or gnomon E, and pivoted plate B, as shown and described.

98,321.—George E. Turner, Chicago, Ill.—*Hollow Grate-Bar Frame.*—December 28, 1869.

Claim.—1. The hollow grate-bar frame, made of two or more horizontal sections, substantially as set forth, to enable each section to expand independently of the others, as specified.

2. The stays or braces *d*, arranged in the sections of the hollow grate-bar frame, substantially as and for the purpose herein shown and described.

98,322.—Thomas Warren, Flint, Mich.—*Governor-Valve.*—December 28, 1869.

Claim.—In combination with the case A, provided with seats B B', openings C C', inlet-pipe N, and outlet-pipe E, the slide-valves F F', provided with ports G G', adjusting right and left screws I, guides H, nut K, and valve-stem L, in connection with any proper governor, when each of said parts is constructed as described, and all are arranged to operate as and for the purpose set forth.

98,323.—Thomas Waterhouse, West Gorham, and Charles F. McKenney, Saco, Me.—*Horseshoe.*—December 28, 1869.

Claim.—The arrangement, on a horseshoe, of the groove *a*, metallic strip *e*, screws *d*, and elastic sheet *b*, secured as described, and for the purposes set forth.

98,324.—James G. Weir, Pittsburgh, Pa.—*Wheelbarrow.*—December 28, 1869.

Claim.—Pivoting the wheel B to springs C, with the center of the wheel directly under the head-piece D, said springs being so arranged, with relation to the wheel B and frame A, that their back ends will slide in guides *f*, as herein described, and for the purpose set forth.

98,325.—Benjamin C. Wilkins, Elgin, Ill.—*Bed-Lounge.*—December 28, 1869.

Claim.—The construction of a bed-lounge, wherein the couch A, back B, leaf *a*, hinges *c* and *d*, hinged support *e*, and hooks *f* and *g*, are arranged and operated in the manner and for the purpose specified.

98,326.—Jesse A. Wilson, Hamburgh, Iowa.—*Cultivator.*—December 28, 1869.

Claim.—1. The castings E and I, constructed and secured to the ends of the beam C, substantially as herein shown and described and for the purposes set forth.

2. The bows F G and K L, constructed and arranged substantially as herein shown and described, in combination with the castings E I and tongue H, as and for the purpose set forth.

3. The slide-bar P O and adjustable bows M, in combination with the tongue H and beams C, substantially as herein shown and described and for the purpose set forth.

98,327.—S. E. Adamson, Philadelphia, Pa.—*Card-Holder.*—December 28, 1869.

Claim.—The adjustable end spring E, in groove or slot D, in combination with the pull B and sign or label C, constructed substantially as described, and operating as and for the purposes set forth.

98,328.—William Adel, Rockton, Ill.—*Eaves-Trough.*—December 28, 1869.

Claim.—1. The trough A, grooved bars B B, and partitions C C, all constructed substantially as described, and for the purposes set forth.

2. In combination with trough A, bars B B, and partitions C C, the pipes D and E, constructed substantially as described, and for the purpose set forth.

98,329.—Henry Aiken, Philadelphia, Pa.—*Stone-Separator.*—December 28, 1869.

Claim.—1. Separating stones from clay, by forcing the latter through elongated slots in a tapering cylinder, and discharging the former into a suitable receptacle at the small end of such cylinder, substantially in the manner and for the purpose specified.

2. The combination of the tapering slotted cylinder A, shaft B, with screw-formed beaters B^2, and stand C with hopper C^1, all arranged to operate substantially as and for the purpose set forth.

3. In combination with the elements of the preceding clause, the tapering cylinder D, substantially as and for the purpose set forth.

4. The combination of the tapering slotted cylinder D with the slotted pivoted gate D^1, friction-roller d^2, and guide D^2, when said parts are constructed and arranged as herein set forth.

98,330.—Otis N. Angell and Andrew J. Angell, Providence, R. I.—*Turbine Water-Wheel.*—December 28, 1869.

Claim.—1. The buckets B B, formed substantially as described, with an inward horizontal and a downward discharge, arranged in relation to and in combination with the eduction-ports F, as shown and specified.

2. The improved turbine-wheel herein described, provided with the buckets B B and the ports F, in combination with the valve-gates G and the stationary guides H, the parts being arranged and operating substantially as described, for the purposes specified.

98,331.—E. A. Archibald, Methuen, Mass.—*Machine for the Manufacture of Spoked Wheels.*—December 28, 1869.

Claim.—1. The pins *e*, in combination with the disk *a*, when arranged to be operated substantially as shown and described, and for the purpose specified.

2. The cutters *j* and *k*, or either of them, in combination with the disk *a* and clamping-mechanism, when constructed and arranged to operate upon either of the exposed surfaces of the nave-ends of the spokes, substantially as described, and for the purpose specified.

3. The arm *p*, pivoted as described, and arranged so as to swing to position over the wheel-center, and to be locked there while one or both faces of the nave-ends are being faced by the cutter or cutters borne by the arm, and so that said arm may be unlocked and swung outward, clear of the spokes, substantially as described.

98,332.—Aime Nicholas Napoleon Aubin, Montreal, Canada.—*Oil-Can.*—December 28, 1869.

Claim.—1. A self-sealing attachment to the neck of cans, consisting in a lever, D, bearing the cap, a spring *f*, and hinged prop F, constructed and operating substantially as described.

2. The wire gauze, covering the apertures inside of the can, not as a separate device, but in combination with the self-sealing attachment.

3. The projection K, in combination with the spout G, for the purpose hereinbefore set forth.

98,333.—Aime Nicholas Napoleon Aubin, Montreal, Canada.—*Peat-Machine.*—December 28, 1869.

Claim.—The side-pocket E, at a tangent of the curve described by the end of the fixed knives G, and the fixed knives G, in combination with the revolving knives F, the whole constructed and operating substantially and for the purpose hereinbefore set forth.

98,334.—Joseph Baker, Sheridan, assignor to himself and R. C. Hathaway, Ionia, Mich.—*Shingle-Machine.*—December 28, 1869; antedated December 9, 1869.

Claim.—In shingle-machines, the vibrating tilting-frame F, provided with racks *f f*^{1}, the pinions G and H, rock-shaft I provided with cams *i i*$'$, rocker-arm *h*, and feather M, the notched slide K, provided with stop-pin *k*, the rod *g*, stop O, and graduated stop-lever N, or their equivalents, when constructed, arranged, and operating substantially as and for the purposes set forth.

98,335.—E. A. Barton, Boonville, Ind.—*Combined Harrow and Seed-Sower.*—December 28, 1869.

Claim.—In combination with the seed-sower, harrow, and roller, constructed and operating as described, the tumbler-rod E and cleaning-teeth *e*, as and for the purpose set forth.

98,336.—Benjamin Baugh, Chadwick, near Bronsgrove, England.—*Enameling Iron and Steel.*—December 28, 1869.

Claim.—1. The method of producing ornamental designs and inscriptions in enamel upon metal tablets, by the use of stencils, substantially as set forth.

2. The method of producing pictorial designs of several colors in enamel upon metal plates, by the use of separate printings of the several colors upon suitably-prepared paper, and the transfer of the same to the surface to be enameled, and fusing thereon, substantially as set forth.

3. As a new article of manufacture, enameled metallic tablets, formed of designs produced in part by stenciling, and in part by printing and transferring, substantially as set forth.

98,337.—Luman L. Beach, Mount Upton, N. Y.—*Hand-Cultivator.*—December 8, 1869.

Claim.—1. The implement, consisting of the frame A, with the cross-bars I and I$'$, with the uprights B, and the adjustable handle C H, and the wheel D, all constructed and arranged substantially as described.

2. The combination of the cross-bars I I$'$, adjustable bars J J, provided with the notches *e* and standards E, when secured by the bolts *n*, as set forth.

98,338.—C. Becker and Morris Wise, New York, N. Y.—*Buttons.*—December 28, 1869.

Claim.—1. The fastening-screw *b*, provided with a shoulder, *e*, in combination with the tubular shank-head A and sleeve *c*, constructed and operating substantially as shown and described.

2. The eyelet *d*, in combination with the fastening-screw *b*, tubular shank-head A, and sleeve *c*, substantially as set forth.

3. The swivel-head *f*, in combination with the tubular shank A, sleeve *c*, and fastening-screw *b*, substantially as described.

98,339.—Charles H. Berry, East Somerville, Mass.—*Spring-Bed Bottom.*—December 28, 1869.

Claim.—In combination with the reversible slats *c*, the elliptical springs E, and plugs K, when constructed and operating as herein described and shown.

98,340.—Seymour A. Bostwick, Laconia, N. H.—*Tobacco-Cutter.*—December 28, 1869.

Claim.—1. The rotary cutter G, in combination with the slides K, ratchet L, and lever D, or the equivalents of said devices, substantially as set forth.

2. The pinion E, upon the shaft of the cutter G, in combination with the toothed bar F, substantially as set forth.

98,341.—B. F. Bowling, Holly Springs, Miss.—*Combined Cotton Scraper and Cultivator.*—December 28, 1869.

Claim.—1. The combination of the adjustable harrow E with the scraper, substantially as and for the purpose herein set forth.

2. The construction and arrangement of the oblique connecting-bar G, pivoted to the front upright B of the stock, and guided and braced by the rear upright C thereof, as described.

98,342.—Charles M. Bowman, Washington, D. C.—*Crossing Signals for Railways.*—December 28, 1869.

Claim.—1. The truck or slide C D, adapted to be drawn by the rotation of the locomotive-wheels, and to actuate a signal, H, of any suitable construction.

2. The inclined track or bar B, in combination with the truck or slide C D, for the purpose set forth.

98,343.—Washington Boyce, Tuscola, Ill.—*Apparatus for Filtering Volatile Liquids.*—December 28, 1869; antedated December 17, 1869.

Claim.—1. The cup A, provided with the movable cover E and rubber band D, so as to form an air-tight connection with the bottle or receiver C.

2. The perforated plunger B, the lower end of which is shaped like a cone, and which is provided with the grooves and openings, in the manner and for the purpose specified.

3. In combination with the above plunger, the floss, silk, or cotton wrappings, when used in the manner and for the purpose specified.

4. The combination of the cup A and the plunger B, when used in the manner and for the purpose specified.

98,344.—James M. Bucklin, Saint Louis, Mo.—*King-Bolt for Railway-Car Trucks.*—December 28, 1869.

Claim.—1. The king-bolt *z*, arranged to rest immediately on the transom of railroad-cars, and constructed to drop through the transom in disconecting the truck.

2. In combination with a railroad-car, the transom A, having central oblong slot *e*, with upright bearing-grooves, constructed and arranged to operate as specified.

3. In combination with the transom of a railroad-car, the oblong-headed bolt *z*, oblong slot *e*, and transverse seat *i*, with cover *n*, constructed and arranged to operate as specified.

98,345.—Riley Burdett, Chicago, Ill.—*Reed-Organ.*—December 28, 1869.

Claim.—1. The arrangement of the upper and lower wind-chests B$'$ and B, connected by the throat I, substantially as described.

2. The set L, placed vertically, or nearly so in

the socket-board, as described, and for the effect set forth.

3. The combination and arrangement of the key D, lever W, and block X, or its equivalent, with the tracker-pin E, for the purpose set forth.

4. The combination and arrangement of the foot-pedal keys S, long connecting-rod T, and extension-arm U, so that the keys of the lower bank may be operated by the pedal-keys when desired.

5. The manual sub-base, set into the throat of the bellows, and operated as described.

6. The combination and arrangement of the several parts described, and for the purpose set forth.

98,346.—HENRY K. BURKHOLDER, Clear Spring Pa.—*Grain-Separator.*—December 28, 1869.

Claim.—1. Providing the heads of a fan in a grain-separator with screens, substantially as and for the purposes herein set forth.

2. In combination with a fan-case, having an opening across its back, as above described, the outside shutters C C, connecting-bar *d*, rods *e e*, and adjustable weights *f f*, all substantially as and for the purposes herein set forth.

98,347.—CHARLES F. BURLEIGH, Tuftonborough, N. H.—*Automatic Fan.*—December 28, 1869.

Claim.—1. The spring-head pendulum as described, the same consisting of the ring E, bars *c c*, spring D, shaft *i*, pendulum-rod and fan-blade G, all combined, arranged, and operating as and for the purpose specified.

2. The combination, as described, of the eccentric *g* with the spring-head pendulum and fan-blade G, by means of the arm *h* and lever *n*, in the manner and for the purpose specified.

98,348.—LUKE CHAPMAN, Collinsville, Conn., assignor to himself and THE COLLINS COMPANY, same place.—*Lawn-Mower.*—December 28, 1869.

Claim.—The combination of the handles *p p*, attached to the shafts by adjustable sockets *r* and r^1, the shaft *b*, with its adjustable bearing *x x*, the toothed wheels *d* and *g*, and endless chain *e*, all constructed and arranged substantially as described.

98,349.—DANIEL G. CHASE, Boston, Mass.—*Button-Hole Cutter.*—December 28, 1869.

Claim.—The button-hole cutter, consisting of the jaw A, with the barrel B and spring *s* for holding the barrel in position, and the jaw A^1, with the cutter C and gauge G, constructed as described, and all combined and arranged, relatively to each other, as set forth.

98,350.—JAMES T. CORBITT, Des Moines, Iowa.—*Corn-Marker.*—December 28, 1869.

Claim.—The frames 2 2 and 4 4, when hinged as described, and provided with marking-wheels 1 1 1, in combination with the seat 8 and supporting-roller 10, all arranged and operating as specified.

98,351.—BENJAMIN P. CRANDALL, New York, N. Y.—*Children's Carriage.*—December 28, 1869.

Claim.—1. In a child's carriage, the combination, with the bearing to which the reach is immovably secured, of the front axle, pivoted to said bearing, substantially as and for the purpose described.

2. The casting J, constructed to support the reaches, form the bearings for the front axle, and guides for its oscillations, and receiving the spring which bears against said axle, substantially as described.

98,352.—MOSES G. CRANE, Newton, Mass., assignor to JAMES M. GARDINER, Saint Louis, Mo.—*Signal-Box Mechanism for Fire-Alarm Telegraph.*—December 28, 1869.

Claim.—In combination with a signal-box mechanism of a fire-alarm telegraph, an insulated circuit-wheel, (for breaking and closing the circuit,) automatically and continuously rotated by the stress of a spring or weight, exerted through a suitable train of gearing, substantially as described.

98,353.—ROBERT CREUZBAUR, Brooklyn, N. Y.—*Piston Liquid-Meter.*—December 28, 1869.

Claim.—1. The arrangement, within one barrel A, of two pistons, C and D, acting as valves for each other, substantially as and for the purpose hereinbefore set forth.

2. The arrangement of the two pistons C and D, acting as valves for each other, when the piston D, acting as valve for piston C, changes the ports for the latter at or near half stroke of D, and *vice versa*, and when the two pistons are disconnected and move independent of each other, substantially as and for the purpose hereinbefore set forth.

3. The combination, with a meter-shell, A, and one or more pistons, C and D, of the cork bulkheads named, substantially as and for the purposes hereinbefore set forth.

4. The combination, with a meter-shell, A, and pistons C and D, of the outside water-channels, arranged as shown, substantially as and for the purpose hereinbefore set forth.

5. The combination, with a meter-shell, A, and two pistons C and D, with their recesses 7 and 8, of the duplicate ports E and the duplicate ports S, substantially as and for the purpose hereinbefore set forth.

6. The combination, with a meter-shell, A, and two pistons C and D, of a bulkhead, H, with its rim h^2, and recesses h^3, substantially as and for the purpose hereinbefore set forth.

7. The small relief-ports *x* x', in combination with the piston-valves C and D, arranged as described and for the purpose named.

98,354.—JOHN J. CROOKE, Southfield, and LEWIS CROOKE, New York, N. Y.—*Plating Iron for the Manufacture of Hinges, &c.*—December 28, 1869.

Claim.—Plating metals, by the process described, that is to say, by first subjecting the rough metal to the pickling-process, then coating it with tin, or other soft metal, suitable to form a foundation for plating, then rolling the metal, to produce an even surface of the tin, or its equivalent, and then applying the plating-metal, substantially as hereinbefore set forth.

98,355.—C. W. DAWSON, Paynesville, Mo.—*Stump-Extractor.*—December 28, 1869.

Claim.—1. The cap H, constructed as described, and provided with ears *a a* and bar *b*, substantially as and for the purposes herein set forth.

2. The combination and arrangement of the frame A B C, standards G G, cap H, lever I, hooks *e* and *f f*, and block and tackle J, all constructed and arranged to operate substantially as and for the purposes herein set forth.

98,356.—EDWARD MORTIMER DEEY, New York, N. Y.—*Apparatus for Floating Ships over Sand-Bars.*—December 28, 1869.

Claim.—The apparatus herein described, consisting of the locks A A', provided with floats E E', canal B, and reservoir C, combined, arranged, and operating substantially as and for the purposes described and set forth.

98,357.—SAMPSON P. DICK and DAVID R. MUSSELMAN, Louisville, Ky.—*Tobacco-Press.*—December 28, 1869.

Claim.—1. In machines for making plug-tobacco, the combination of the shafts P with a roller, F, at each end, the rollers being connected with the shafts by means of a loose coupling, R, and the shafts Y with rollers E E at each end, all arranged and operating substantially in the manner and for the purpose herein set forth.

2. The arrangement of the series of double rollers D D, pulleys O, pinions S S, and connecting-bands C, all operating substantially as and for the purpose specified.

3. The rollers V V, arranged as described with relation to the rollers D D, and driven therefrom in the manner and for the purpose substantially as described.

4. The arrangement of the several series of double rollers F F, E E, D D, and V V, the pulleys O, toothed wheels S T, and bands C C, all operated by means of gearing G G G H H *i i*, and drive-wheel J, all constructed and arranged to operate substantially as herein described.

98,358.—JOHN DONALDSON, GEORGE REAVELY, and JAMES FRANCIS, Galashiels, Scotland.—*Choke-Block for Railways.*—December 28, 1869.

Claim.—1. In combination with the rails of a railroads witeh or "siding," the ehoke-bloeks C C′, so arranged and eonneeted that they are automatically removed from the traek by the pressure of the ear or locomotive wheel, substantially as deseribed.

2. The arrangement of the rail D, sway-bar G, with its connections, the bar J, lever L, and the key-bar N, substantially as described, for the purpose set forth.

98,359.—JACOB DOURSON, Columbus, Ohio.—*Bedstead and Lounge.*—Deeember 28, 1869.

Claim.—The eombination of the bedstead-frame A, mattress-frame B, double joints C, and plates D, all eonstrueted and arranged substantially as and for the purposes herein set forth.

98,360.—JACOB DOURSON, Columbus, Ohio.—*Extension Table Roller-Slide.*—December 28, 1869.

Claim.—1. The combination of the key or bed-piece B, rollers *e e*, and top-piece C, all constructed and arranged substantially as and for the purposes herein set forth.

2. In combination with the roller-slide B C *e*, the stop D, substantially as and for the purposes herein set forth.

98,361.—ALVA E. ELLIS, Friendsville, Ill.—*Quilting-Frame.*—Deeember 28, 1869.

Claim.—The combined quilting-frame and clothes-horse, herein described, construeted with frame A, cross-heads C, rollers E, eranks *a*, segments G, and rod H, as specified.

98,362.—OBED FARNESTOCK, Lebanon, Ind.—*Waiter.*—December 28, 1869.

Claim.—An improved waiter, having a reeess, as at C, to fit the arm, and a handle, D, underneath it, arranged and constructed in the manner shown, and for the purpose set forth.

98,363.—HENRY FAIRBANKS, Saint Johnsbury, Vt.—*Machine for Milling Knife-Edges of Scale-Beams.*—December 28, 1869.

Claim.—1. In a knife-edge milling-maehine, substantially as herein specified, the rocking-table B, tilting upon two axes, substantially as and for the purposes herein set forth.

2. In eombination with the milling-tools A A, and a tilting table, B, carried on a transverse slide, C, the employment of one or more adjusting-screws, *e e′*, arranged and adapted to serve, relatively to the other parts, substantially in the manner and for the purposes herein set forth.

3. The within-deseribed combination and arrangement of the tilting-table B, eross-shaft H, and inclines G G′, with their connections, adapted to operate together, as and for the purposes herein set forth.

4. In combination, the vertical slides F F′, the reversed inclines G G′, and cross-shaft H, arranged to transmit the proper tilting motion to the tilting-table B, without interfering with its transverse motion, substantially as and for the purposes herein set forth.

5. In a knife-edge milling-machine, the combination of a carrying-table, B, adapted to feed the work to the milling-tools, the supporting-pieces I, and adjusting-means N, adapted to apply directly under the knife-edges, all substantially as and for the purposes herein set forth.

98,364.—WILLIAM FIELDS, Wilmington, Del.—*Manufacture of Sheet-Iron.*—December 28, 1869.

Claim.—1. The mixing the irons, as hereinbefore set forth, and the use of the flour of zinc in the finishing of the same.

2. The use of the flour of zinc, in combination with the black lead and tallow, in the finishing of the iron, as hereinbefore described.

3. The application of the wooden faces to the steam-hammer and its anvil when used for the purpose of finishing iron.

4. Making and finishing sheet-iron, using all the articles as a combination, as hereinbefore specified.

98,365.—JAMES M. FORD, Brooklyn, N. Y.—*Sash-Cord Guide-Block.*—December 28, 1869.

Claim.—The cylindrical tube herein deseribed, having worms *b*, and isometrically-curved bore *c*, construeted and arranged to operate substantially as speeified.

98,366.—ISAAC N. FORRESTER, Bridgeport, Conn.—*Pump.*—Deeember 28, 1869.

Claim.—1. The annular-flanged piston-valve C, formed in two sections, as and for the purposes set forth.

2. The eombination of the cylinder, the piston, and the sectional valve, all construeted to operate as set forth.

98,367.—ISAAC N. FORRESTER, Bridgeport, Conn.—*Pump.*—December 28, 1869.

Claim.—The combination of the stationary tubular sectional piston-rod and its flanges with the flanged piston-valve and the reciprocating cylinder, all these parts being constructed to operate as set forth.

98,368.—ISAAC N. FORRESTER, Bridgeport, Conn.—*Pump.*—December 28, 1869.

Claim.—The eombination of the moving barrel A, stationary perforated tubular rod B, collars B^1, pistou-valve C, and receiving-valves *a a*, A^1, the whole arranged and operating substantially as and for the purpose set forth.

98,369.—JAMES D. FRARY, New Britain, Conn.—*Handle for Cutlery.*—December 28, 1869.

Claim.—The hollow handle, and the tang passing entirely through it, with the interposed filling, leaving spaces at one or both ends, to receive portions of the cap, or of the cap and bolster, east on the tang, substantially as and for the purpose described.

98,370.—EMERSON E. GORE, Phœnix, Oreg.—*Gang-Plow.*—December 28, 1869.

Claim.—1. The combination of the stops R′ R′ with the frames A and A′, and arms D′ and F′, whereby the latter are retained in an inclined position, and the plows thereby prevented from rising or falling, substantially as and for the purpose specified.

2. The links D′ F′, connecting the frame A A′, the hind links being slotted, for the purpose of allowing the plows to be raised in an inclined direction, as specified.

3. The hoisting-lever M′, link K′, and crank I′, in combination with the links D′ F′, and frames A A′, of a gang-plow, as specified.

4. The spring-catch O′, pivoted to the frame A, for the purpose of locking the frame A′ in its elevated position, as specified.

5. The frame A, supported on the front axle by the rods C, and on the swiveled caster-wheel O, substantially as described, so that it can be raised and lowered at will, to adjust the position of either plow, or of both, substantially as speeified.

6. The levers D, connected separately with the axle and with the frame A, for raising or lowering the latter, as speeified.

7. The lever P, connected with the swiveled shank N of the caster-wheel O, and pivoted to a jointed arm, Q, that projects from the frame A, to adjust the latter, substantially as herein shown and described.

8. The combination, with the frame A and axle B, of the jointed rod H, adjustable rod I, and jointed rod J, substantially as speeified.

98,371.—JOHN MCFARLANE GRAY, Liverpool, England.—*Steam Steering-Apparatus.*—December 28, 1869.

Claim.—1. In combination with a steering-engine, a screw and nut, one of which receives a rotary motion from the engine, and the other from the attendant, arranged to produce a differential traverse motion, and thereby control the action of the steering-means, substantially as herein set forth.

2. A rotating shaft connecting the steering-mechanism with the engine, in combination with apparatus arranged to produce a differential traverse motion to control the action, substantially as herein described, while the same is operated from the bridge or place of governance at will, as set forth.

3. The magnifying telegraph-director F^2, construeted with two joints, substantially as herein set forth.

4. The quadrants F^1 H^1, operated by worms, in the manner and for the purpose herein set forth.

5. Controlling the steering-engine and the steering-telegraph by one and the same motion-transmitter led from the place of governance, substantially as and for the purpose herein set forth.

98,372.—B. R. HAWLEY, Normal, Ill.—*Ventilator.*—December 28, 1869.

Claim.—The combination of the devices herein described, for ventilating and heating buildings, consisting of the hot-air shaft B, provided with dampers *a a*, the foul-air shaft F, and the space or chamber formed between the inner and outer walls, and in the floor and ceiling, said space or chamber being rendered air-tight from the outside by a continuous line of plastering or other equivalent, on the inside of the outside walls, substantially as set forth.

98,373.—THOMAS HEAP, Saint Joseph, Mo.—*Concrete Blocks for Building and other Purposes.*—December 28, 1869.

Claim.—1. A concrete building-block, formed of the materials, and compounded in about the proportions herein specified.

2. A concrete building-block, faced with the composition herein described, substantially in the manner specified.

98,374.—HENRY B. HEBERT, New York, N. Y.—*Grain-Drier.*—December 28, 1869.

Claim.—The arrangement, in transverse series, of the scattering-bars B with those of one series alternating with each other, in connection with the air-holes *a a*, arranged zigzag, and relatively to the said transverse and alternate bars, the whole together as described.

98,375.—H. M. HEDDEN, Worcester, Mass.—*Photographic Paper.*—December 28, 1869.

Claim.—1. A photographic paper, constructed substantially as and for the purposes set forth.

2. The loose central fibrous layer *a*, in combination with the sides B B, substantially as and for the purposes set forth.

98,376.—B. T. HENRY, New Haven, Conn.—*Method of Forming the Heads of Carriage-Springs.*—December 28, 1869.

Claim.—The method herein described of forming the heads of carriage-springs.

98,377.—THOMAS R. HERD, Allegheny, Pa.—*Car-Coupling.*—December 28, 1869.

Claim.—1. The carriage A^1, rollers A^2 B, rack A^3, shaft A^5, pinion A^4, ratchet A^6, and pawl A^7, in combination with the curved cone B^1, link B^3, spring C^1, and bumper A, having recesses B^1 and C, when constructed, arranged, and operating substantially as and for the purpose described and set forth.

2. The arrangement of the above devices, in combination with the bumper E, springs E^1 E^2, seat F, rollers G^1, and pin G, when constructed and arranged and operating substantially as described, and for the purpose set forth.

98,378.—GEORGE HERRICK, Waverly, N. Y.—*Railway-Car Truck.*—December 28, 1869.

Claim.—1. In combination with the bearing-plate B of a car-truck, provided with the guard-pins *z z*, the swivel-pedestal C, pivoted to the plate B, said pedestals having curved slots, *n n*, and forming bearings for the journals of the car-wheel.

2. The car-wheel D, having grooved axle *a'*, in combination with the swivel-pedestal C and pivoted brace H.

3. The car-truck herein described, having frame A, rubber cushions *v v*, bearing-plates B B, provided with pins *z z*, and pivoted to the slotted pedestals C C, braced by the pivoted bars H H, and forming bearings for the grooved axles *a' a'*, of the car-wheels.

98,379.—FRANCIS HOVEY, New York, N. Y.—*Carriage-Jack.*—December 28, 1869.

Claim.—The combination of the lever C, with its locking surfaces or stops *e*, the toggle-joint motion or motions D, and the lifting-bar B, in roller-sliding connection with the stand A, substantially as shown and described.

98,380.—R. B. HUGUNIN, Cleveland, Ohio.—*Sash-Holder.*—December 28, 1869.

Claim.—1. The longitudinally-grooved surface D, substantially as and for the purposes herein described.

2. The longitudinally-grooved surface D, roller E, projection C, in plate A B, substantially as and for the purposes herein described.

3. In combination with the elements of the second claim, the slotted springs F and F', for the purposes herein specified.

98,381.—THEODORE HYATT, New York, N. Y.—*Rendering Safes, Vaults, and Chests Fire-Proof.*—December 28, 1869.

Claim.—1. The use of cans or vessels, constructed of any non-corrosive material or materials, of any suitable form and size, containing gas or steam-producing materials, when said cans or vessels are placed in any position between the inner and outer walls or shells of fire-proof safes, and other structures, and enveloped and insulated from such walls and from each other, by means of a filling or packing of dry non-heat-conducting absorbent earth or earths, when such earths are combined in any proportions, with any chemical salt or salts, containing water of crystallization.

2. Insulating the vessels holding gas or steam-producing materials from the external walls of safes and other structures, by means of above-described dry compound.

3. Insulating the vessel containing steam-generating materials from the interior walls or shells of book-case, by the means and for the purposes set forth.

4. Insulating the cans containing gas or steam-producing materials from each other, by the means and for the purposes mentioned.

98,382.—JOHN HORSLEY, Cheltenham, England.—*Nitro-Glycerine Compound for Blasting.*—December 28, 1869.

Claim.—The manufacture of blasting powder, or explosive compound, by incorporating nitro-glycerine with any of the explosive mixtures or powders herein described, and in about the proportions herein set forth.

98,383.—JOHN HUGHES, Buchanan, Pa.—*Lantern.*—December 28, 1869.

Claim.—1. The combination of a pivoted locking-tongue, *h*, with a latch, E, applied to a lantern, substantially as described.

2. The application of perforated strengthening-strips *a* to the lantern-top A, substantially as and for the purposes described.

98,384.—M. G. IMBACK, Bethlehem, Pa.—*Curtain-Fixture.*—December 28, 1869; antedated December 18, 1869.

Claim.—1. The roller A, having two pulleys of unequal diameter formed upon one end, substantially as and for the purposes herein set forth.

2. The roller A, provided with pulleys D and G, of unequal diameter, in combination with one or more cords H, curtain C, weight K, or its equivalent, when used as shown, and for the purpose specified.

98,385.—PLATT C. INGERSOLL, Green Point, N. Y., assignor to himself and HORACE F. DOUGHERTY, same place.—*Mechanical Movement for Actuating Presses.*—December 28, 1869.

Claim.—The arrangement of the double or divided ratchet-wheel or wheels F F, the interposed connecting-chain pulley or body G, the lever or levers H, with their pawls I, the pulleys M, sheave or sheaves K and the chain or chains J, substantially as specified.

98,386.—JOHN G. ISHLER, Martinsville, Ill.—*Quilting-Frame and Clothes-Drier.*—December 28, 1869.

Claim.—1. In combination with the mortised posts A A, the cross-bars D D^1 D^2, having holes at

one end, the keys *b b*, and spool-pins *d d*, all as and for the purposes herein set forth.

2. The combination and arrangement of the posts A A, feet B B, notched pieces C C, end-rails E G, side-rails H H, cross-bars D D^1 D^2, hooks *a a*, *e e*, *i i*, and *h h*, keys *b b* and *m m*, and spool-pins *d d*, all constructed as described, and for the purposes herein set forth.

98,387. — JOHN JEANING, Plainville, Conn., assignor to himself and R. B. PRINDLE, Washington, D. C.—*Bleaching Cotton and Woolen Fabrics.*—December 28, 1869.

Claim.—1. The hereinbefore described process for bleaching woolen or cotton fabrics, substantially as set forth.

2. The hereinbefore-described soap, compounded of the ingredients and in the manner substantially as and for the purpose specified.

3. The hereinbefore-described bleaching-fluid, composed of the ingredients, and compounded in the manner substantially as and for the purpose shown.

98,388.—GEORGE JOHNSON, Cincinnati, Ohio.—*Hoisting-Machine.*—December 28, 1868; antedated December 17, 1869.

Claim.—1. The cross-head L, attached to the shifting-rod D, or other equivalent parts, having projections *l* and *l'*, substantially as and for the purpose described.

2. The lever J, so attached as to allow the poles of its fulcrum to pass through the shifting-rod D, and having an adjustable weight, K, as and for the purpose specified.

3. The combination, with the shifting-rod D, or other equivalent parts, of the cross-head L, projections *l l'*, lever J, and adjustable weight K, all operating together, as and for the purpose herein set forth.

98,389.—AMASA C. KASSON, Milwaukee, Wis.—*Ruffling-Attachment for Sewing-Machines.*—December 28, 1869.

Claim.—1. A ruffler for sewing-machines, consisting of the plate A, with the projection on its rear edge, and the plate B, having a corresponding projection, and with the slots in plate A, said plates being arranged as described.

2. A ruffler, constructed with two projections or plates, of uniform shape and size, and nearly so, for the upper fabric to pass between, said projection or plates bearing on the fabric equally on each side of the needle, substantially as herein described.

98,390. — THOMAS LAMB, Philadelphia, Pa.—*Sewing-Machine.*—December 28, 1869.

Claim.—1. A shuttle, F, having a hook, *d*, at the edge, and a hook, *e*, at the back, and revolving in an inclined shuttle-race, in combination with a bobbin, G, which lies within a perforated case, retained in a stationary position loosely within the shuttle, as described.

2. The hook *e*, beveled at the edge, arranged at the back of the shuttle, so as to be adjustable on the same, and operating substantially as specified.

3. A projection, *f*, arranged, in respect to the shuttle, substantially as and for the purpose set forth.

4. The presser-foot, attached to an arm vibrating on a fulcrum at the rear end of the machine, and operated by the needle-arm, as described.

5. A feeding-foot, K, attached to an overhanging arm, pivoted at the rear end of the machine, and operated vertically and laterally from the needle-arm by devices, substantially as described, and for the purpose specified.

6. The arm I, hung to the base-plate A, and carrying the arm L and slide *r*, in combination with a wedge, *q'*, which is forced between the slide and the arm L on the movement of the needle-arm, substantially as and for the purpose specified.

98,391.—WILLIAM LOVE, McConnellsville, Ohio.—*Ladies' Boot.*—December 28, 1869.

Claim.—A laced boot, having its vamp and flap forming one continued piece, the said flap covering the lacing, and secured to the sides of the quarters by buttons, or their equivalents, substantially as described.

98,392.—THOMAS LOWDEN, Boston, Mass., assignor to himself, GEORGE STOUT, and RICHARD J. LOWDEN, same place.—*Water-Wheel.*—December 28, 1869.

Claim.—A series of independent buckets, so pivoted that each one may, at a point above the center of the wheel, open or swing out away from the center, substantially as and for the purpose described.

98,393.—JAMES MAGEE, Usquepaugh, R. I., assignor to himself and S. A. ALPIN, same place.—*Adjustable Wrench.*—December 28, 1869.

Claim.—The improved adjustable wrench, composed of handle and jaw A, guide-bar B, spring D, and adjustable jaw C, constructed as described.

98,394.—LEANDER J. MCCORMICK, LAMBERT ERPELDING, and WILLIAM R. BAKER, Chicago, Ill., assignors to C. H. MCCORMICK AND BROTHER, same place.—*Harvester.*—December 28, 1869.

Claim.—1. The combination of the turning rake-arm *p*, swiveled connecting-rod p^2, socket p^1, crank *r*, link r^1, roller r^3, and guide-cam M, operating substantially as set forth.

2. The combination of the main frame, supplementary frame, driving-wheels, hinged finger-beam, the overhung reel, and the rotating turning-rake mounted on the finger-beam, all these parts being constructed for joint operation, as set forth.

98,395.—WILLIAM T. MCKEAN, East Palestine, Ohio.—*Washing-Machine.*—December 28, 1869.

Claim.—1. In a washing-machine, a roller-frame, jointed at its center, longitudinally, and resting upon fulcrum-pivots, so that the weight, attached to one end of said frame, shall press the jointed central portion against a rotating cylinder, as shown, and for the purpose herein specified.

2. The herein-described washing-machine, consisting of the box or trough A, the legs B, the fluted cylinder C, the shaft D, the boxes E, the crank F, the center-jointed frame G, G', G'', and G''', the weight L, the fulcrum-pivots M, and the rollers N, all constructed and arranged as and for the purpose specified.

98,396.—RUFUS N. MERIAM, Worcester, Mass.—*Cutter-Head.*—December 28, 1869.

Claim.—The rebating cutter-head, (constructed as herein shown and described,) consisting of the rectangular head A, provided with radial grooves *b*, for the reception of spurs C, and dovetailed grooves parallel with its axis, to receive the bolt for securing the cutter.

98,397.—JOHN A. MILLER, Shippensburgh, Pa.—*Horse Hay-Fork.*—December 28, 1869; antedated December 18, 1869.

Claim.—1. In combination with a hay-fork of any description, the gauge E, constructed substantially as described, and operating in the manner and for the purposes herein set forth.

2. The arrangement of the semi-elliptical prongs A A', gauge E, handles B B', loop D, and cord *b*, all the parts constructed and operating substantially as set forth.

98,398. — R. M. MILLER, Port Andrew, Wis.—*Clothes-Drier*—December 28, 1869.

Claim. — A clothes-drier, having its body, A, mounted on a post so as to revolve thereon, and provided with the arms B, made stationary, and the arms C and D, made adjustable, by means of a windlass, pulley, and cords, the whole arranged to operate as herein described.

98,399.—CHARLES J. NEGER, Philadelphia, Pa.—*Ventilator.*—December 28, 1869.

Claim.—The combination, with a stove or heater, of a curved flue, adapted for being connected to flues or pipes H H', as herein set forth, for the purpose specified.

98,400. — WILLIAM W. OGLESBEY, Benton County, Oreg.—*Salve.*—December 28, 1869.

Claim.—The manufacture or preparation of a compound which I denominate "Oregon Balm-of-Gilead Salve," of the ingredients, in the proportions, and for the purposes set forth.

98,401.—O. S. Osgood, Burlington, Iowa.—*Bed-Bottom.*—December 28, 1869.

Claim.—In combination with a bedstead, the cross-bars B and D D, spring-slats C C, cross-slats E E, and bed-slats G G, all constructed and arranged as herein set forth.

98,402.—Addison Overbagh, Scranton, Pa.—*Device for Lubricating Journals.*—December 28, 1869.

Claim.—The combination, within the box, as shown, of the flanged journal A, bearing B, with groove *a*, chain C, and oil-receptacle D, all constructed to operate substantially as specified.

98,403.—Lindon Park, Brady, Pa.—*Window-Blind.*—December 28, 1869.

Claim.—1. The independent links E E, made of metal or other material, fitting in notches G G, in the edges of the slats D, and connecting the double tape lines or strings C C, as herein shown and described.

2. In combination with the above, the zigzag method of folding up the bliud with a drawing-string, J, passing through holes K, in the slats D, and fastening on a button, N, on the lower slat, as herein shown and described.

98,404.—Isaiah Paxson and Charles Paxson, New York, N. Y.—*Solar Camera.*—December 28, 1869.

Claim.—1. The combination of the springs P P and rebated strips R R with the negative-holder O, with or without the intermediate strips *h h*, substantially in the manner and for the purpose hereinbefore described.

2. The combinatiou and arrangement of the vertical screw-rods D with the printing-board C, the said rods having wheels E on their upper ends, which have the endless chain F in connection, all operating conjointly, as and for the purpose specified.

98,405.—Seth W. Perkins, Geneseo, Ill.—*Extinguisher.*—December 28, 1869.

Claim.—The case B, combined with the pivoted jaws *b*, arms *b'*, and weights *b''*, in the manner and for the purpose set forth.

98,406.—N. Petrè, New York, N. Y.—*Lock.*—December 28, 1869.

Claim.—In combination with a single cut-away disk, the stop and spring, when the spring acts to both push and pull the disk against the frame, substantially as described and represented.

98,407.—Joseph F. Pool, Monroe, Wis.—*Seed and Grain Separator.*—December 28, 1869.

Claim.—1. The frame E, constructed as described, with a partition, *c*, to form the V-shaped chamber G, said chamber being provided with sliding-door *d* and hopper-screen H, substantially as and for the purposes herein set forth.

2. The arrangement of the arms O O, slotted plates P P, and set-screws R R, for the purpose of raising and lowering the rocking-shaft N, substantially as herein set forth.

3. The within-described arrangement of feed-board C, spring D, shaft Y, frame E, stationary rollers *a a*, adjustable rollers *b b*, arms O O, slotted plates P P, and rocking-shaft N, all constructed and operating in the manner and for the purpose set forth.

98,408.—Charles Pratt, New York, N. Y.—*Nozzle for Oil-Cans.*—December 28, 1869.

Claim.—A removable or detachable nozzle for cans, &c., composed of a spout, for the discharge of the liquid, and a vent-tube or conduit, for the admission of air, substantially as set forth.

98,409.—George M. Pratt and L. E. Maynard, Middletown, Conn., assignors to The Finkle and Lyon Manufacturing Company, same place.—*Thread-Controller for Sewing-Machine.*—December 28, 1869.

Claim.—The slotted lever D, constructed as shown, and arranged transversely across the path of the needle, in combination with the pin *a*, on the needle-bar, and the fixed eyes E and F, all operating substantially in the manner and for the purpose herein set forth.

98,410.—A. B. Prouty, Worcester, Mass., assignor to Samuel V. Essick, Mansfield, Ohio.—*Knitting-Machine.*—December 28, 1869.

Claim.—1. The combination of the toothed work-holding disk with the wheel S, having teeth on its periphery, serving to propel the disk, and also notches or teeth on its upper surface, by which it is itself propelled, substantially as shown and described.

2. The combination, with the wheel S, of the propelling-pawl R, mounted on a reciprocating shaft, arranged to rock in its bearings, so as to bring either arm of the pawl into or out of action, substantially as shown and described.

3. The combination of the cam O on the driving-shaft, the reciprocating rocking-shaft Q, and its pawl R, wheel S, spring switch-lever V, and adjustable pin or pins on the disk.

4. The combination of the pin or projection Y on the needle-stock, the slide U and its spring 5, and the wheel S, substantially as shown and described.

5. The combination, with the toothed disk, of the hanger 6 and the spring-piece or deflector 4, substantially as shown and described.

98,411.—D. J. Pruner, Bellefonte, Pa.—*Hydrant.*—December 28, 1869.

Claim.—1. The combination and arrangement of a pit-lining, A, and a removable hydrant, constructed with metal shoulder M, and attached to the supply-pipe by the slanting joint-plates B and *e*, as specified.

2. In combination with a pit-lining, A, the removable hydrant, herein described, having slanting joint B, pipes *p* and *c'*, cut-off disks *l* and *t*, shoulder *r*, jaws *n*, springs S and *m*, struts K, and plates M and *z*, constructed and arranged to operate as specified.

3. In combination with a pit-lining, A, the removable hydrant, herein described, having slanting joint B, pipes *p* and *c'*, cut-off disks *l* and *t*, shoulder *r*, jaws *n*, wedges *v v*, adjustable spring *m*, struts K, and plate M and *z*, as specified.

4. In combination with the cut-off plate *t*, with elbow *r*, the plate *l* having three apertures, viz, an inlet, *e*, and outlets *e'* and *e''*, constructed and arranged to operate as specified.

98,412.—Aaron C. Pry, Keedysville, Md.—*Hopper-Boy Rake.*—December 28, 1869.

Claim.—The shaft A, provided with a spiral longitudinal groove, in combination with the rake B, provided with a suitable spline or splines, substantially as shown and described.

98,413.—Amos Raffensparger and D. G. S. Gochnauer, Mulberry, Pa.—*Seed-Sower.*—December 28, 1869.

Claim.—1. The combination of the frame A, springs B B, cylinder C, pivots *a a*, spring *d*, and cord or strap *b*, all substantially as and for the purposes herein set forth.

2. The arrangement of the arm G, ratchet-wheel H, screw-rod I, pinion *i*, and indicator *m n*, all substantially as and for the purposes herein set forth.

3. The combination and arrangement of the frame A, springs B B, cylinder C, pivots *a a*, spring *d*, arm G, ratchet-wheel H, screw-rod I, pinion *i*, and indicator *m n*, all constructed as described, and operating substantially in the manner and for the purposes herein set forth.

98,414.—J. P. Randolph, Marietta, Ohio.—*Feed-Cutter.*—December 28, 1869.

Claim.—1. The combination of the lever C, having a hook, C^2, formed upon one side, with the guide B^1 of the frame B, substantially as and for the purpose set forth.

2. In combination with the above elements, the knife-frame D, knife D^1, and link C^3, substantially as and for the purpose set forth.

3. The plate E, constructed with oblique flanges, and arranged substantially as and for the purpose set forth.

4. The plate G, constructed with oblique flanges, and arranged to operate substantially as and for the purpose set forth.

98,415.—E. C. Ranks, Boston, Mass.—*Folding-Chair.*—December 28, 1869.

Claim.—As an improvement in folding-chairs, the elongated eyes I, encircling the grooves *a*, in the round J, in combination with the cross-legs A B E, the round N, and staples L, arranged longitudinally and horizontally beneath the seat H, as and for the purpose set forth.

98,416.—S. H. Ransom, Albany, N. Y.—*Base-Burning Stove.*—December 28, 1869.

Claim.—1. The independent vertical ascending flue S, inclosed by the vertical descending flue H, and arranged to operate substantially as described.

2. The flues S H, combined with a hollow flue-base, A, substantially as described.

3. The arrangement of direct-draught damper K, in the relation shown to the exit-passage S, substantially as described.

4. The wings or side plates *p p*, applied to outlet-passage N and magazine G, substantially as described.

5. The combination, with the grate-hook *d*, of the slide *b* and button *c*, substantially as described.

6. The fire-pot C, constructed with a beveled bottom edge, and fitted upon the corresponding beveled surface *v*, of the ring B^2, substantially as described.

98,417.—George N. Rex, Butler, Ind.—*Road-Scraper.*—December 28, 1869.

Claim.—In combination with the box A and revolving bottom D, the vertically-placed bail *b*, made L-shaped at the bottom, and pivoted to the horizontal pins *d d*, upon which rest the springs *e e*, to control the bail *b*, all substantially as and for the purposes specified.

98,418.—L. Rodenhausen, Philadelphia, Pa.—*Spring-Coupling.*—December 28, 1869.

Claim.—The two-part coupling A B, the part A being provided with groove A, substantially as and for the purpose described.

98,419.—Benjamin K. Rogers, Jonesport, Me.—*Ship-Pump.*—December 28, 1869.

Claim.—A ship's pump, having cylinders B, plungers C, rods D, standard G, levers H and *c*, plate K, ratchets L and P, and walking-beam N, constructed and arranged substantially as specified.

98,420.—H. W. Safford, New York, N. Y.—*Head-Rest for Car-Seats.*—December 28, 1869.

Claim.—The combination of the sliding standards A A A, cases *a' a' a'*, and pads C C, with the reversible back of a railway-car seat, substantially as and for the purpose hereinbefore set forth.

98,421.—Jacob F. Saiger, Shelby, Ohio.—*Curing and Preserving Butter.*—December 28, 1869.

Claim.—The arrangement or process herein described for curing and preserving butter, substantially as specified.

98,422.—Jacob Scott, Earlville, Iowa.—*Pump.*—December 28, 1869.

Claim.—A pump, consisting of the perforated chamber A, and pump-stock B, eduction-pipe B', hinged valves C and C', eduction-passage D, solid piston E, piston-rod E^1, lever E^2, and fulcrum G, all as shown and described.

98,423.—William Sellers, Philadelphia, Pa.—*Lathe.*—December 28, 1869.

Claim.—1. The beveled projection *d*, or its equivalent, when used in combination with the clamp C, substantially as and for the purpose specified.

2. The screw D and nut E, in combination with the set-screw *g*, or its equivalent, for the purpose specified.

98,424.—Merville Shaffer, La Fayette, Ind., assignor to Ford Tanner, same place.—*Basket-Machine.*—December 28, 1869.

Claim.—The pins or guides *f*, in combination with the screw-rod *g* and socket *a*, as herein set forth.

98,425.—Taliaferro P. Shaffner, Louisville, Ky.—*Manufacture of Nitro-Glycerine.*—December 28, 1869.

Claim.—The combination of mechanical parts, and the process of washing and agitating nitro-glycerine, submerged in or mixed with water, pure, or impregnated with an alkali, substantially in the manner and for the purposes hereinbefore described.

98,426.—Taliaferro P. Shaffner, Louisville, Ky.—*Process of Preserving Nitroleum and other Explosive Liquids.*—December 28, 1869.

Claim.—The use of sponge, or other equivalent elastic porous substance, to hold in suspension, by capillary attraction, nitro-glycerine, or other equivalent explosive liquid, for the purpose of storing or transportation, in the manner and substantially as hereinbefore described.

98,427.—Taliaferro P. Shaffner, Louisville, Ky.—*Explosive Compound.*—December 28, 1869.

Claim.—1. The combination of gun-cotton or other high explosive substance with nitro-glycerine, in the manner substantially as hereinbefore described.

2. The combination of gun-cotton or other elastic explosive substance, with nitro-glycerine, in the manner substantially as hereinbefore described.

3. The combination of nitrated fiber, of whatsoever form or texture, with nitro-glycerine, in the manner substantially as hereinbefore described.

4. The combination of twisted, compressed, loose, or other-conditioned nitrated or explosive fiber, with nitro-glycerine, in the manner substantially as hereinbefore described.

98,428.—Taliaferro P. Shaffner, Louisville, Ky.—*Blasting-Fuse.*—December 28, 1869.

Claim.—1. The combination of a train or blasting-fuse with a metallic or other suitable cup or vessel, charged with fulminate or detonating-powder, substantially in the manner and for the purposes hereinbefore described.

2. The combination of materials of different explosive powers and densities in the same fuse, or in parts of fuses, when incased and so connected that the ignition of the one will reach the other, substantially in the manner and for the purposes hereinbefore described.

98,429.—James T. Shattuck, Natick, Mass.—*Well-Tube.*—December 28, 1869; antedated November 27, 1869.

Claim.—1. The elliptical perforated tubes *s s*, in combination with the main driving-tube T, substantially as described.

2. The arrangement and combination of the main tube T, small tubes *s s*, and clearing-tube *t t*, substantially as and for the purposes hereinbefore set forth.

98,430.—Thomas Shaw, Philadelphia, Pa.—*Machine for Pressing Clay Pipes.*—December 28, 1869.

Claim.—1. The pipe-press herein described, consisting of the tub *b*, cover *k*, disk *l*, with rods *f f*, and hollow rod *c*, with its inlet *e* and outlet *i*, when constructed and operated in the manner and for the purpose herein set forth.

2. In connection with the above-named parts, the piston *m*, when constructed and combined with said parts, as and for the purpose herein set forth.

98,431.—Daniel Sherwood, Lowell, Mass., assignor to Woods, Sherwood and Company.—*Knife-Rest.*—December 28, 1869.

Claim.—As a new and improved article of manufacture, a knife-rest, made of twisted wire, substantially as described and specified.

98,432.—Daniel Sherwood, Lowell, Mass. assignor to Woods, Sherwood and Company.—*Table-Caster.*—December 28, 1869.

Claim.—As a new and improved article of manufacture, a table-caster, constructed of wound wire, substantially as described and specified.

98,433.—Daniel Shockey, Waynesborough, Pa.—*Carriage-Springs.*—December 28, 1869.

Claim.—The combination of the guide bars ,*a* struts *a'*, cushions *a'' b*, axle A, cross-bar A', in the manner and for the purpose specified.

98,434.—Valentine J. Shryock, Folsomville, Ind.—*Tobacco, Hay, and Cotton Press.*—December 28, 1869.

Claim.—1. The arrangement, upon the bed A, between the standards B B and braces C C, of the track G, carriage H, and board I, the latter connected, by the ropes *a a*, to the windlass K, substantially as and for the purposes herein set forth.

2. The arrangement of the rods *d d*, slotted bar *b*, and wedges *e e*, for the purpose of holding the hogshead on the board I, when pressing the tobacco, substantially as herein set forth.

3. In combination with the devices herein described, for moving and holding the hogsheads J J, the windlasses M M, ropes *f f* and *h h*, levers L L, and cam-shaped bars N N, all substantially as and for the purposes herein set forth.

98,435.—William Slade, Sr., Gum Creek, Ga.—*Water-Wheel.*—December 28, 1869.

Claim.—1. The combination of the bolts D D, crank E, with handle *f*, and springs *e e*, all constructed as described, and operating substantially as and for the purposes herein set forth.

2. In combination with the bolts D D, crank E, handle *f*, and springs *e e*, the projections *i i*, arranged as described, to operate substantially in the manner and for the purposes herein set forth.

3. The combination and arrangement of the shaft A, arms B B, swinging paddles C C, rods *d d*, bolts D D, cranks E E, springs *e e*, handle *f*, and projections *i i*, all constructed and arranged as described, substantially as and for the purposes herein set forth.

98,436.—Alfred E. Smith, Bronxville, N. Y.—*Carriage-Axle.*—December 28, 1869.

Claim.—The arrangement, herein described, of the axle A, skein H, thread *c*, nut G, conical washer *s*, grooved channel *d*, and recess *a*, when the same are constructed substantially as specified.

98,437.—Augustus B. Smith, Philadelphia' Pa.—*Skates.*—December 28, 1869.

Claim.—1. The lever E, hinged to the runner A, and having, at its outer end a lip, *h*, adapted to a recess in a block, F, attached to the heel of the boot or shoe, all substantially as set forth.

2. The combination of the said lever E and its lip *e*, with the curved wedge H, on the under side of the heel-plate.

3. The combination of a single strap, G, secured to the sole-plate with the lever E.

98,438.—Friend W. Smith, Jr., Bridgeport, Conn.—*Picture-Nail.*—December 28, 1869.

Claim.—The flexible and elastic diaphragm or lining attached to the back of the head, to operate substantially as and for the purpose herein set forth.

98,439.—William H. Smith, Charlestown, Mass.—*Metallic Cartridge.*—December 28, 1869.

Claim.—1. The chamber or recess C', surrounding the base of the nipple D, and communicating with the interior of the cartridge, by means of a number of openings, *c*, substantially as and for the purpose specified.

2. The nipple D, constructed as described, in combination with the head B, provided with the recess C', and openings C and *c*, substantially as shown, and for the purpose set forth.

98,440.—William M. Smith, Columbus, Ohio.—*Chair-Frame.*—December 28, 1869.

Claim.—1. The part, Fig. 2, as shown and described, when constructed and used in the manner and for the purpose specified.

2. The combination of the parts as shown in Figs. 2, 3, and 4, constructed and used in the manner specified.

98,441.—C. A. Snyder, Richmond, Va.—*Tag for Mail-Bags.*—December 28, 1869.

Claim.—1. The plate A, constructed as described, with slot *a*, block B containing the spring-catch *e*, and a recess having transverse grooves at its ends for the insertion of the ticket, substantially as herein set forth.

2. The lid or cover C, pivoted at one end to the plate A, and having at its outer end a notch, *b*, and on its under side longitudinal grooves for the insertion of glass, mica, or other suitable transparent material, substantially as herein set forth.

3. The combination of the plate A, block B, spring-catch *e*, and cover C, all constructed as described and for the purposes set forth.

98,442.—John H. Steiner, Philadelphia, Pa., assignor to himself and Christian Sharps, same place.—*Apparatus for Producing and Carbureting Hydrogen-Gas.*—December 28, 1869.

Claim.—1. Generating hydrogen-gas by treating a mass of iron or zinc scraps or filings with acidulated water, which is caused to pass through the mass of metal, without being retained in contact with the same.

2. The combination, with a receptacle, containing a mass of zinc or iron scraps, of a reservoir, containing acidulated water, which is passed among the particles of metal and from the same, either continuously or intermittently, for the purpose described.

3. The combination of a gasometer, a chamber, containing a supply of acidulated water, and devices, whereby the passage of the liquid from the chamber is regulated on the movement of the gasometer, for the purpose set forth.

4. A deflector, F, arranged, in respect to a pipe, E, for distributing a fluid over a mass of metal, below the deflector, substantially as set forth.

5. The combination of the metal-receptacle, a chamber below the same, and a waste-pipe, so arranged as to prevent the liquid from reaching the metal after passing from contact with the same.

98,443.—Lewis Theobald, Bremen, Ind.—*Carriage.*—December 28, 1869.

Claim.—A coupling or reach, A, constructed of two parts, B and C, connected together by a double socket and bolt, *b*, with intervening leathers F and G, all arranged substantially as herein described.

98,444.—Leopold Thomas, Pittsburgh, Pa.—*Machine for Making Railroad-Spikes.*—December 28, 1869.

Claim.—1. Two circular pointing-rollers, presenting three rotating sides, in combination with an abutment, which presents one stationary side, said parts being arranged so as to gripe the spike-rod point, and cut off the spike-blanks, and deliver them, in position to be carried to the heading-dies, substantially as specified.

2. The laterally-reciprocating carrier-device S, adapted for delivering a spike-blank into a heading-die, and also holding it firmly therein while the heading is being done, substantially as described.

3. Two heading-dies, in combination with a laterally-reciprocating carrier, which will alternately deliver the blanks into said dies, substantially as specified.

4. The combination of two heading-dies, two headers, and a laterally-movable blank-carrier, substantially as specified.

98,445.—James W. Tufts, Medford, Mass.—*Soda-Water Apparatus.*—December 28, 1869.

Claim.—The sirup-cocks E, connected with the bottoms of the cans C by means of flexible tubes G and pipes *c*, whereby the cans may be turned back to afford access to the couplings or connections, substantially as set forth.

98,446.—M. P. Turner, Des Moines, Iowa.—*Wall for Buildings.*—December 28, 1869.

Claim.—1. A wall for buildings, constructed as described, by placing the brick on their edges, their ends separated by vertical wooden studs, and bound with wire placed horizontally between each layer of brick, substantially as herein set forth.

2. The combination of the corner-post *a*, brick *b*, studs *d*, and wires *c i*, all arranged substantially as and for the purposes herein set forth.

98,447.—Oliver Tyson, Otho, Iowa.—*Gauge for Filing Saws.*—December 28, 1869.

Claim.—1. The rollers B, slotted bearings *b*, and frame A, when combined in and for the purpose described.

2. The latch D, having the projection *d*, when combined with the frame A, as and for the purpose described.

3. The device described, consisting essentially of the frame A, rollers B, bearing-bar C, and latch D, when combined as and for the purpose described.

98,448.—GEORGE M. VAN BUREN, New York, N. Y.—*Ticket-Holder.*—December 28, 1869.

Claim.—A ticket-holder, constructed with a portion of one side at the end left off, whereby the contents may be seen in connection with the covering-lid B, and diagonal division-plate *b*, substantially as and for the purpose described.

98,449.—CHARLES C. WAGGONER, Saint John's, Ohio.—*Steam-Engine.*—December 28, 1869.

Claim.—1. The arrow-headed arm E, slide D, lever B, and valve-levers *a'*, combined and arranged substantially as set forth.

2. The rod G, having a right-and-left screw connection, combined with the valve-levers *a'*, as and for the purpose described.

3. The rotatable stress-head *d*, provided with pins *d'*, in combination with follower-screw *e*, elbow-springs *c'*, and packing-ring *c*, substantially as specified.

98,450.—WASHINGTON WALLICK, Philadelphia, Pa., assignor by mesne assignments to WALLICK AND ASAY, same place.—*Manufacture of partly Gilt Frames.*—December 28, 1869; antedated December 22, 1869.

Claim.—The finishing and priming of such portions of wood moldings or oval or arched top frames as have to be gilded prior to the finishing of the main body, as and for the purpose herein set forth.

98,451.—JOHN P. WHIPPLE, Woonsocket, R. I.—*Apparatus for Filling Vials.*—December 28, 1869.

Claim.—The combination and arrangement of the chamber A, gooseneck D *b*, elastic bulb F, gauge E, and spring-compression rod G, in such manner as to draw back to said chamber A any surplus fluid that may have been discharged therefrom, as shown and described.

98,452.—JAMES H. WHITNEY, Brooklyn, N. Y.—*Feeding-Mechanism for Sewing-Machine.*—December 28, 1869.

Claim.—1. The arrangement and combination of the lever D, with its cam-grooves *e* and *f*, the studs *b* and *c*, and feed-bar C, with its surface I, the whole constructed and operating substantially as described and specified.

2. The combination, with the lever D, constructed as described, of the dog E, for regulating the feed of the machine, substantially as described and specified.

98,453.—CHARLES H. WIGHT, Baltimore, Md.—*Stationery-Furniture.*—December 28, 1869.

Claim.—The arrangement upon stand A, of stamp-safe G, calendar B, pen-rack K, letter-scale E, thermometer F, ink-receptacles H I, swinging mucilage-bottle W, and sponge-cup C, in the manner and for the purpose described.

98,454.—C. S. WILLIAMSON, Covert, N. Y.—*Machinery for Operating Churns.*—December 28, 1869.

Claim.—The within-described machine for operating churns, constructed and arranged substantially in the manner herein set forth.

98,455.—ALBERT M. WINN, JEFFERSON KINDLEBERGER, and WILLIAM AUGUSTUS ARNOLD, San Francisco, Cal., assignors to "THE INVENTORS' ASSOCIATION," same place.—*Machine for Boring Blind-Stiles.*—December 28, 1869.

Claim.—1. The combination of the upper and lower series of adjustable bit-holders D' and D, herein described, with the table J, substantially as and for the purpose specified.

2. The combination of the cams M and N, lever P, and block K, or equivalent devices, with the table J, when constructed and arranged substantially as herein described.

3. The sliding-bar V and pulley T, in combination with the operative mechanism described in the second claim.

4. The spacer *b*, composed of the fixed forks *d d* and the adjustable forks *e e*, substantially in the manner and for the purpose described.

98,456.—FREDERICK WITRAM, San Francisco, Cal.—*Harvester-Cutter.*—December 28, 1869.

Claim.—The combination of the slotted cutters, the T-pieces, and cutter-bar, arranged to operate substantially as described.

98,457.—MOSES B. WRIGHT, West Meriden, Conn.—*Apple Coring and Slicing Machine.*—December 28, 1869.

Claim.—1. The slotted plate G, in combination with the head-piece L, so arranged that the knives *e e* will pass through the slots, for the purpose set forth.

2. The combination of bar H, provided with nipple I, with slotted plate G, and head-piece L, and tube J, all constructed and arranged to operate as described.

3. The combination and arrangement of the hollow shaft or tube J, provided with flange *a*, and moving in the standards E E, circular knife *f*, conical head piece L, with cutters *e e*, ferrule K, bar *h*, slotted plate G, and knob *m*, all constructed as described, and arranged to operate substantially in the manner and for the purposes herein set forth.

98,458.—GEORGE F. BOWMAN, Cleveland, Ohio.—*Mounting Writing-Slate.*—December 28, 1869.

Claim.—A common framed slate, secured within a portfolio by means of metallic end-cars C, and supported along its entire length by a metallic back, B, fitted thereto, made in one piece with the ears, and constituting the seat or receptacle for the slate-frame E, and the back of the portfolio A, so that the slate may be removed when necessary, as described.

98,459.—ADAM GOOD, Jr., Titusville, Pa.—*Clamps for Elevating Well Tubes and Rods.*—December 28, 1869.

Claim.—1. The tube-clamp C, constructed as described, with a hinged part, C', in such manner that the whole clamp can be opened for the purpose of admitting the tube or pipe within the clamp sideways, and locked together, so as to complete the circle of the clamp, substantially as hereinbefore described.

2. In combination with a clamp having a hinged section, C', as described, the spring-bolt D, inserted in the journal *c'*, in an axial direction, for the purpose of locking the hinged section C' to the fixed part C, when the tube is embraced between them, substantially as before described.

3. The hinged section C' of the clamp, provided with a bearing-block, c^8, in connection with a receiving-notch c^9, in the fixed part C, for the purpose of supporting the hinged section, and relieving it from strain when the two parts are locked together, as before described.

4. The combination of a hinged sucker-rod wrench, E, with a clamp, constructed with a hinged and fixed section, C and C', substantially as before described.

5. The sucker-rod wrench E, hinged to the clamp, so that it may be turned over or swung back off the opening in the clamp, when not desired for use, substantially as before described.

6. The socket c^5, for the reception of a sucker-rod wrench, which may thus be connected to the clamp, so that it may be removed therefrom and replaced by another having a larger or smaller opening to suit different sizes of sucker-rods, as hereinbefore described.

7. The clamp constructed with one or more lugs c^4 c^5, for the purpose of receiving the arresting-catch H, and the cam-head wrench F, and the wrench-clamps E E', in the manner and for the purpose hereinbefore described.

8. The combination of an elevating swiveled tube-clamp, C C', with a hinged tube-catch, H, operating in the manner substantially as hereinbefore described.

9. The combination of an elevating swiveled tube-clamp with a double eccentric tube-wrench, F, in the manner substantially as hereinbefore described.

10. The combination of the hinged and fixed parts of the clamp C C', hinged wrench, the spring-catch D, with the bail or stirrup A and the swiveled ring B, the whole constructed and arranged substantially as before described.

EXTENSIONS.

JAMES E. SIMPSON, Brooklyn, N. Y.— *Dry-Docks.*—Patented December 5, 1854, No. 12,034; extended January 12, 1869.

Claim.—The method herein described of constructing dry-docks by making use of the natural stratum of clay for the floor of the dock, and continuing the same up through the walls by means of puddling, in the manner set forth, the front of the dock being furnished with gates for the admission of the vessel, as described.

JOHN PEPPER, Gilford, N. H.—*Circular-Knitting Machines.*—Patented December 5, 1854, No. 12,046; reissued October 27, 1863, No. 1,555; extended January 12, 1869.

Claim.—1. The sliding detached needles, in combination with a cam, or its equivalent, for operating two, three, four, or more of them at one and the same time, substantially as described.

2. The series of ribbing-needles, in combination with the plain needles of a circular-knitting machine, operating in the manner substantially as set forth, for the purpose specified.

3. Making a part of the cam or lip which actuates the ribbed needles removable, for the purpose of introducing and withdrawing the needles, as set forth.

4. Making a part of the lip of the cam-plate adjustable, for the purpose of varying the length of stitches as required.

5. Inclining the plane of one series of needles to the plane of rotation of the other series, for the purpose set forth.

ELIAS INGRAHAM, Hartford, Conn.—*Design for Clock-Case.*—Patented December 3, 1861, No. 139; extended January 12, 1869.

Claim.—The design for a clock case as hereinbefore illustrated and described.

AARON H. ALLEN, Boston, Mass.—*Seats for Public Buildings.*—Patented December 5, 1854, No. 12,017; reissued January 15, 1861, No. 21; extended January 12, 1869.

Claim.—A swinging or lever-seat, set and moving upon a cross-shaft or hinges, and sustained when in use by a stop or stops, so disposed as that the rear portion of the seat comes in contact with said stop or stops when the seat is turned down, substantially as herein set forth, and whether combined or not with weights or springs whereby the said seat may assume and retain a vertical or raised position automatically, as herein specified.

CYRENUS WHEELER, Jr., Auburn, N. Y.—*Grain and Grass Harvesters.*—Patented December 5, 1854, No. 12,044; reissued January 3, 1860, No. 875; extended January 12, 1869.

Claim.—1. In combination with the hinged bar H, and the finger-bar, the intermediate shoe M, hinged to said bar H, substantially in the manner and for the purpose set forth.

2. In combination with the hinged bar H, a lever that when released allows said bar to freely swing around its pivoted points, and when fastened holds said bar firmly in its adjusted position, as described.

3. The shoe M as a hinge and a support both to the cutter bar, substantially as described.

4. The socket or recess *n* in the shoe M, for the reception of the finger-bar, substantially as described.

5. In combination with a finger bar, hinged at one of its ends to an intermediate piece also hinged to the main frame, an elevating and supporting caster-wheel for carrying that end of the machine when adjusted for reaping or mowing, substantially as described.

6. The combination of a brace or support, *t*, on the shoe, and a similar brace or support, *u*, on the bar H, for resisting the strain on the finger-bar when reaping, substantially as described, or for transporting it from place to place.

7. The flexible connection for elevating the outer end of the finger-bar, substantially as described.

CYRENUS WHEELER, Jr., Auburn N. Y.—*Harvesters.*—Patented December 5, 1854, No. 12,044; reissued January 3, 1860, No. 876; again reissued May 14, 1867, No. 2,610; extended January 12, 1869.

Claim.—In combination with a harvester-frame that is free to vibrate about a gear-center, a laterally-projecting finger-bar, so hinged to one end or corner of said frame as to permit the finger-bar at each end to follow the undulations of the ground over which it is drawn.

CYRENUS WHEELER, Jr., Auburn, N. Y.—*Grain and Grass Harvesters.*—Patented December 5, 1854, No. 12,044; reissued January 3, 1860, No. 877; extended January 12, 1869.

Claim.—1. So hinging a finger-bar by one of its ends only to the main frame as that it may oscillate or turn round its longitudinal axis, for the purpose of raising or lowering the points of the fingers to adapt the machine to the condition of the ground or of the crop to be cut, substantially as described.

2. In combination with a finger-bar hinged by one of its ends only to the main frame, so that the points of its fingers can be raised or depressed, a connecting-rod or pitman, in two pieces, and so connected that one piece can turn independently of the other, for the purpose of preventing the cramping or torsion of said rod, when the finger-bar is turned substantially as described.

CYRENUS WHEELER, Jr., Auburn, N. Y.—*Grain and Grass Harvesters.*—Patented December 5, 1854, No. 12,044; reissued January 3, 1860, No. 878; extended January 12, 1869.

Claim.—A short finger-bar, so hinged by one of its ends only to an arm, brace, or support that is in turn hinged to the main frame in or near the line of the finger-bar, as that said finger-bar may rock or roll in the line of its length, as well as rise and fall in a line transverse thereto, by being simply drawn over the ground, substantially as described.

CYRENUS WHEELER, Jr., Auburn, N. Y.—*Grain and Grass Harvesters.*—Patented December 5, 1854, No. 12,044; reissued January 3, 1860, No. 879; extended January 12, 1869.

Claim.—In combination with a cutter-bar, the shoe M and its hinge, and a supporting-piece and its hinged connection to the main frame, the arranging of the pivots of said hinges at right angles to each other, and in or near the line of the finger-bar as described.

CYRENUS WHEELER, Jr., Auburn, N. Y.—*Grain and Grass Harvesters.*—Patented December 5, 1854, No. 12,044; reissued January 3, 1860, No. 881; extended January 12, 1860.

Claim.—The combination of the drooping main frame, the loose tongue, and a hinged finger-bar, substantially as and for the purpose described.

CHARLES DANFORTH, Paterson, N. J.—*Throstles for Spinning Cotton.*—Patented December 12, 1854, No. 12,055; extended January 12, 1869.

Claim.—The connecting together the spindle-rails from side to side of the frame in two or more sections, connecting the guards and guard-wire boards with the spindle-rails, so that they will traverse with them, and constructing and arranging the traverse movements so that the different sections will counterbalance each other, essentially as described in this specification.

B. F. BROWN, Dorchester, Mass.—*Hanging Carriage Bodies.*—Patented December 12, 1854, No. 12,051; extended January 12, 1869.

Claim.—1. The combination of the C-springs and perches, arranged substantially as above described, for sustaining the weight of the carriage-body and for relieving the said carriage-body from sudden jolts, the combined action of the C-springs and perches being such as to give an easy and elastic motion to the carriage-body; and, further,

2. The combination of the C-springs, perches, and thorough-braces, the said thorough-braces operating to give an easy motion to the carriage-body, and preventing the swaying of the said carriage-body from twisting or bending the C-springs, as above set forth.

JEREMIAH STEVER, Bristol, Conn.—*Machines for Scraping Metals.*—Patented December 12, 1854, No. 12,076; extended January 12, 1869.

Claim.—The arrangement of the driving-shaft, the connecting-rod F, the slotted lever G, and its fulcrum-lever I, in connection with the rod O and its rocker-shaft C, the whole being for giving the scraper the double motion, and regulating the same, essentially as specified.

PHILIPPINE S. BRACKENRIDGE, Natrona, Pa., administrator of EDWARD STIEREN, deceased.—*Processes for Treating the Mother-Water of Salines.*—Patented December 12, 1854, No. 12,077; extended January 12, 1869.

Claim.—The process for treating the bitter water of such of the salines of the United States, for the purpose of obtaining Epsom salts, (or sulphate of magnesia,) iodine, bromine, and a portion of refined table-salt, using for the purpose the apparatus referred to, or any other which may be found to answer the purpose.

SYLVANUS SAWYER, Fitchburg, Mass.—*Rattan-Machine.*—Patented December 12, 1854, No. 12,073; extended January 12, 1869.

Claim.—1. The combination of a mechanism for dressing the enameled side of the strand of rattan, and a mechanism for reducing a strand to its proper thickness, as specified.

2. The combination of a mechanism for reducing the strand to a proper thickness, and a mechanism for reducing it to its proper width, as specified.

3. The combination of a movable grooved bed or roller, pressure-roller or rollers, and knives for reducing a strip to the width required.

4. The combination and arrangement of a mechanism for reducing the enameled surface or side of the strand, or removing the joints or other protuberances therefrom, a mechanism for reducing a strand to its proper thickness, and a mechanism for reducing it to its proper width, the same being made to act together automatically, essentially as hereinbefore specified.

MARTIN P. M. CASSITY, Nehama county, Kansas, administrator of ISAAC H. STEER, deceased.—*Making Nuts.*—Patented June 19, 1855, No. 13,118; antedated December 19, 1854; extended January 19, 1869.

Claim.—1. Making a nut at a single operation, from a heated bar or plate of metal, by cutting off the blank from the bar, punching a hole or eye through it, and swaging it into shape, substantially as herein set forth.

2. Punching the eye of the nut in a die or press-box, by which it is surrounded and firmly supported, and thus prevented from straining or bursting during the operation, substantially as set forth.

3. Shaping nuts by subjecting them, while hot, to powerful and sudden compression on the punch and in the punching-die, substantially as herein set forth, whereby they are finished with such a degree of smoothness, regularity, and precision, that in the condition in which they come from the machine they are fit to use in the construction of most kinds of machinery, and are at the same time sounder and stronger than unpressed nuts made by machinery.

SYLVANUS SAWYER, Fitchburgh, Mass.—*Machine for Splitting Rattan into Strips.*—Patented January 2, 1855, No 12,141; extended January 12, 1869.

Claim.—1. A combination of mechanism for splitting the rattan into sectoral strips, and a mechanism for removing annular or segmental strands therefrom, substantially as above specified.

2. A combination of mechanism for splitting a stick of rattan into sectoral or triangular parts or strips, and a mechanism for rounding and dressing or finishing either one or more such strips, substantially as specified.

3. A combination of mechanism for splitting a rattan into sectoral parts or strips, a mechanism for removing or separating from such parts annular or segmental strands, as specified, and mechanism for rounding, reducing, or finishing either one or more or all of the triangular strips or parts of the pith or inside portions of the rattan, as specified.

SYLVANUS SAWYER, Fitchburgh, Mass.—*Machinery for Cutting Rattan, &c.*—Patented June 24, 1851, No. 8,178; extended January 12, 1869, by act of Congress.

Claim.—1. The combination of the cutters *a*, as described, with the levers C, and springs *e*, and cams D, or their equivalents, and also handles D′ and links *d*′, for the purpose of applying said cutters or scrapers so as to act upon the stick of rattan in the manner herein described, and by which they may all be operated simultaneously, substantially in the manner herein described.

2. Bending the stick at the point at which the cutter is removing the strand from the surface.

3. The combination of the elements which compose each simple section of the cutting-apparatus, that is to say, of the cutter H and gauge I with the stock G and guide *g*, and bed-roller F, or their equivalents, substantially as described, for the purpose of bending the stick and removing the strand therefrom, whether said section is used alone or is combined with others, as described.

4. The combination of that part of the machine called the "scraper," with the feeding-rollers, or their equivalents, and the several sections of the cutting-apparatus, said sections being so arranged in relation to each other as that the stick, in passing from the one to the other shall be properly bent, and also that the several cutters shall act upon different points of its circumference, the whole being arranged and operating substantially in the manner herein described and set forth.

LYSANDER WRIGHT, Newark, N. J.—*Sawing-Machine.*—Patented January 2, 1855, No. 12,176; extended January 12, 1869.

Claim.—1. The two pulleys, varying in size, for the purpose set forth.

2. The revolving guide-block, for the purposes set forth.

3. The arrangement and combination of the guides, cross-head, hold-fast and guide-block, shoe and screw, for the purpose of raising and lowering, and to give the rake all of which, substantially as set forth.

JOSEPH S. WINDSOR, Providence, R. I.—*Machines for Making Weavers' Harness.*—Patented January 2, 1855, No. 12,175; extended February 9, 1869.

Claim.—1. The mode of operation, substantially as specified, by means of which each twine is formed in a loop, and the spool, or its equivalent, carrying such twine, carried through such loop to form a knot, and then the spool, or its equivalent, which carries the other twine, passed through such loop, that the twine thus carried through may be griped therein when the knot is drawn tight, thus forming the eye of two twines, with a knot in each griping the other twine, as herein set forth.

2. The mode of operation, substantially as herein described, for determining the size of the eyes by closing the knots on the two fingers, or their equivalents, whereby the knots are closed at the proper place on each twine, the two sides of each eye made of equal length, and any desired number of eyes of the same size, as set forth.

3. In combination with the fingers, or their equivalents, on which the knots are closed, the discharger, or any equivalent therefor, by means of which the knots are discharged from the said fingers as they are drawn tight, as set forth.

4. In combination with the mechanism for forming the knots, substantially as herein described, the employment of pincers, substantially as described, or any equivalent therefor, for holding the twines tight after the knots at each end of the eye have been closed, and during the operation of drawing the twines tight around the bands, as set forth.

5. The mode of operation, substantially as described, by means of which the twines are wrapped

around the bands in succession, and formed each into a loop, through which the spool, or its equivalent for carrying the twine, is passed, to effect the tie, substantially as described.

6. The mode of operation, substantially as described, for forming what is termed the leese of the harness, by reversing the motions of the spools, or their equivalents, for carrying the twines, thus carrying the twines alternately on opposite sides of one band, as set forth.

7. The method, substantially as herein described, of mounting the heddles, as they are formed on the slats or rods, by suspending the said slats or rods above the machine, and attaching the bands to which the heddles are tied in the process of formation, to a sliding-bar, or its equivalent, which is elevated as the heddles are formed, as set forth.

8. The method of marking every nineteenth (or any other number) of heddles, by means of the marker receiving motion, in the manner substantially as specified, or by equivalent means.

JESSE W. HATCH and HENRY CHURCHILL, Rochester, N. Y.—*Machine for Cutting Boot and Shoe Soles.*—Patented January 2, 1855, No. 12,128; reissued July 24, 1866, No. 2,321; extended February 9, 1869.

Claim.—1. The reciprocating cutter-shaft A, having the endless-edged knife or die C attached thereto, when the same is made to perform half a revolution between successive cutting-strokes, by means of the segment-gear F, or other equivalent means for that purpose, operating substantially as described.

2. The said reciprocating cutter-shaft, when the same is used in connection with the cutting-block M and guide-bar J, or their equivalents.

3. The said cutter-shaft A, guide-bar J, cutting-block M, and discharging-plate T, or their equivalents, combined and operating together, substantially as described.

P. W. MACKENZIE, Orangeville, N. Y.—*Machine for Blowing Blasts, &c.*—Patented January 2, 1855, No. 12,165; extended February 9, 1869.

Claim.—1. The use of the drum and blower having centers eccentric to each other, the said blower being internal of the drum, and propelled by it, substantially in mode of construction and for the purposes hereinbefore set forth.

2. As a part of my invention, the cylindrical adjustable packing for the arms of the blower, in combination with the drum and blower-arms, substantially in mode of construction and operation and for the purposes hereinbefore set forth.

FANNY HOLMES, Whitehall, N. Y., executrix of JOHN E. NEWCOMB, deceased.—*Grain-Harvesters.*—Patented January 9, 1855, No. 12,215; extended February 9, 1869.

Claim.—1. Making the hinged apron extensible, substantially in the manner set forth.

2. The mode of keeping the scythe-plate to the shear-edges of the guides, said mode consisting in the employment of a grooved pressure-plate, or bar, and set-screws, for the purposes herein set forth.

GEORGE W. HUBBARD and WILLIAM E. CONART, New York, N. Y.—*Operating Slide-Valves in Direct-Action Engines.*—Patented January 9, 1855, No. 12,203; reissued September 18, 1866, No. 2,359; extended February 9, 1869.

Claim.—1. So combining a main engine, or motor, a supplementary valve-working engine, and their induction and eduction valve or valves, that the movement of the valve or valves of the main engine or motor is commenced and partly effected by the piston of said engine, and completed by the piston of the supplementary or valve-working engine, substantially as herein described.

2. When two direct-action engines are so combined that the movement of the induction and eduction valve or valves of one is produced by the movement of the piston of the other, we claim the arrangement of the cylinder and piston of one engine within the valve-chest of the other, substantially as herein described.

3. In operating the slide-valve of one direct-action engine by the piston of another, we claim so connecting the said slide-valve with a tappet-rod, operated by an arm on the piston-rod of its own engine, that the said rod and valve may have each a certain amount of motion, independently of the other, substantially as and for the purpose herein specified.

4. The arrangement of the valves E and *k*, tappet-rod F, and its connections, with the said valves and the cut-off plate *j* and stops *e e*, substantially as described, for the purpose set forth.

AMBROSE FOSTER, Lauraville, Md.—*Building-Block.*—Patented January 16, 1855, No. 12,264; extended February 9, 1869.

Claim.—The building-block, herein described, is claimed as a new manufacture.

JARVIS CASE, La Fayette, Ind.—*Corn-Planters.*—Patented January 16, 1855, No. 12,231; reissued November 16, 1858, No. 623; again reissued April 17, 1866, No. 2,227; extended February 9, 1869.

Claim.—1. The seed-slide *c*, lever *m*, rod *o*, and slide *r*, whereby a valve at the seed-hopper of a corn-planter is so connected with another valve below the seed hopper that, by a single impulse or movement, a charge of seed shall be dropped from each valve, substantially as described.

2. The combination of lever I, rock-shaft *u*, weight *v*, and wire 2, with lever J, whereby the valves of one corn-planter may not only be operated to produce the double drop of seed described, but will become convertible, at will, from a hand-planter to an automatic planter, substantially as described.

3. So arranging and connecting a valve at the seed-hopper of a corn-planter with another valve below the hopper, in combination with a lever, that the attendant of the machine, as it is moved over the ground, by a single throw of the lever, not only discharges the seed from the valve below the hopper, at the proper time, but drops a charge from the valve at the seed-hopper to the valve below, in readiness for the next hill, substantially as set forth.

4. So combining and arranging the mechanism of a corn-planter's valve that the valve in the seed-hopper and the valve in the seed-tube below the hopper may each be made to drop a charge of seed by a single impulse or movement, substantially as described.

JOTHAM S. CONANT, Hackensack, N. J.—*Sewing-Machines.*—Patented January 16, 1855, No. 12,233; reissued November 24, 1868, No. 3,214; extended February 9, 1869.

Claim.—An endless rotary cloth-feeder, substantially as herein described, in combination with a reciprocating eye-pointed piercing-needle.

GEORGE A. BROWN, Middletown, R. I.—*Hay-Making Machine.*—Patented January 23, 1855, No. 12,269; extended February 9, 1869.

Claim.—The construction of a machine, in manner and form as herein described, or in any other manner or form substantially the same, applying the power directly from the driving-wheels to the spreading-apparatus, thus saving the loss of power caused by friction in a series of wheels; using coiled or spring teeth; and the application of such machine to the purpose of spreading and turning hay.

CHARLES METTAM, New York N. Y.—*Rolling Iron Shutters.*—Patented January 23, 1855, No. 12,281; extended February 9, 1869.

Claim.—Making the slats of the form substantially as herein specified, that is to say, with an exterior-protruding arch, *a*, at their center, combined with flat taps or bearings *b* at their edges, the slats being arranged in relation to each other and united together essentially as set forth, by which configuration the shutter may be rolled up in a less compass, the labor of rolling up reduced, and the many other advantages herein set forth obtained.

THADDEUS SELLECK, Greenwich, Conn.—*Method of Working Franklinite Ore.*—Patented January 30, 1855, No. 12,329; extended March 9, 1869.

Claim.—The process of reducing Franklinite ore, to obtain iron and the white oxide of zinc therefrom, by working it under a lighter head in a vertical-walled low-cupola furnace, substantially as described.

CYRENUS WHEELER, Jr., Auburn, N. Y.—*Harvesters.*—Patented February 6, 1855, No. 12,367; reissued June 5, 1860, No. 971; again reissued May 28, 1867, No. 2,632; extended March 9, 1869.

Claim.—1. The combination of a vibrating frame, a finger-bar attached to one corner or end thereof by a hinge, and a platform in rear of said finger-bar, so as to leave an unobstructed space for the delivery of the grain on the ground.

2. The combination of a vibrating frame with the cutting-apparatus hinged thereto, a driver's seat, and an arrangement of one or more levers, whereby the driver in his seat can raise and sustain the cutting-apparatus when desired.

3. The combination of a finger-bar, hinged to a vibrating frame, and a removable platform connected with the said frame by means of the finger-bar only.

4. The combination of a hinged finger-beam and a side-delivery platform, so arranged that the grain may be delivered from the platform on to the ground out of the way of the horses on their next round.

5. The combination of a hinged finger-beam, a lever, and a yielding or linked connection extending from the lever to the vibrating part of the machine to which the finger-beam is attached, whereby the inner end of the finger-beam is raised to pass obstacles in mowing, and raised and sustained in reaping.

6. The combination of a hinged finger-beam, a lever, a yielding or linked connection extending from the lever to the vibrating part of the machine to which the finger-beam is attached, and the seat for the driver, whereby the driver can raise the inner end of the finger-beam to pass obstacles in mowing, and raise and sustain the same in reaping.

7. The combination of a hinged finger-beam with an auxiliary draught rod or bar attached to the inner end of the hinged finger-bar.

8. The platform-bar Q, as a means of securing the platform to the finger-beam, and for strengthening said finger-beam when it has the platform to carry, substantially as described.

9. The inclined caster-wheel S, arranged as represented, and in combination with the platform, whereby the latter is elevated when the machine is being turned short around to the right, substantially as described.

10. In combination with a finger-beam and platform, placed in rear of the main supporting-wheel, the two casters N S, arranged as described, for allowing the machine to turn short around to the right, for the purposes specified.

11. A revolving track-clearer, when operated from a ground-wheel through gearing, substantially as described.

BIRDSILL HOLLY, Lockport, N. Y.—*Elliptical Rotary Pumps.*—Patented February 6, 1855, No. 12,350; extended March 9, 1869.

Claim.—The corrugated or grooved pistons or cogs, in the manner and for the purposes specified.

JAMES EASTERLY, Albany, N. Y.—*Base-Burning Stoves.*—Patented February 13, 1855, No. 12,382; reissued June 30, 1868, No. 3,009; extended March 9, 1869.

Claim.—Constructing a stove, as herein described, with openings for the admission of air to the burning fuel at some point or points above the grate, including between said points and the grate sufficient fuel for ignition, at any one time, substantially as described.

JAMES EASTERLY, Albany, N. Y.—*Base-Burning Stoves.*—Patented February 13, 1855, No. 12,382; reissued June 30, 1868, No. 3,010; extended March 9, 1869.

Claim.—1. A cooking-stove, which is provided with a coal-supply magazine and a combustion-chamber, arranged without the space inclosed by the outer walls of the stove, substantially as described.

2. The combination of a coal-supply magazine with a cooking-stove, when such magazine is wholly outside of the outer walls of the stove, substantially as described.

3. In a cooking-stove, having a magazine for supplying the combustion-chamber with fuel, inlets for the admission of air to the burning fuel, arranged at some point or points above the grate, substantially as described.

4. The relative arrangement of the several parts of the stove, whereby the heated products are caused to circulate around the oven, substantially as described.

RUSSELL JENNINGS, Deep River, Conn.—*Augers.*—Patented January 30, 1865, No. 12,318; reissued October 3, 1865, No. 2,081; again reissued January 16, 1866, No. 2,146; extended March 9, 1869.

Claim.—The projecting of the floor-lips in advance of the cutting-spur, substantially as herein described, and for the purpose herein set forth.

THOMAS C. BALL, Bellows Falls, Vt.—*Screw-Jacks.*—Patented February 27, 1855, No. 12,464; extended March 9, 1869.

Claim.—The combination of the tubular screw B with the standard A and the inner screw C, the whole being arranged substantially as and for the purpose above set forth and described.

NORMAN W. WHEELER, Brooklyn, N. Y.—*Method for Operating Steam-Valves.*—Patented July 31, 1855, No. 13,369; antedated March 1, 1855; extended March 9, 1869.

Claim.—1. Actuating the induction and eduction valves of any double-acting reciprocating steam-engine, by means of steam-pressure derived from the working-cylinder, and released therefrom by the passage of the working-piston over and beyond appropriate ports, when the pistons, or their equivalents, upon which such pressure acts, are so arranged that no movements of the valves shall result from the passage of the working-piston over the first of two or more such ports in any full stroke.

2. Releasing the steam contained between pistons of unequal areas, by the passage of the larger one over its exhaust-port, and stopping the supply between the same pistons, by the passage of the smaller one over its induction-port, substantially as described.

JOHN STEINTHORP, Brooklyn, N. Y.—*Machines for Making Candles.*—Patented March 6, 1855, No. 12,492; extended April 13, 1869.

Claim.—1. The employment of the pistons D D, formed at their upper ends into molds for the tips of the candles, in combination with stationary candle-molds, to throw out the candles in a vertical direction, substantially as herein set forth.

2. The combination of the rack, tip-bar, and clasps, constructed and arranged substantially as described, and for the purposes specified.

NOBLE T. GREENE, Providence, R. I.—*Cut-Off Valves for Steam-Engines.*—Patented March 13, 1855, No. 12,507; extended April 13, 1869.

Claim.—1. Combining with the rocking levers, or their equivalents, for operating the valves, the spring-tappets on the sliding bars, substantially as described, and for the purpose specified.

2. In combination with the sliding spring-tappets that operate the rock-levers, substantially as described, the employment of the gauge-bar, or any equivalent therefor, to regulate the period of closing the valves, whether the said gauge-bar be regulated by a governor or by other means, as set forth.

JOHN C. SCHOOLEY, Cincinnati, Ohio.—*Processes of Curing Meats.*—Patented March 13, 1855, No. 12,530; extended April 13, 1869.

Claim.—The process of curing meat, and preserving fruit and provisions, by means of circulating currents of air, artificially dried by ice or its equivalent, through the room wherein the curing takes place, substantially as and for the purposes set forth

CHARLES CUNNINGHAM, Nashua, N. H.—*Benzole-Vapor Apparatus.*—Patented March 13, 1855, No. 12,535; extended April 13, 1869.

Claim.—1. The combination of the heater *w* and the swinging gas-burner *v*, or of the induction air-pipe A, and any one of the burners of the apparatus, with the water-vessel *u*, the reservoir *k*, or the meter

a, substantially as herein described, for the purpose of keeping the contents of the vessel containing the benzole or light-producing liquid at a given temperature.

2. The combination of the reservoir *k* and the rotary disseminator *n o*, with an ordinary rotary meter-wheel, substantially as herein described, for forcing air through the hollow shaft, or its equivalent, into the reservoir *k*, for the purpose of vaporizing the benzole of the latter vessel.

3. The particular mode of making the rotary disseminator *n o*, substantially as herein described, and for the purposes herein specified, not meaning to claim the use of the hollow shaft for evaporating saccharine fluids.

4. The application and use of the meter-wheel, with its case and contents, as an air-blast apparatus, operated by weights or otherwise, not meaning to claim the method of using the meter for measuring gas.

G. W. N. YOST, Corry, Pa.—*Cultivators.* — Patented March 20, 1855, No. 12,571; extended April 13, 1869.

Claim.—The combination of the adjustable scraper E with the bar-point, &c., D, as already described, for the purpose of barring off the row, and rapping up the middle; also, for scraping off the row, and rolling the scrapings over into the furrow opened by the plow, substantially as set forth in this specification.

LEMUEL T. WELLS, Saint Louis, Mo.—*Printing-Press.* — Patented March 20, 1855, No. 12,568; extended April 13, 1869.

Claim.—The platen U, hinged or pivoted to vibrating arms V, in combination with the stationary pin or pins *n*, and retracting-springs X, or equivalent devices for the purposes explained.

THADDEUS HYATT, New York, N. Y.—*Illuminating Vault-Covers.*—Patented March 27, 1855, No. 12,595; extended April 13, 1869.

Claim.—The method of securing glasses in the apertures of metal plates, or other surfaces, by surrounding the glass with a hoop or belt of lead, gutta-percha, or other equivalent yielding substance, and forcing the glass so surrounded into the aperture, or recess, substantially as and for the purpose specified.

WILLIAM H. GUILD and WILLIAM F. GARRISON, Brooklyn, N. Y.—*Operating Valves in Direct-Acting Steam-Engines.* — Patented March 27, 1855, No. 12,592; reissued July 29, 1856, No. 382; extended April 13, 1869.

Claim.—Giving to the valve the whole or part of the movement necessary to effect the change in the direction of the movement of the engine-piston, by means of the steam acting upon a piston, E, which is fitted to work perpendicularly to the valve, in a cylinder, D, forming a part of the valve-driver, or device employed to drive the valve, and is supported against the pressure of steam by a rocker *e*, or its equivalent, by which it is caused to operate on the valve-driver, substantially as herein set forth.

THOMAS J. HALL, Bryan, Texas.—*Plows.*—Patented April 3, 1855, No. 12,627; extended April 13, 1869.

Claim.—The so hanging of the cutter to the beam as that it may swivel therein, in combination with the supports at the edge of the wheel, substantially as set forth and described.

FINLEY LATTA, Cincinnati, Ohio, administrator of A. B. LATTA, deceased.—*Steam Generators.*—Patented April 10, 1855, No. 12,682; extended May 11, 1869.

Claim.—1. Combining a steam-generator, or boiler, consisting of a coil of tube with a furnace, in such a manner that the flame or products of combustion shall come in immediate contact with said coil, when this coil is combined with a feed-apparatus and gauges, which will enable the engineer to inspect constantly the supply of water, see that it is not interrupted, test its sufficiency, and regulate it at pleasure, according to the varying demands of the boiler, or close the dampers if the feed should be interrupted, substantially as described.

2. While confining the admission of water to the receiving-end of a coiled-tube boiler, limiting the quantity therein, and the supply thereof to the quantity demanded for immediate conversion into steam, for the purposes of avoiding the weight of a large quantity of water, producing steam promptly, saving fuel, and preventing the water from being thrown out of the tube by the steam formed in the lower part thereof, substantially as described.

3. Causing the dischargiug-end of a coiled-tube generator to communicate with and discharge itself into the water-jacket, while all other communication of said coil with said water-jacket is avoided, as described.

ALBERT S. SOUTHWORTH, Boston, Mass.—*Plate-Holders for Cameras.*—Patented April 10, 1855, No. 12,700; reissued September 25, 1860, No. 1,049; extended May 11, 1869.

Claim.—Bringing the different portions of a single plate, or several smaller plates, successively into the field of the lens of the camera, substantially in the manner and for the purpose specified.

AARON WOODMAN, New York, N. Y., administrator of MOSES THOMPSON, deceased.—*Furnaces for Burning Wet Fuel.*—Patented April 10, 1855, No. 12,678; reissued October 7, 1856, No. 398; again reissued March 31, 1857, No. 446; extended May 11, 1869.

Claim.—1. Using green bagasse, wet tan, wet sawdust, and other wet carbonaceous or vegetable substances, as fuel, for the production of intense heat, by mingling the gases issuing from a highly-heated mass thereof with those arising from carbonaceous combustion, by the intervention of a flue, or chamber, with which the chamber or chambers containing the fire and charge of wet substances communicate, and in which said gases meet, mingle, and consume each other on their way to the apparatus to be heated and to the stack.

2. The combustion, for the purpose of a high degree of heat, of bagasse, refuse tan, sawdust, and other wet refuse substance, or very wet and green wood, by the employment of a series of fire-chambers, arranged in any manner substantially as described, to communicate with one common flue, or mixing-chamber, when any number of said chambers is nearly closed to the admission of air when first charged, as described, while the remaining chamber or chambers are in full communication with the mixing-chamber, and have a proper supply of air admitted, and the ash-pit of each chamber in its turn is nearly closed, and then opened, and has air admitted, whereby the heat required is rendered continuous and comparatively uniform, while the fuel in some of the chambers is being heated and decomposed, and its gases sent forward to the mixing-chamber, to any desirable degree, as herein set forth.

CHESTER VAN HORN, Springfield, Mass.—*Slide-Rest for Lathes.* — Patented April 17, 1855, No. 12,747; extended May 11, 1869.

Claim.—Forming the tool block C of two parts, *c d*, and connecting said parts together by a dovetail, or its equivalent, so that the upper part *c* may slide or work on the lower part, *d;* the faces of the two parts *c d*, that are connected, being oblique or inclined, as herein shown, and the part *c* being moved or operated by a screw, E, or its equivalent, for the purpose of elevating or depressing the tool G, as herein described.

CHARLES H. FONDI, Mobile, Ala.—*Dredging-Machines.*—Patented April 17, 1855, No. 12,720; extended May 11, 1869.

Claim.—1. The device for keeping the wheel in gear while raising and lowering, and the combination of the radius bar and the sliding carriage, which carries the shafts of the pinions, and also moves the miter-wheels which slide on the feathered shafts, as this device, and this combination of well-known mechanical devices, is my own invention, and has enabled me to keep the excavating wheel always in gear with the engine, and has never been so applied before.

2. The self-acting latch F, in its particular form and mode of adjustment, it being so shaped and adjusted as to hold on to the lid of the bucket until it is struck by the tipper, and so balanced that by its own gravity it will fall over and latch again before the bucket enters the water. This particular form and adjustment with the pin marked H does away with the necessity of springs, and is the result of careful and expensive experiments.

3. That particular combination of chutes, or sluiceways, G G, which forms an apex under the discharging-tipper, and passes athwartships on an incline toward the scows, which particular combination has enabled me to discharge an excavating-wheel laterally on either or both sides.

JAMES EMERSON, Lowell, Mass.—*Ships' Windlass.*—Patented April 17, 1855, No. 12,718; reissued July 31, 1860, No. 1,020; extended May 11, 1869.

Claim.—1. The combination applied to each chain-wheel, H, and the shaft B, the same consisting of the part pinions G G′, the guard-sectors I I, the pawls J J, the levers K K, and the studs *h′ h′*, the whole being made to operate together and be operated by the shaft B, substantially in manner and for the purpose as specified,

2. The combination and arrangement of the gears C D, N O, and their ratchet-and-pawl mechanisms, or equivalents thereof, applied to the two shafts B E, substantially in manner and for the purposes as specified.

3. The arrangement of the auxiliary capstan F, with the main capstan *a*, and its shaft E, when the latter is connected with and made to operate another shaft B, by gears C D, as described.

NORMAN C. HARRIS, Poultney, Vt.—*Manufacture of Slate-Pencils.*—Patented April 24, 1855, No. 12,759; extended May 11, 1869.

Claim.—Cutting the pencils completely formed, from slabs of slate, by means of a cutter or series of cutters, grooved so as to half form the pencils on one side of each slab, and then reversing the slab and forming the other halves of the pencils, substantially as herein set forth.

CLEMENT RUSSELL, Massillon, Ohio. — *Double-Geared Horse-Power.* — Patented May 1, 1855, No. 12,782; reissued April 15, 1862, No. 1,302; extended May 18, 1869.

Claim.—In connection with double-geared horse-power, the combined use of a center-pin and moving block, for allowing the drive-wheel to adjust itself to the pinions with which it works, substantially as herein described.

GEORGE W. BROWN, Galesburgh, Ill.—*Seed-Planters.* — Patented May 8, 1855, No. 12,811; reissued November 10, 1857, No. 508; again reissued December 11, 1860, No. 1,091; extended May 18, 1869.

Claim.—1. In combination with a seed-planting machine that is operated by hand, the placing of both the driver and the person who operates the seed slides or valves upon the machine in such position as that each may attend to his particular duty, without interfering with that of the other, substantially as described.

2. In combination with a seed-planting machine that is operated by hand, and upon which the driver and the person who works the seed slides or valves sit or stand, the so locating of said seats or stands as that the weight of one of the persons may be used to counterbalance or overbalance the weight of the other, for the purpose of more readily raising or lowering the seeding-apparatus, substantially as and for the purpose described.

GEORGE W. BROWN, Galesburgh, Ill. — *Seed-Planters.* — Patented May 8, 1855, No. 12,811; reissued November 10, 1857, No. 508; again reissued December 11, 1860, No. 1,092; extended May 18, 1869.

Claim. — In combination with a seed-planting machine operated by hand, and having its seeding-devices forward of the center of the wheels and forward of the driver's seat, and a hinged connection, the locating of the seat in such relation to a line drawn through the centers of the wheels or ground-supports, as that the occupant of said seat may, by moving himself or throwing his weight forward or backward, on his seat, without the necessity of rising, walking, or standing over or near the seeding-devices, force the seeding-apparatus into, or raise it from, the ground, substantially as described.

GEORGE W. BROWN, Galesburgh, Ill. — *Seed-Planters.* — Patented May 8, 1855, No. 12,811; reissued November 10, 1857, No. 508; again reissued December 11, 1860, No. 1,093; extended May 18, 1869.

Claim. — In combination with a seed-planting machine that has a hinged or yielding joint between its fixed points of support, and with its seeding-devices between said points, the so connecting of the parts between said fixed points of support as that that portion of the machine carrying the seeding-devices may be raised up out of the ground by the attendant riding on the machine, and be carried by the tongue or horse-necks and the supporting-wheels, substantially as and for the purpose described.

GEORGE W. BROWN, Galesburgh, Ill. — *Seed-Planters.* — Patented May 8, 1855, No. 12,811; reissued November 10, 1857, No. 508; again reissued December 11, 1860, No. 1,094; extended May 18, 1869.

Claim. — In combination with a seed-planting machine so made that the forward part of the machine can be raised up into the supporting-wheels, and there carried, a lock, block, or stop, *h*, which prevents the rear part of the frame from descending so low as to strike the ground or inconvenience the occupant of the seat upon said rear portion of the frame, substantially as and for the purpose described.

GEORGE W. BROWN, Galesburgh, Ill. — *Seed-Planters.* — Patented May 8, 1855, No. 12,811; reissued November 10, 1857, No. 508; again reissued December 11, 1860, No. 1,095; extended May 18, 1869.

Claim.—So combining with a lever by which both may be operated, a valve or slide in the seed-hopper and a valve in the seed-tube, as that a half motion of the lever by the operator riding on the machine by which they are operated, shall both open and close the seed-passages at regular periods, and pass measured quantities only, substantially as described.

LYDIA W. LITCHFIELD, Southbridge, Mass., administratrix of LAROY LITCHFIELD, deceased. — *Shuttles for Looms.* — Patented May 1, 1855, No. 12,780; reissued March 30, 1869, No. 3,355; extended May 18, 1869.

Claim.—1. The combination and arrangement of the spring *d* with the shuttle A, the spindle *a*, the joint-pin *b*, the arm *c*, and the abutment or stop *h*.

2. The combination and arrangement of the pin *e*, and its head *f*, with the shuttle A, the spring *d*, the spindle *a*, the joint-pin *b*, the arm *c*, and the abutment or stop *h*.

3. The combination of means of adjusting the stop *h*, in manner as described, with such stop, the arm *c*, the spindle *a*, the pin *b*, and the spring *d*, arranged with the heel and the joint-pin of the spindle, and in the shuttle, as set forth.

WARREN HOLDEN, Philadelphia, Pa. — *Boot and Shoe Stretchers.*—Patented May 1, 1855, No. 12,793; extended May 18, 1869.

Claim. — Dividing the last A into a number of parts, *a, b, c c*, connected by rods *e e, f f*, and a link, *d*, and forcing said parts outward, so as to stretch the boot or shoe at any desired part, or at all parts, by means of the device composed of the jointed levers *j j*, nuts *k k*, and rod *l*, as herein shown and described.

JEREMIAH STEVER, Bristol, Conn.— *Machine for Burnishing Metals.* — Patented May 1, 1855, No. 12,799; reissued October 11, 1859, No. 834, (whole No. 1,205;) again reissued July 2, 1861, No. 100; extended May 18, 1869.

Claim. — The combination of these three things,

viz: A tool proper for burnishing metals and caused to traverse mechanically, a rest or support for the article to be burnished, and a contrivance for holding the tool and article to be burnished in working-contact by a yielding or spring pressure, the combination being substantially such as specified.

M. M. RHODES AND J. C. RHODES, Taunton, Mass. — *Machine for Leathering Tacks.* — Patented May 8, 1855, No. 12,832; extended May 18, 1869.

Claim. — 1. The employment, substantially as herein described, of a hollow cylinder with an opening in the side to receive the tacks, and a driver working within it in a suitable manner to expel the tacks at the end of the cylinder, and drive them into the leather, or any material serving the same purpose, which is presented in a suitable manner to receive them.

2. Operating the cylinder and driver substantially as described, so that the former may receive a short and the latter a long movement, and that the final operation of the former to cut the leather or other material on the punch may not take place till after the termination of the operation of the latter in driving the tack through the said leather or material, as herein fully set forth, but may be produced by a continual movement of the latter after it has driven the tack through.

3. The divider, consisting of one or more tongues similar to I I′, having a straight edge working nearly close to and across the entrance of the receptacle into which the tacks are fed to be submitted to the operation of the driver, and having a beveled end, terminating in a point, to separate the tacks, one by one, as they are brought by the feeder contiguous to the aforesaid receptacle, and to conduct and push them as required into the said receptacle, substantially as herein described.

4. Forming the mouth *o* of the barrel with a projecting lip *k*, substantially as described, for the purpose of passing outside the point of the tack as the barrel rises and the tack is entering the mouth, and thereby preventing the point from going down the outside of the barrel, and letting the tack fall head foremost into the barrel.

JACOB A. CONOVER, New York, N. Y.,—*Machine for Splitting Wood.*—Patented May 15, 1855, No. 12,857; extended May 25, 1869.

Claim.—1. The movable bed or carriage for carrying and advancing the blocks of wood, in combination with the reciprocating cutters, operating at right angles with the surface of the bed or carriage, substantially as and for the purpose specified.

2. In combination with the bed or carriage and reciprocating cutter, substantially as specified, the employment of the clearing-plate through which the cutters pass, substantially as and for the purpose specified.

3. Providing the said clearing-plate with an elastic pad, and imparting to it an up-and-down motion, substantially as specified, in its combination with the bed or carriage and reciprocating cutter, as specified, by means of which the said plate, under the combination specified, performs the double office of holding the blocks and clearing the cutters, as specified.

E. M. STEVENS, J. B. CROSBY, and J. W. PEARSON, Boston, Mass.—*Seed-Planters.*—Patented May 22, 1855, No. 12,924; reissued January 26, 1869, No. 3,278; extended May 25, 1869.

Claim. — 1. The application of elastic-surfaced feed-rollers in seed-sowing machines, when constructed and arranged to receive and deliver the grain, substantially as described.

2. The combination of the rollers, either or both elastic-surfaced, with the hopper or seed-box of a seed-sowing machine, substantially as and for the purposes described.

3. The combination of the rollers, either or both elastic-surfaced, with a spreader, provided with grooves or tubes, and furrow-openers, substantially as described.

4. The combination of seed-box, rollers, and spreader, provided with grooves or tubes, and furrow-openers, all constructed to operate substantially as described.

THOMAS J. SILSBY, Boston, Mass., administrator of ARAD WOODWORTH, 3d.—*Machinery for Spinning.*—Patented May 15, 1855, No. 12,889; extended May 25, 1869.

Claim.—The use of one or more inner fliers, arranged in a sequence, one within the other, to revolve in the same or different directions, or at the same or different speeds, with the outer flier, all the fliers acting continuously upon the roving-yarns, or material first received by the outer flier, until the spinning or twist is completed, and the yarn or yarns are wound upon the spool or bobbin, thereby twisting and spinning more rapidly, and attaining any desired degree of twist in yarns, as hereinbefore more fully described.

THOMAS J. KNAPP, Philadelphia, Pa.—*Adjustable Tenoning-Tool.*—Patented May 15, 1855, No. 12,864; extended May 25, 1869.

Claim.—The construction of the tool, as herein shown and described, viz, having two segments, D D, of a cylinder secured to the flanch B, of the shank A, by screws *b b*, and having screws *c c*, *d d*, pass through the flanches E E and projections *e e*, of both segments, for the purpose of allowing the segments to be placed nearer together or further apart, as desired, and having a hub or boss, C, at the center of the face of the flanch B, to receive the rings I, of different sizes, corresponding to the diameter of the tenons to be cut, and by which rings the segments are properly adjusted the required distance apart, for the purpose of cutting tenons of various sizes, as herein shown and described.

CHARLES A. DURGIN, New York, N. Y.—*Sewing-Machines.*—Patented May 22, 1855, No. 12,902; reissued June 15, 1858, No. 567; extended June 1, 1869.

Claim.—1. The vibrating hook, or its mechanical equivalent, for holding down the thread, during the partial passage of the shuttle through the loop, when arranged and operating substantially as set forth.

2. In combination with the vibrating hook, or its equivalent, the employment of two continuous rotary motions, one working the needle, the other the shuttle, and this for the purpose of producing sewing without any rest, on either the shuttle or needle in their movements, thereby rendering a sewing-machine capable of rapid action, simple in construction, and noiseless in its operation, substantially as set forth.

JOHN TYLER, West Lebanon, N. H.—*Curbs for Water-Wheels.*—Patented May 22, 1855, No. 12,927; extended June 8, 1869.

Claim.—Combining the within-described hinged lip *v* with the curb of a water-wheel, in such a manner that its inner curved surface forms the termination of the scroll water-way surrounding the wheel, while its straight surface forms one side of the mouth of the said scroll water-way, for the purposes herein set forth.

REBECCA A. MARCHER, New York, N. Y., executrix of ROBERT I. MARCHER, deceased. — *Tool for Grooving Moldings.*—Patented May 22, 1855, No. 12,916; extended June 8, 1869.

Claim.—Forming or cutting transverse and parallel grooves *g* in concave portions *f* of moldings B, by means of a tool-stock, D, attached to a plate, C, by a pivot, E, which is at the center of a circle of which the concave forms a part, the cutter *b* being attached to the lower end of a slide, E′, which is operated or pressed down, when the cutter acts upon the molding, by a spring, H, and elevated upon the return motion of the cutter by raising the lever G, the cutter *a* having a stop or guard, *c*, adjoining it, for the purpose of regulating the depth of the cut, as herein shown and described.

E. W. GOODALE, Clinton, Iowa. — *Machine for Making Paper Bags.*—Patented May 29, 1855, No. 12,945; reissued September 4, 1860, No. 1,033; extended June 8, 1869.

Claim.—1. Cutting off the paper from a continuous roll in a machine for making bags by a cut of such form, that when a bag is completed, one side of the mouth is caused. by the form of the said cut, to pro-

ject beyond the other side, substantially as represented in Figure 12, to afford facility for opening the bag and to form a flap for closing the mouth.

2. Giving the blades of the side-shears J J′, J J′ a curved, angular, or irregular form near the point, for the purpose of cutting out, each by a single cut, the whole piece necessary to leave the lap on one side of the bag, substantially as represented in Figures 4 and 10.

3. Hanging the movable blades J′ J′, of the said shears, on shafts, or pivots, *j j*, perpendicular to their faces, for the purpose of allowing them to cut slightly across the fixed blades by a slight lateral movement, which they receive simultaneously with the movement usually given to the shears, substantially as described.

4. The intermittently-rotating folder, arranged and operating substantially as described, to receive the bag-pieces from the feed-apron L, after the cutting and pasting operations, and to support or partly support them until the creases come into their operating-positions, and afterward to fold them over the creasers.

5. The combination of the side-lappers N N, and the folding stands *d d*, substantially as described, that is to say, the stands being so placed as to support the bag-piece and the creasers during the folding and lapping operations, and to allow the folder to pass between them and the lapping-pieces, being attached to the said folding-stands in such a manner as to be capable of falling over those creasers which are supported by the folding-stands. This I claim irrespective of any manner of operating the lappers, and whether the folding-stands have the lateral movement described, or are stationary.

6. The tooth-roller T, hung in a frame, T′, from the axle of one of the pressing and delivery rollers, and operating substantially as described, to commence the removal of the bags from the creasers.

7. The general arrangement and combination of the several working-parts of the machine, substantially as herein described.

ALPHEUS C. GALLAHUE, New York, N. Y.—*Machines for Pegging Boots and Shoes.*—Patented August 16, 1853, No. 9,947; antedated February 18, 1853; extended June 8, 1869.

Claim.—1. The sliding lever *n′ n′*, having a hook *p p* thereon, for entering the staple of the last, which, passing through slots in the uprights 4*s* 4*s*, of the turn-table, secures the last to said table, *s′ s′*, by the introduction of the wedge *q′*, as set forth.

2. The turn-table *s′ s′*, mounted on the sliding table *v′ v′*, which works on ways upon the moving table *w′ w′*, and is actuated by springs G G, for the purpose of keeping the edge of the sole at all times in contact with the gauge *a*, when this is combined with mechanism for giving the turn-table a semi revolution at the point where its center is brought opposite the awl, by the motion of the table *w′ w′*, that regularity in inserting the pegs may be secured.

3. The combination of the spring *k′*, lever 16, catch 3*s*, or their equivalent, sliding wheels D and 9, racks 6 and 5, miter-wheels F and B, by which a semi-revolution is given the turn-table, while the pegs are being inserted around the heel, by the shifting of cog-wheel 9 from rack 7 into 6, on release of lever 16 from catch 3*s*, and the return of said cog-wheel 9 into rack 7, on the release of spring H from catch I, by which means it acts on the upper side of lever 16, as set forth.

4. The cam 53, rod 52, secured to hammer *z*, and helical spring *f′*, by which a graduated driving-stroke is given the awl *d*, and its rod, in combination with cam 2, rod *h*, upon which slides the hammer Y, and helical spring *g′*, by which a driving-stroke is given the peg-driver alternatively with that of the awl and its rod; it being understood that I do not claim the general feature of a hammer and rod carrying an awl and spring for driving the awl operated by a cam, as this has been done heretofore, but the particular mode or combination in which they are used, as here claimed.

5. Giving the peg-tube and driver a side motion independent of the awl and rod, by means of cam *o* and lever A, or their equivalent, for the purpose of bringing the peg directly over the hole punched in the sole of the shoe by the withdrawn awl, the whole constructed and operating substantially as set forth and shown.

6. The combination of cam *o* and stirrup *m* with the swung peg-cutter R, by which the peg-wood is split with the grain of the wood from below, by the knife at 55, and at the same time forces in the tube in R; it being understood that I do not claim the general feature of a peg-cutter forming one side of the tube through which the peg is driven, but only the particular mode of applying it, as here claimed.

GEORGE W. LA BAW, Jersey City, N. J.—*Miter-Machines.*—Patented May 29, 1855, No. 12,956; reissued May 18, 1869, No. 3,445; extended June 15, 1869.

Claim.—1. The knives or cutters G, H H, and X, attached to the stock F, in combination with the mechanism for operating the same, substantially as described, and for the purposes specified.

2. The knives, or cutter X, arranged as described, in combination with the mechanism for operating the same, for cutting miters, substantially as described and specified.

3. The mechanism for holding the material for cutting miter and square joints, consisting of the bar C, slotted both vertically and horizontally, and the eccentric lever D, constructed substantially as described, and for the purpose specified.

GEORGE FOWLER, Seymour, and SOPHRONIA and MALTBY FOWLER, Wallingford, Conn., administrators of DE GRASSE FOWLER, deceased. — *Machines for Punching Metal.* — Patented April 17, 1855, No. 12,723; extended June 15, 1869.

Claim.—The peculiar manner of connecting the operation of the two levers *n n* and K, to throw the machine out of gear at the time when the punch is at its greatest elevation, when constructed, arranged, and made to operate substantially in the manner herein described.

EDWARD A. STERRY, Norwich, Conn.—*Faucet.*—Patented June 12, 1855, No. 13,047; extended June 15, 1869.

Claim.—The arrangement of the valve *e*, the set-screw *i*, the grooved shank *d*, and the screw-enlargement *c*, of the spindle of the key, with each other, and with the female screw in the sides of the chamber *a*, and the groove K, which cuts through the threads of said screw, by which, in a cock of the usual proportions, the valve can be moved up and down without being turned on its axis, substantially as herein set forth.

CALEB H. GRIFFIN, Lynn, Mass.—*Machines for Cutting Out Boot and Shoe Soles.*—Patented June 12, 1855, No. 13,072; reissued January 26, 1864, No. 1,610; extended June 22, 1869.

Claim.—1. The combination of the depresser-bar with the reciprocating knife-frame, its two movable knives, and their elevating-springs, or equivalent machinery, such being arranged and made to operate together, substantially as specified.

2. So constructing a machine with two knives, each connected to a separate cutter-head, and with their edges toward the surface to be cut thus by the mechanism employed, said knives shall be brought alternately to the cutting-point, the one ascending as the other descends, the one cutting the right and the other the left side of the sole, and so on alternately, in the manner described, and for the purposes set forth.

HENRY BOYNTON, New York, N. Y.—*Reciprocating Railway-Propeller.* — Patented June 19, 1855, No. 13,078; extended June 22, 1869.

Claim.—1. The double-wheeled car-truck, provided with wheels rotating in opposite directions, on the same axis, and running between upper and under simultaneous-acting railways, constructed and applied substantially in the manner and for the purpose described, by which a longitudinal propeller for water-craft is held or confined to its designed railways.

2. In combination with two sets of railways, one for the forward and the other for the back-stroke, the ascending and descending railways, so arranged that the fore-wheels of the truck run upon one track, and the after-wheels upon another track, whereby

the truck is free to ascend and descend, at either end of the main railway, in such manner that a line drawn through its axles will be always parallel, or nearly so, to the main horizontal rails, substantially in the manner and for the purpose described.

3. The lower rising vibrating rails and the upper pivot-moving rails, constructed and applied substantially as herein set forth.

4. The combination of levers in their adaptation to railway-propellers, by which the upper pivot-rails, at either end of the railway, being moved by the truck-wheels, those at the opposite end are similarly moved at the same time, and the addition of safety-levers, by which, if the pivot-rails upon either side end are moved, all the others are similarly moved at the same time.

5. The combination of levers, by which the catch-bars or fastenings to the upper pivot-rails are governed, and disengaged by the truck-wheels, and by which, if either one is disengaged, the others are also at the same time.

6. The combination of the curved toe-rocking shaft, with the oscillating riding-bar sustaining a weight or spring with any reciprocating-arm attached to the engine, for the purpose of gradually and rapidly retarding the piston, and bringing it and the car-truck to a state of rest, as herein described.

WILLIAM BOYD and WILLIAM F. BOYD, Mansfield, Mass.—*Bridle-Winkers.*—Patented June 26, 1855, No. 13,119; extended June 29, 1869.

Claim.—Forming the flaring or projecting portions *a*, of the winkers A of horse-bridles on metallic plates *b*, as herein shown, and for the purpose as set forth.

JONAH NEWTON, New York, N. Y.—*Method of Securing Cutters to Rotary Disks.*—Patented June 19, 1855, No. 13,096; reissued August 13, 1867, No. 2,728; extended June 29, 1869.

Claim.—1. A rotary cutter, consisting of a disk having recesses, which represent the segment of a circle, and teeth adapted to and admitting of being adjusted in these recesses, substantially as set forth, for the purpose specified.

2. The tooth or cutter, consisting of the segment of a ring, having on its convex side a rib adapted to a groove in the above-mentioned recess.

3. The recess *h*, and segmental nut *f*, arranged for securing the tooth or cutter to the disk or plate, as set forth.

WILLIAM MCDONALD, Morrisania, N. Y.—*Machine for Mitering Printers' Rules.*—Patented July 3, 1855, No. 13,197; reissued March 17, 1868, No. 2,899; extended July 6, 1869.

Claim.—The combination, with a movable cutter, of a sector-guide plate, a rule-holding bed, and adjusting-mechanism, constructed and operating substantially as described, and for the purpose specified.

WILLIAM MCDONALD, Morrisania, N. Y.—*Machine for Mitering Printers' Rules.*—Patented July 3, 1855, No. 13,197; extended July 13, 1869.

Claim.—Attaching to the bed A and framing B a sector-guide plate E, to which plate E the bed F is secured by a set-screw G, the bed F having a curved projection *e* attached to it, which projection works in a recess or groove *a* in the plate E, by which the bed F may be adjusted at the desired angle with the plate A, and the ends of the rules beveled or cut as herein shown, and for the purpose set forth.

ADDISON P. BROWN, Syracuse, N. Y.—*Self-Regulating Windmill.*—Patented July 3, 1855, No. 13,156; extended July 13, 1869.

Claim.—1. The helical slot and pin as a means of governing the degree of obliquity of the fans to the wind.

2. The combination of weights with the helical slots and pins, combined and operating in the manner and for the purpose herein specified.

THOMAS CROSSLEY, Bridgeport, Conn.—*Machine for Printing Woolen and other Goods.*—Patented June 20, 1854, No. 11,118; antedated April 5, 1854; extended July 20, 1869.

Claim.—1. The combination of the series of blocks with the stationary cases, or their equivalents, and the endless-chain register, operating in the manner substantially as described, by which any number of colors may be simultaneously applied, and a section of the figure be completed each time the blocks are compressed.

2. The within-described method of holding and feeding the material to be printed, by means of the endless chain and hooks, by which the material is held rigidly until the operation is completed, and thus perfect and unerring register is obtained.

3. The method, substantially as herein described, of giving motion to the blocks, by means of the sector X, or its equivalent, whereby they are moved in by a slow motion, and out with a rapid motion, and are caused to remain stationary at the two extremes of their traverse, while they receive their color and the impression is made.

WILLIAM ADAMSON, Philadelphia, Pa.—*Sand-Paper Cutting-Machine.*—Patented July 3, 1855, No. 13,153; extended July 20, 1869.

Claim.—The employment of thin elastic metallic blades L L′ and K K′, of uniform thickness, so arranged that the revolving blade shall overlap slightly the stationary blade, in the manner and for the purpose substantially as herein set forth.

S. T. THOMAS, Gilford, N. H.—*Looms.*—Patented July 3, 1855, No. 13,187; extended July 20, 1869.

Claim.—1. Combining with each rocker-lever L, and the lifter R thereof, an arm, N, cam *a*, and sector O, or the equivalent or equivalents thereof, the whole being applied together and made to operate in the manner essentially as specified.

2. Combining with the series of lifters R R and the pattern-prism *k*, a series of bent levers, *f f*, or their equivalents, and imparting to the pattern-prism vertical or up-and-down movements, as described, the same being to produce advantages, as stated.

3. When the upper and lower sets of cords of a harness are supported by pulleys, as described, applying both said upper and lower sets of cords to one and the same end of a lever, operated by a cam having a continuous rotation, as described.

4. Combining with the star-cam and lever for moving a set of shuttle-boxes, a mechanism, substantially as described, for imparting an accelerated movement to the shuttle-boxes, as explained, the said mechanism consisting of the additional lever *d*, the movable wedge *h′*, and its operative mechanism, as described.

5. The above-described arrangement of a jacquard, the wires thereof, the impelling-pawls, and the star-cams and their shaft, whereby one jacquard-apparatus, applied at one end of the loom, is made to operate two independent shuttle motions of the loom, as explained.

6. So applying to the main shaft a friction-clutch wheel, and a fly or balance wheel, that the fly may run loosely upon the shaft, and be capable of being moved either toward or away from the friction-clutch, in combination with so connecting the fly with the shipper, that the said fly shall be moved laterally during and by the movements of the shipper, as described.

7. Combining with the friction-wheel and the shipper, as described, a brake-mechanism, for throwing said brake, g^3, into and out of operation, as specified, such mechanism consisting of the lever-latch h^3, the projection l^3, and spring f^3, as specified.

JOHN PEPPER, Gilford, N. H.—*Knitting-Machines.*—Patented July 17, 1855, No. 13,289; reissued September 15, 1863, No. 1,538; extended July 20, 1869.

Claim.—1. The bar *e*, with its grooves *c′*, having its rear elevated above its forward portion, for the purpose of preventing the needle from rolling, as described.

2. In combination with the hooked sinkers and ribbed needles, made to operate substantially as described, the series of "cast-off" sinkers, or those formed without hooks, the same being arranged in the sinker-bar, and not only so as to admit the rib-needles to work between the hooked sinkers, but so as to render the machine capable of performing either plain or ribbed work, as specified.

3. Making the rib-needles take the place of the front or hook of the sinker in forming the loops of the rib-stitch.

HENRY R. WORTHINGTON, Greenburgh, N. Y.—*Water-Meter.*—Patented July 24, 1855, No. 13,320; extended July 20, 1869.

Claim.—The employment of two cylinders, which may be distinguished as cylinders No. 1 and 2, with pistons working in the same, so arranged and combined with regard to each other as that the motion of the piston in cylinder No. 1 shall actuate the supply and delivery valve of cylinder No. 2, while, in like manner, the motion of the piston in cylinder No. 2 actuates the supply and delivery valve of cylinder No. 1, thus producing a positive and direct motion, as herein fully set forth.

STEPHEN E. BOOTH, Orange, Conn., administrator of SHELDON S. HARTSHORN, deceased.—*Buckles.*—Patented July 10, 1855, No. 13,218; extended July 20, 1869.

Claim.—The improvement in the manufacture of buckles, composed of but two pieces, when constructed substantially as herein described.

JOSEPH A. PEABODY, Philadelphia, Pa.—*Machine for Mortising Window-Blinds.*—Patented July 17, 1855, No. 13,271; extended July 27, 1869.

Claim.—1. The bar or carriage N, which carries the blind-stile, and which is moved by lever or otherwise; and the changeable and adjustable arms O, O, or their mechanical equivalents, one end of each of them being connected to the bar N, while their opposite ends are so connected (by pins or otherwise) to the machine, that these arms are changeable and adjustable, so as to impart any desired angle to the mortises, essentially in the manner and for the purposes set forth.

2. The carriage B, or its equivalent, which may be vibrated or moved by lever or otherwise, for carrying a series of revolving mortising-chisels; this carriage, and the chisels attached to it, being so moved that the chisel will form or cut all the angular mortises in one window-blind stile at one operation, essentially in the manner and for the purposes set forth.

KINGSTON GODDARD, Richmond County, N. Y.—*Bridle-Reins.*—Patented July 24, 1855, No. 13,306; extended August 3, 1869.

Claim.—The arrangement of the reins, substantially as herein described, by making the snaffle-rein tubular in part to receive the curb-rein, substantially as and for the purpose set forth.

WELLIS HUMISTON, Troy, N. Y.—*Candle-Mold Apparatus.*—Patented July 24, 1855, No. 13,334; reissued January 22, 1861, No. 1,131; again reissued November 14, 1865, No. 2,108; extended August 3, 1869.

Claim.—1. The combination of the candle-tip mold *a* with the piston or ejecting rod D, in the manner and for the purposes substantially as herein described and set forth.

2. The combination of the said candle-tip mold *a*, arranged and combined with the said piston or ejecting rod D, with the vertical stationary candle-mold B, in the manner and for the purposes substantially as herein described and set forth.

3. The receiving of the candles in and by the vertical candle-supporting bars F, in the position in which they are ejected or pushed from the vertical stationary candle-molds B, and the closing of the said bars F, with the candles therein, and thus and thereby holding them during the operation of the pouring into or filling the said molds immediately below said receiving and supporting bars F, and thereby avoid the danger or liability of breaking the said candles or their tips, substantially as herein described and set forth.

4. The adjusting and holding the wick for the candles in the center of the said vertical stationary candle-molds B, by means of the said candle receiving and supporting bars F, and the candles therein held or supported by means thereof, in connection with the candle-tip molds *a*, each arranged and operated in the manner substantially as herein described and set forth.

5. The employment of the candle receiving and supporting bars F, so constructed and arranged as to open laterally on a vertical line lengthwise of the same, to receive the ejecting candles, and to close with such candles therein, by the means substantially as herein described, and so arranged over and above the said vertical stationary candle-molds B, as to hold said candles therein until the wick is severed between the candles so suspended and those molded in said stationary molds below, and thereby allow of the removal (when necessary) of such candle receiving and supporting bars F, with said candles therein, in the manner substantially as herein described and set forth.

6. The employment of portable candle receiving or supporting bars F, which may be opened and closed laterally, on a vertical line lengthwise of the same, immediately above and near the center of the vertical stationary candle-molds B, and so arranged and combined with the candle-machine frame or trough C that the same may, whenever desirable, be removed therefrom with the candles which have been ejected therein from the stationary molds below, in the manner substantially as herein described and set forth.

7. The holding of the candles F suspended over and above the vertical stationary candle-molds in and by the said candle receiving and supporting bars F, while the said candle-tip molds *a* are being separated or drawn from the tips of the said candles by means of the lowering or downward movement of the platform E, to which the piston or ejecting rods D are attached and combined, in the manner substantially as herein described and set forth.

8. The employment of one or more springs R, constructed of spiral or other shape, in combination with the said vertical candle receiving and supporting bars F, and operating between such bars, for the purpose of opening the said bars laterally on a vertical line lengthwise of the same, so as to allow the candles being ejected from the vertical stationary candle-molds to enter or pass between the same, in the manner substantially as herein described and set forth.

9. A candle-machine, so constructed, arranged, and combined, that by one continued upward movement or operation of the platen or platform E, having thereto attached the said piston or ejecting rods D, three or more rows of candles will be ejected vertically from the vertical stationary candle-molds and into the candle receiving and supporting bars F, opening laterally on a vertical line lengthwise of the same, at or near the center thereof, and immediately over and above the said stationary candle-molds B, in the manner substantially as herein described and set forth.

10. The starting of the candles from the said candle-molds B, by giving a sudden blow to the candle-tip molds *a* and to the candles therein, by means of the upward movement of the platen or platform E, with the said piston or ejecting rods D thereto attached, in the manner substantially as herein described and set forth.

D. C. CUMMINGS, Smithville, N. J.—*Straw-Cutters.*—Patented August 7, 1855, No. 13,385; extended August 10, 1869.

Claim.—1. The upward cut, when the material is fed in by a distinct device for that purpose, by which the dirt is separated from the straw or other material to be cut, passing out beneath the feed-rollers instead of collecting on the stationary guard or cutting-plate, substantially as and for the purposes specified.

2. Operating the movable feed-roller by means of a spur-wheel hung in a vibrating frame or yoke, with a universal coupling for connecting its axis with that of the roller, when said roller is supported on spring-bearings independent of each other, substantially as and for the purposes specified.

JOHN E. BURROWS, Newark, N. J.—*Making Zinc-White.*—Patented August 14, 1855, No. 13,416; extended August 24, 1869.

Claim.—The making of white oxide of zinc from ores of zinc or Franklinite, prepared substantially as above set forth, by means of a furnace having perforated grate-bars and an air-chamber underneath them, in which hot or cold blasts of air are forced to unite with the ignited mass of fuel in a diffused state, by passing through the perforations of the

grate-bars to liberate the zinc, in the form of vapor, in manner of construction and mode of operation, substantially as set forth.

BARNET L. SOLOMON, New York, N. Y., executor of MYER PHINEAS, deceased. — *Design for an Inkstand.* — Patented August 19, 1862, No. 1,652; extended September 7, 1869.

Claim.—The design for an inkstand, represented in the accompanying drawings.

JOHN and THOMAS HOPE, Providence, R. I.—*Machine for Engraving Calico-Printers' Rollers.*—Patented August 21, 1855, No. 13,462; extended September 7, 1869.

Claim.—1. The combination and arrangement of the two sets of measuring markers *i i i i*, the hold-back rods E F, and roller with the plane-surface table B, the same being not only to enable the design to be transferred, it being brought forward in regular sections, but to be maintained flatly upon the table, as described.

2. The two measuring-indices Q B′, in combination with the large pulley M, and the shaft of the driving-roller of the cylinder to be engraved.

3. The means of holding and moving the cylinder so that it shall not only be rotated by pressure against its external surface, but may be readily either removed from or applied to its supports, the same consisting in employing a driving-roller and a bearing-roller at one end of the cylinder, in combination with two sets of bearing-rollers made to extend into a groove around the cylinder, and to support such cylinder, both laterally and longitudinally, as described.

4. The arrangement of the pattern-table, the tracer, and its carriage, the several other carriages, the mechanism for operating each, the wheel M, its shaft, and the supports of the roller to be engraved, the whole constituting an important improvement in engraving-machinery, and securing to it important advantages in operation as well as in construction.

F. A. ROSS, New York, N. Y.—*Sewing-Machine Cases.* — Patented August 28, 1855, No. 13,499; extended September 7, 1869.

Claim.—1. The making the case in the form of a cabinet, which, when opened, will afford space for operating the machine by the treadle, and will form a table for the work by raising the leaves and supporting them by the doors of the cabinet when thrown open, in the manner above described.

2. The construction of the folding top, which, when open, furnishes drawers and shelf for the convenience of the operator, as above described.

HENRY WATERMAN, Brooklyn, N. Y. — *Reaping and Mowing Machines.*—Patented August 28, 1855, No. 13,512; extended September 7, 1869.

Claim. — 1. The combination of the two sets of knives described, with the curvilinear motion of the cutter-bar, as set forth.

2. The elastic fingers, in combination with the curvilinear motion of the cutter-bar.

3. Collecting and depositing the grain by the revolving cradles actuated by the weight of the grain laid upon them by the reel, in the manner set forth.

4. The flexible deflector, constructed and operating as set forth.

JOSEPH ALEXANDER ADAMS, Brooklyn, N. Y.—*Machine for Electrotyping.*—Patented September 4, 1855, No. 13,516; extended September 7, 1869.

Claim.—The reciprocating or vibrating brush M, operated as shown, or in an equivalent way, for the purpose of covering or coating the molds for electrotyping purposes, with any proper powdered substance, the said vibrating brush being combined, when necessary, with a carriage, P, arranged as shown, or in an equivalent way, so that the whole surface of the molds may be presented gradually or successively to the action of the brush as the molds pass underneath it.

CLARK TOMPKINS, Troy, N. Y., and JOHN JOHNSON, Boston Mass.—*Knitting-Machines.*—Patented September 18, 1855, No. 13,586; reissued May 15, 1860 No. 963; extended September 21, 1869.

Claim.—1. The apparatus for revolving the take up machinery in unison with the needle-cylinder, as herein specified, substantially in the manner and for the purpose set forth.

2. Revolving the shaping-plates S and C by a positive motion with and at the same velocity as the take-up motion, substantially as described and for the purposes specified.

JOSEPH D. ELLIOT, Leicester, Mass.—*Machinery for Folding and Measuring Cloth.* — Patented September 11, 1855, No. 13,543; extended September 21, 1869.

Claim.—1. In connection with the pivoted vibrating blades E E′, the rod and swivel for causing said blades to make a half revolution during each vibration, substantially as described.

2. The friction-bar or brake C, in combination with the rolls B D, for preventing the cloth, by the momentum of the blades, from paying off faster than it is folded, substantially as described.

ALBERT BISBEE, Chelsea, Mass. — *Steam-Gauge Cocks.*—Patented September 18, 1855, No. 13,563; extended September 21, 1869.

Claim.—The arrangement, substantially as specified, of the India-rubber disk or facing to the screw-plug or stopper, imbedded and bound at its edges by an extension of the body of the plug as described, with the stationary annular stopper-seat of the cock, essentially as set forth.

JOSHUA H. BUTTERWORTH, Dover, N. J.—*Door-Locks.*—Patented April 11, 1846, No. 4,452; reissued June 4, 1861, No. 88; extended September 21, 1869.

Claim.—1. The pawl described, or its equivalent, when combined with a movable talon that can yield to the pressure of the key-bit or key, to a point beyond its range, in the manner and for the purpose set forth.

2. The use or employment of one or more sets of rotating cam or disk plates, such as are described, having two or more in a set, on the same stem, when so combined with a tumbler or tumblers that lock the main bolt, so that it cannot be withdrawn until all the plates are rotated into such a position, relative to the tumbler, that the resisting parts can enter the notches in the circular cam-plates, pass within the line of their periphery, and so allow the tumblers to withdraw from contact with and resistance to the withdrawal of the bolt.

3. The use or employment of cam or disk-plates, two or more in a set, having the same center or key-bolt, when so constructed that one plate only is attached to the key-bolt, the next plate being moved by the pin projecting from its surface, coming in contact with the ends of the slits described, or in any analogous manner that allows the plate acted upon by the key to move, during a part of its revolution, without engaging and carrying round the next plate.

4. The use or employment of plates such as are described, two or more in a set, when so constructed and arranged as to require the motion of the key to be reversed in order to set each succeeding plate into such a position that the tumblers can descend into their notches and relieve the bolt.

5. The use of a plurality of cam or disk plates, in one set, operated by one key, key-bolt, or stem, when so constructed that the plates are to be set consecutively by means of the same key, key-bolt, stem, or their equivalent, each plate to its own proper position, according to the existing combination, by the aid of the same index, so as to relieve the bolt from the tumbler, or other mechanism combined with the plates, that has kept the bolts from being drawn back.

6. The use or employment of disk or cam plates, such as are described, combined by levers, or their equivalent, with the talon that draws back the bolt, when so arranged that the talon is thereby withdrawn beyond the range of the key-bit, and only allowed to come within its range, so as to be acted upon by it, when the plates have been brought into such a position as to allow that part of the levers that rest upon the edges of the plates to pass into the notches with the line of their periphery.

7. Separate pieces of metal 2 2 2 2, moving upon

pins, when used in connection with cam-plates, so as to change the point of contact between the plates themselves, and thus diversify, regularly or irregularly, the combination of permutation-locks.

RICHARD MONTGOMERY, New York, N. Y.—*Corrugated Beams.*—Patented September 25, 1855, No. 13,599; extended September 28, 1869.

Claim.—A supporting-beam formed of sheet-metal of unequal thickness, bent into a series of folds, substantially as represented in the accompanying drawing, and herein set forth.

THOMAS J. BALL, Bryan, Texas.—*Gang-Plows.*—Patented May 1, 1855, No. 12,791; extended September 28, 1869.

Claim.—The arrangement of the plows and pivoted beams, with the adjustable cross-beams, so that the plows may have a convenient permanent adjustment, in connection with their self-adjusting property in the plow-beam, as set forth and described.

ARCALOUS WYCKOFF and E. R. MORRISON, Elmira, N. Y.—*Boring-Machine.*—Patented September 25, 1855, No. 13,606; reissued October 14, 1856, No. 404; extended October 5, 1869.

Claim.—1. The tubular or hollow auger or bits G, as constructed, having the cutting-lips of the bits approach the center, and yet separated from each other, doing without the use of a screw on the end of the bit, for the purpose of preventing the bit from following the grain of the wood.

2. The worm J, operating on its own axle, and independent of the revolutions of the auger or bits D, for the purpose of clearing away the chips, as set forth.

SAMUEL VAN SYCKEL, Titusville, Pa.—*Interlocking Grate-Bars.*—Patented October 9, 1855, No. 13,669; extended October 5, 1869.

Claim.—The so casting of grate-bars, with projections and recesses on their sides and ends, as that when laid together they shall interlock one over, under, or behind the other, in such manner as to prevent them moving vertically and horizontally, or from warping or twisting, whilst they may be readily removed or replaced, as herein set forth.

ISAAC M. SINGER, New York, N. Y.—*Sewing-Machines.*—Patented October 9, 1855, No. 13,661; extended October 26, 1869.

Claim.—1. In combination with the shuttle, and attached thereto, the employment of a spring pressure-guide, substantially as specified, to control the shuttle-thread as the needle enters the cloth or other substance to be sewed, as set forth, and for the purpose specified.

2. The continuous feed-motion for spacing the stitches, substantially as specified, in combination with the vibratory motion of the needle, imparted in one direction by the feed-motion, and in the opposite by a spring or any equivalent therefor, substantially as and for the purpose specified.

PETER GEISER, Waynesborough, Pa.—*Grain-Separators.*—Patented October 9, 1855, No. 13,644; extended October 26, 1869.

Claim.—1. The vanes within the fan-case, against which the blast acts, for the purpose of closing or opening the register automatically, to regulate the blast, as set forth.

2. The manner of separating the grain from the straw and other impurities, by means of the aprons, combs, and grooved rolls, without the use of a riddle, whether one, two, or more sets of such separating-apparatus be used, substantially as described.

3. In combination with the separating-apparatus, the self-regulating dividing-shelf, upon which the grain drops for the purpose of carrying the heavy grain back and the lighter forward, for a second or more complete separation, as set forth.

4. The hinging of the upper to the lower portion of the straw-carrier frame, and providing it with adjustable slides or conveyers, for dividing and conveying the straw into any desired localities, as set orth.

B. F. MILLER, New York, N. Y.—*Chimney-Stack.*—Patented October 2, 1855, No. 13,620; extended October 26, 1869.

Claim.—Constructing and placing a solid or hollow cone or a pyramid in the mouth of the funnel or smoke-stack, with its apex upward or pointing outward from the mouth of said chimney or pipe, in combination with the surrounding shield, furnished with flanches, as described, constructed and located substantially as set forth.

JAMES M. COOK, Boston, Mass.—*Dust-Deflector for Windows of Railroad-Cars.*—Patented October 16, 1855, No. 13,676; extended October 26, 1869.

Claim.—The rotary deflector or ventilator, constructed and made to operate substantially in manner and for the purpose as specified.

JOSEPH KEECH, Waterloo, N. Y.—*Wash-Boards.*—Patented October 16, 1855, No. 13,682; extended October 26, 1869.

Claim.—Constructing the operating face of wash-boards of a laterally depressed and centrally elevated corrugated surface, substantially as specified, for increasing the effective operation of the board, in the manner set forth.

ALBERT FULLER, New York, N. Y.—*Faucet.*—Patented October 16, 1855, No. 13,677; reissued July 5, 1859, No. 752; extended October 26, 1869.

Claim.—1. The elastic plug-valve, attached to a stem, when operated by an eccentric or its equivalent, substantially as set forth, for the purposes described.

2. The elastic plug-valve, constructed as described, in combination with the cup-shaped cap, to prevent the plug from spreading, substantially as described.

D. W. C. SANFORD, New Orleans, La.—*Refrigerators.*—Patented November 13, 1855, No. 13,802; reissued April 21, 1857, No. 455; extended November 2, 1869.

Claim.—In combination with said shelves or fixtures so placed, constructing the open bottom of the ice-box in such manner that the air may pass freely down through the same and fall directly from the ice upon the articles to be refrigerated, while at the same time the drip of the water is prevented, as set forth.

L. W. LANGDON, Northampton, Mass.—*Sewing-Machines.*—Patented October 30, 1855, No. 13,727; extended November 2, 1869.

Claim.—1. Making a stitch by tying a half knot or a whole knot, at the will of the operator, in the manner herein set forth and described.

2. The snail-worm on the revolving vertical face-plate, for the purpose of holding the tread until the knot is tied, and then casting it off in time for the stitch to be drawn up.

3. The vertical face-plate, into which the shuttle is set for the purpose of carrying it around, and the reaction of the looper K, for quickening the motion of the shuttle as it passes the needle for the purpose of letting the looper pass out freely.

4. Feeding the material by the needle, when combined and arranged with the lateral motion of the needle, in the manner described, that is to say, in connection with the rock-shaft H, with the sliding-step in the end, the connecting-rod *q*, the spring S, the set-screw and rollers R R, the cams T T, the sliding-bar P, and the adjustable lever *o*, as set forth.

JAMES WEST, Syracuse, N. Y.—*Roofing Compositions.*—Patented October 30, 1855, No. 13,733; reissued September 8, 1857, No. 491; extended November 2, 1869.

Claim.—The use of lime in combination with the rubber or gutta-percha and shellac solutions, in the composition as set forth, and for the purpose specified.

JAMES O. LEACH, Ballston Spa, N. Y.—*Looms.*—Patented October 30, 1855, No. 13,724; extended November 9, 1869.

Claim.—1. The combination and arrangement of the shifting-lever N, connecting-rod P, and eccentric R, operated by the gearing T and S, or their mechanical equivalents, substantially in the manner described, for the purpose of varying the movement of

the loom-harness or heddles, so as to produce solid or tubular fabric with the same warp, and vary the solid or tubular weaving, so as to produce bags of any desirable capacity.

2. The mechanism, substantially as herein described, for determining and regulating the intervals between the shift of the cams, viz, stops on the shaft of the eccentric, governed by a stop-lever, said stop-lever being operated by a horizontal cam, which is itself turned by a ratchet-wheel whose pawl is driven by the oscillating motion of the lathe, in combination with the partially-toothed bevel-wheel.

Additional Improvement No. 147, *dated July* 8, 1856.—In operating a loom, the employment of two sets of cams, four in each set, constructed, shaped, and arranged, in reference to each other, as shown in the drawings, the same being movable to the right and left without changing their intervals, and in either position producing a tubular cloth; one set being arranged in reference to the other so that the shift of the cams shall make the harness shift the warp, instantly carrying that part forming the upper web downward, and that forming the lower web upward, making at their crossing a firm single joint.

Additional Improvement No. 159, *dated March* 3, 1857.—The change in the relative position of cams 2 and 4, 6 and 8, in the manner and for the purposes substantially as set forth.

SARAH A. HOLMES, administratrix of RICHARD G. HOLMES, deceased, and WILLIAM H. BUTLER, New York, N. Y.—*Locks.*—Patented October 30, 1855, No. 13,722; extended November 9, 1869.

Claim 1.—Arranging the spindle or arbor E, of the lock, in such a relation with the bolt, that the bolt may be operated by drawing and pressing the spindle or arbor in a direction transversely with the casing of the lock, substantially as described.

2. The cylindrical bolt B, constructed and arranged substantially as shown, and also connecting said bolt to the spindle or arbor E by means of the lever C, as described.

3. The employment or use of the sector-tumblers K, when attached to a sliding-plate, J, and used in connection with a spring, L, which is acted upon by the beveled or inclined projection *n*, at the side of the box or casing I, for the purpose of preventing the lock being picked by obtaining a knowledge of the position of the slots *l*, in the tumblers, by pressing the tumblers singly against the plate K, as herein described.

JOSEPH MCCORD, Philadelphia, Pa.—*Policemen's Rattles.*—Patented November 20, 1855, No. 13,823; extended November 9, 1869.

Claim.—The securing of the handle to the edge of the ratchet-wheel, and at right angles to the axis of the latter, for the purpose of turning down the handle out of the way, thereby rendering the instrument more convenient to carry in the pocket, and for the further purpose of combining a mace and rattle in one instrument, substantially in the manner herein set forth.

MARY F. CROCKER, West Winsted, Conn., administratrix *de bonis non* of WILLIAM R. CROCKER, deceased.—*Machine for Manufacturing Corks.*—Patented October 30, 1855, No. 13,714; extended November 16, 1869.

Claim.—1. The application of the revolving cylindrical cutters, to cut corks from a block or slab, as herein described, whether the cutters are slit to cut tapering or conical, or unslit to cut cylindrical corks.

2. I do not claim a cylindrical cutter, but this mode of construction, use, and application, allowing myself the privilege of varying the same in detail while the principle and distinguishing characteristics are retained.

SAMUEL WETHERILL, Baltimore, Md.—*Process for Making Zinc-White.*—Patented November 13, 1855, No. 13,806; extended November 16, 1869.

Claim.—The process of producing the white oxide of zinc from the ores of that metal by the direct application of the fuel to the ore in the crushed state and in admixture therewith, in combination with a blast of atmospheric air introduced in numerous small jets to the charge of mixed ore and coal, in a thin layer, substantially as specified.

JAMES A. WOODBURY, Boston, Mass.—*Planing-Machine.*—Patented November 13, 1855, No. 13,808; extended November 16, 1869.

Claim.—Making both of the edge-cutters adjustable in such a manner that the board can be fed in from either side of the machine, double guides being provided for the purpose, as specified.

ELI HORTON, Windsor Locks, Conn.—*Lathe-Chuck.*—Patented November 13, 1855, No. 13,787; extended November 16, 1869.

Claim.—1. In combination with the opening H, on the front plate for the introduction of the solid jaws, the hub L, on the back plate for closing said opening and retaining the jaws in their respective slots, substantially as described.

2. The locating of the circular rack in the deep recess or groove formed between the flanges F Z, which not only form a tight casing to protect it from chips, filings, &c., but also support it, as well as the shanks of the screw-bolts, substantially as set forth.

RHUDOLPHUS KINSLEY, Springfield, Mass.—*Tobacco-Presses.*—Patented November 13, 1855, No. 13,790; extended November 16, 1865.

Claim.—The construction and employment of a press-box or compresser, substantially as herein described, in which the article to be compressed can be put, and placed under a press, and when compressed can be retained in that position and removed from the press till set, while the press is liberated for other operations, all as above set forth.

E. HARMON, Gettysburgh, Pa.—*Envelope.*—Patented November 20, 1855, No. 13,838; extended November 30, 1869.

Claim.—The manufacture or preparation of envelopes with parallel lines on the interior of the back as herein set forth.

TIMOTHY BAILEY, Ballston Spa, N. Y.—*Knitting-Machine.*—Patented November 20, 1855, No. 13,811; extended November 30, 1869.

Claim.—1. Actuating the sinking or other burrs by means of a gear-wheel, whose teeth are actuated, or rather acted upon by the needle as a rack, whereby the wings in said burrs are freed from contact with the needles and do not nip the yarn tightly between said wings and the needles, substantially in the manner and for the purposes described.

2. Carrying back the old stitch and holding it back by means of a disk-wheel and segment having a planetary motion, as herein set forth, and also the leading of the finished cloth through a ring, or its equivalent, surrounding a shaft having a planetary motion, whereby the action of the drag-weight is properly adjusted upon different portions of that circuit of the cloth which is being acted upon by the needles and burrs, substantially as herein specified, and in combination with a cloth or knitted tube, to which is imparted substantially such a revolving motion as is herein described.

3. A self-adjusting climbing drag-weight, constructed substantially in the manner herein set forth.

4. A stationary series of needles in circuit, when constructed and arranged substantially in the manner described, in combination with the revolving burrs driven by independent gearing, and traveling from needle to needle, whereby the turning of the finished cloth on its own axis is avoided, and all difficulties incident thereto obviated.

Disclaimer as to 1st and 4th claims filed November 6, 1869.

SETH SIMMONS, Providence, R. I., administrator of NATHAN SIMMONS, deceased.—*Cloth-Stretching Rollers.*—Patented December 4, 1855, No. 13,888; extended December 14, 1869.

Claim.—My improvement in the cloth-stretching roller or cylinder, the same consisting in imparting to its sectional stretchers, while the roller is in revolution, consecutive movements in one direction or away from the middle of the roller in the order as described, and by mechanism substantially as specified, or any mechanical equivalent therefor.

STEPHEN E. BOOTH, Orange, Conn., administrator of SHELDON S. HARTSHORN, deceased.—*Buckles.*—

Patented December 11, 1855, No. 13,907; extended December 14, 1869.

Claim.—Constructing the tongues and loop of the buckle in one part, and at one operation, in such a manner that socket (*a*, Fig. 3) will firmly secure the joint *b* in the other part (Fig. 2) so as to need no other fastening, as herein described.

PHILO MARSH, South Adams, Mass.—*Treating Oils.*—Patented January 1, 1856, No. 14,042; extended December 28, 1869.

Claim.—For the purpose of defecating oil, the employment, in manner substantially as above described, of the pyrogenic constituents of crude pyroligneous acid, except the acetic acid.

JAMES COCHRANE, New York, N. Y.—*Method of Operating and Lubricating Slide-Valves.*—Patented January 1, 1856, No. 14,010; extended December 28, 1869.

Claim.—1. Moving a vibratory, flat, or curved slide-valve within its chest, without the necessity of a stuffing-box, by the means, or similar ones, to those described.

2. Substantially the method of lubricating slide-valves as described, by and through an aperture of the valve or its seat.

DESIGNS.

3,304.—HARRISON EATON, Amherst, N. H.—*Stove.*—January 5, 1869.

3,305.—ISRAEL FOSTER, Philadelphia, Pa.—*Carpet-Pattern.*—January 5, 1869.

3,306.—JACOB GETZ, Buffalo, N. Y.—*Trade-Mark.*—January 5, 1869.

3,307.—WILLIAM GORMAN, New Haven, Conn., assignor to SARGENT AND COMPANY, same place.—*Shelf-Bracket.*—January 5, 1869.

3,308.—WILLIAM GORMAN, New Haven, Conn., assignor to SARGENT AND COMPANY, same place.—*Shelf-Bracket.*—January 5, 1869.

3,309.—WILLIAM GORMAN, New Haven, Conn., assignor to SARGENT AND COMPANY, same place.—*Shelf-Bracket.*—January 5, 1869.

3,310.—WILLIAM GORMAN, New Haven, Conn., assignor to SARGENT AND COMPANY, same place.—*Shelf-Bracket.*—January 5, 1869.

3,311.—WILLIAM GORMAN, New Haven, Conn., assignor to SARGENT AND COMPANY, same place.—*Shelf-Bracket.*—January 5, 1869.

3,312.—WILLIAM GORMAN, New Haven, Conn., assignor to SARGENT AND COMPANY, same place.—*Shelf-Bracket.*—January 5, 1869.

3,313.—WILLIAM GORMAN, New Haven, Conn., assignor to SARGENT AND COMPANY, same place.—*Shelf-Bracket.*—January 5, 1869.

3,314.—WILLIAM GORMAN, New Haven, Conn., assignor to SARGENT AND COMPANY, same place.—*Shelf-Bracket.*—January 5, 1869.

3,315.—HENRY HEBBARD, New York, N. Y.—*Spoon or Fork Handle.*—January 5, 1869.

3,316.—ELEMIR J. NEY, Lowell, Mass., assignor to LOWELL MANUFACTURING COMPANY, same place.—*Carpet-Pattern.*—January 5, 1869.

3,317.—JOHN B. NICKELS, Bangor, Me.—*Stove.*—January 5, 1869.

3,318.—J. E. PARKER, West Meriden, Conn.—*Shelf-Bracket.*—January 5, 1869.

3,319.—WILLIAM PARKIN, Taunton, Mass., assignor to REED AND BARTON, same place.—*Tazza for Holding Cake.*—January 5, 1869.

3,320.—WILLIAM PARKIN, Taunton, Mass., assignor to REED AND BARTON, same place.—*Tea-Service.*—January 5, 1869.

3,321.—JOHN SEALY, Jr., Newark, N. J.—*Ornament of a Hat or Cap.*—January 5, 1869.

3,322.—JOHN SEALY, Jr., Newark, N. J.—*Ornament of a Hat.*—January 5, 1869.

3,323.—JOHN SEALY, Jr., Newark, N. J.—*Ornament of a Hat or Cap.*—January 5, 1869.

3,324.—NICHOLAS S. VEDDER, Troy, N. Y.—*Base and Top of a Stove.*—January 5, 1869.

3,325.—NICHOLAS S. VEDDER, Troy, N. Y.—*Plates of a Stove.*—January 5, 1869.

3,326.—NICHOLAS S. VEDDER, Troy, and TOBIAS S. HEISTER, Lansingburgh, N. Y., assignors to NICHOLAS S. VEDDER.—*Plates of a Stove.*—January 5, 1869.

3,327.—NICHOLAS S. VEDDER, Troy, and TOBIAS S. HEISTER, Lansingburgh, N. Y., assignors to NICHOLAS S. VEDDER.—*Plates of a Stove.*—January 5, 1869.

3,328.—NICHOLAS S. VEDDER, Troy, and TOBIAS S. HEISTER, Lansingburgh, N. Y., assignors to NICHOLAS S. VEDDER.—*Plates of a Cook's Stove.*—January 5, 1869.

3,329.—NICHOLAS S. VEDDER, Troy, and TOBIAS S. HEISTER, Lansingburgh, N. Y., assignors to NICHOLAS S. VEDDER.—*Plates of a Cook's Stove.*—January 5, 1869.

3,330.—NICHOLAS S. VEDDER, Troy, and TOBIAS S. HEISTER, Lansingburgh, N. Y., assignors to NICHOLAS S. VEDDER.—*Doors of a Stove.*—January 5, 1869.

3,331.—NICHOLAS S. VEDDER, and FRANCIS RITCHIE, Troy, N. Y., assignors to NICHOLAS S. VEDDER.—*Base and Top of a Stove.*—January 5, 1869.

3,332.—NICHOLAS S. VEDDER, and FRANCIS RITCHIE, Troy, N. Y., assignors to NICHOLAS S. VEDDER.—*Plates of a Stove.*—January 5, 1869.

3,333.—WILLIAM H. WILSON, Providence, R. I.—*Sleeve-Button.*—January 5, 1869.

3,334.—HUGH CHRISTIE, Morrisania, N. Y.—*Floor-Cloth Pattern.*—January 12, 1869.

3,335.—JOEL HAYDEN, Jr., Haydensville, Mass.—*Water-Closet Receiver.*—January 12, 1869.

3,336.—GEORGE R. HOLBROOK, Ansonia, Conn., assignor to PHELPS, DODGE AND COMPANY same place.—*Clock-Case.*—January 12, 1869.

3,337.—GEORGE B. OWEN, Winsted, Conn.—*Clock-Bell Stand.*—January 12, 1869.

3,338.—EMERY PARKER, New Britain, Conn., assignor to RUSSELL AND ERWIN MANUFACTURING COMPANY, same place.—*Face-Plate of a Sash-Pulley.*—January 12, 1869.

3,339.—WILLIAM PARKIN, Taunton, Mass., assignor to REED AND BARTON, same place.—*Tea-Service.*—January 12, 1869.

3,340.—WILLIAM PARKIN, Taunton, Mass., assignor to REED AND BARTON, same place.—*Butter-Vase, or Cooler.*—January 12, 1869.

3,341.—WILLIAM SHELMERDINE, Philadelphia,

Pa., assignor to SHELMERDINE AND AITKEN, same place.—*Carpet-Pattern.*—January 12, 1869.

3,342.—THOMAS S. HUDSON, East Cambridge, Mass.—*Inkstand.*—January 19, 1869.

3,343.—JAMES HUTCHISON, Newark, N. J., assignor to EDWARD C. SAMPSON, New York City.—*Floor Oil-Cloth Pattern.*—January 19, 1869.

3,344.—CHARLES T. MEYER, Bergen, N. J., assignor to EDWARD C. SAMPSON, New York City.—*Floor Oil-Cloth Pattern.*—January 19, 1869.

3,345.—CHARLES T. MEYER, Bergen, N. J., assignor to EDWARD C. SAMPSON, New York City.—*Floor Oil-Cloth Pattern.*—January 19, 1869.

3,346.—APOLLOS RICHMOND, Brooklyn, and SAMPSON G. RICHMOND, Norwich, Conn.—*Stove.*—January 19, 1869.

3,347.—A. RICHMOND, Brooklyn, and SAMPSON G. RICHMOND, Norwich, Conn.—*Cook's Stove.*—January 19, 1869.

3,348.—A. RICHMOND, Brooklyn, and SAMPSON G. RICHMOND, Norwich, Conn.—*Air-Tight Stove.*—January 19, 1869.

3,349.—S. B. ROWLEY, Philadelphia, Pa.—*Glass Cover of a Fruit-Jar.*—January 19, 1869.

3,350.—THOMAS DOLAN, Philadelphia, Pa.—*Stocking-Fabric.*—January 26, 1869.

3,351. THOMAS DOLAN, Philadelphia, Pa.—*Stocking-Fabric.*—January 26, 1869.

3,352.—THOMAS DOLAN, Philadelphia, Pa.—*Stocking-Fabric.*—January 26, 1869.

3,353.—FRANCIS T. FRACKER, Boston, Mass., assignor to P. AND F. CORBIN, New Britain, Conn.—*Hinge.*—January 26, 1869.

3,354.—FRANCIS T. FRACKER, Boston, Mass., assignor to P. AND F. CORBIN, New Britain, Conn.—*Hinge.*—January 26, 1869.

3,355.—LEVIS PASSMORE, Philadelphia, Pa., assignor to W. W. STEEL, same place.—*Gate.*—January 26, 1869.

3,356.—T. L. VARNS, Kokomo, Ind.—*Sled-Runner.*—January 26, 1869.

3,357.—CHARLES PRATT, New York, N. Y.—*Top or Bottom of a Sheet-Metal Can.*—February 9, 1869.

3,358.—CHARLES PRATT, New York, N. Y.—*Top or Bottom of a Sheet-Metal Can.*—February 9, 1869.

3,359.—CHARLES PRATT, New York, N. Y.—*Top of a Sheet-Metal Can.*—February 9, 1869.

3,360.—JAMES ALLISON, Philadelphia, Pa., assignor to JOHN BROMLEY, JAMES BROMLEY, THOMAS BROMLEY, GEORGE D. BROMLEY, and JOHN H. BROMLEY, same place.—*Carpet-Pattern.*—February 9, 1869.

3,361.—TAYLOR BLOW, Saint Louis, Mo.—*Trade-Mark.*—February 9, 1869.

3,362.—SPENCER H. BROWN and CHARLES H. WILLETS, New York, N. Y.—*Bustle.*—February 9, 1869.

3,363.—ROBERT B. CARSLEY, Boston, Mass.—*Canceling and Embossing Stamp.*—February 9, 1869.

3,364.—JOHN ROGERS, New York, N. Y.—*Group of Statuary.*—February 9, 1869.

3,365.—CONRAD SEIMEL, Green Point, assignor to CHARLES PRATT, New York, N. Y.—*Corner of Sheet-Metal Can.*—February 9, 1869.

3,366.—TALIAFERRO P. SHAFFNER, Louisville, Ky.—*Trade-Mark.*—February 9, 1869.

3,367.—HENRY BERGER, New York, N. Y.—*Center-Piece.*—February 16, 1869.

3,368.—ROBERT R. CAMPBELL, Lowell, Mass., assignor to LOWELL MANUFACTURING COMPANY, same place.—*Carpet-Pattern.*—February 16, 1869.

3,369.—GEORGE F. GANTZ, New York, N. Y., assignor to GEORGE F. GANTZ AND COMPANY, same place.—*Trade-Mark.*—February 16, 1869.

3,370.—HARRY H. GLIDDEN and ELON P. HOUSE, Springfield, Ill.—*Trade-Mark.*—February 16, 1869.

3,371.—JULIUS HERRIET, New York, N. Y., assignor to DAVID WOLFE BRUCE, same place.—*Printers' Types.*—February 16, 1869.

3,372.—THOMAS HOUGHTON, Philadelphia, Pa.—*Lamp-Chimney.*—February 16, 1869.

3,373.—W. L. HUMASON, New Britain, Conn.—*Latch.*—February 16, 1869.

3,374.—WILLIAM C. HUTCHINGS, Hartford, Conn.—*Trade-Mark.*—February 16, 1869.

3,375.—NATHAN LAWRENCE, Taunton, Mass., assignor to REED AND BARTON, same place.—*Ice-Pitcher.*—February 16, 1869.

3,376.—CHARLES PRATT, New York, N. Y.—*Sheet-Metal Can.*—February 16, 1869.

3,377.—HENRY H. BABCOCK, Watertown, N. Y.—*Pump.*—February 16, 1869.

3,378.—HUGH CHRISTIE, Morrisania, N. Y., assignor to W. M. BRASHER AND COMPANY.—*Floor Oil-Cloth Pattern.*—February 16, 1869.

3,379.—HUGH CHRISTIE, Morrisania, N. Y., assignor to W. M. BRASHER AND COMPANY.—*Floor Oil-Cloth Pattern.*—February 16, 1869.

3,380.—GEORGE W. FRY, Pittsburgh, Pa.—*Lamp-Chimney.*—February 16, 1869.

3,381.—DAVID NEUMANN, New York, N. Y.—*Satchel-Lock.*—February 16, 1869.

3,382.—JAMES PATERSON, Elizabeth, N. J., assignor to WILLIAM M. BRASHER AND COMPANY, Brooklyn, N. Y.—*Floor Oil-Cloth Pattern.*—February 16, 1869.

3,383.—A. CODDING, Jr., North Attleborough, Mass.—*Bracelet.*—February 23, 1869.

3,384.—JOHN COOK, Brooklyn, N. Y.—*Spoon or Fork Handle.*—February 23, 1869.

3,385.—JOHN FARRELL, Baltimore, Md.—*Trade-Mark.*—February 23, 1869.

3,386.—GUSTAV L. JAEGER, New York, N. Y.—*Hat-Box.*—February 23, 1869.

3,387.—EMERY PARKER, New Britain, Conn., assignor to RUSSELL AND ERWIN MANUFACTURING COMPANY, same place.—*Face-Plate of a Lock.*—February 23, 1869.

3,388.—CHRISTIAN PFEFFER, Buffalo, N. Y.—*Picture-Frame.*—February 23, 1869.

3,389.—EDWIN CHARLES RUTHVEN, Philadelphia, Pa., assignor to MACKELLAR, SMITHS AND JORDAN, same place.—*Printers' Type.*—February 23, 1869.

3,390.—Joseph Sedgebeer, Painesville, Ohio.—*Grinding-Mill.*—February 23, 1868.

3,391.—Frederick Whitehouse, Brooklyn, N. Y., assignor to The Whiting Manufacturing Company, New York City.—*Spoon.*—February 23, 1869.

3,392.—Conyers Button, Philadelphia, Pa.—*Stocking-Fabric.*—March 2, 1869.

3,393.—Conyers Button, Philadelphia, Pa.—*Stocking-Fabric.*—March 2, 1869.

3,394.—Edward N. Crane, Newark, N. J.—*Buckle-Loop.*—March 2, 1869.

3,395.—Daniel F. Packer, Mystic River, Conn.—*Trade-Mark.*—March 2, 1869.

3,396.—Warren H. Sadler, Baltimore, Md.—*Picture-Frame.*—March 2, 1869.

3,397.—Charles Spencer, Philadelphia, Pa.—*Leg of a Stocking.*—March 2, 1869.

3,398.—Charles Spencer, Philadelphia, Pa.—*Leg of a Stocking.*—March 2, 1869.

3,399.—B. F. Sturtevant, Boston, Mass.—*Blower-Case.*—March 2, 1869.

3,400.—Amelia Strang, Oakland, Cal.—*Boot.*—March 2, 1869.

3,401.—William Sutherland and Thomas I. Lewellen, Philadelphia, Pa.—*Flower-Pot.*—March 2, 1869.

3,402.—William K. Vanderslece and Lucius Thompson, San Francisco, Cal.—*Spoon or Fork Handle.*—March 2, 1869.

3,403.—John T. Webster, New York, N. Y.—*Floor Oil-Cloth Pattern.*—March 2, 1869.

3,404.—Conyers Button, Philadelphia, Pa.—*Stocking-Fabric.*—March 23, 1869.

3,405.—Conyers Button, Philadelphia, Pa.—*Stocking-Fabric.*—March 23, 1869.

3,406.—Conyers Button, Philadelphia, Pa.—*Stocking-Fabric.*—March 23, 1869.

3,407.—Conyers Button, Philadelphia, Pa.—*Stocking-Fabric.*—March 23, 1869.

3,408.—John V. B. Carter, Albany, N. Y.—*Stove.*—March 23, 1869.

3,409.—Calvin Fulton, Rochester, N. Y.—*Stove.*—March 23, 1869.

3,410.—George F. Gantz, New York, N. Y., assignor to George F. Gantz and Company.—*Label.*—March 23, 1869.

3,411.—George Hartje and Lucien S. Jacquin, New York, N. Y.—*Locket.*—March 23, 1869.

3,412.—James L. Haven, Cincinnati, Ohio.—*Barn-Door Hanger.*—March 23, 1869.

3,413.—John S. Jennings, Brooklyn, (E. D.,) N. Y.—*Chamber-Pail.*—March 23, 1869.

3,414.—Charles T. Meyer, Bergen, N. J., assignor to Edward C. Sampson, New York City.—*Floor Oil-Cloth Pattern.*—March 23, 1869.

3,415.—Charles T. Meyer, Bergen, N. J., assignor to Edward C. Sampson, New York City.—*Floor Oil-Cloth.*—March 23, 1869.

3,416.—Victor E. Meyer, Harrison, N. J., assignor to A. Folsom and Sons, Boston, Mass.—*Carpet-Pattern.*—March 23, 1869.

3,417.—E. J. Ney, Lowell, Mass., assignor to Lowell Manufacturing Company, same place.—*Carpet-Pattern.*—March 23, 1869.

3,418.—E. J. Ney, Lowell, Mass., assignor to Lowell Manufacturing Company, same place.—*Carpet-Pattern.*—March 23, 1869.

3,419.—E. J. Ney, Lowell, Mass., assignor to Lowell Manufacturing Company, same place.—*Carpet-Pattern.*—March 23, 1869.

3,420.—E. J. Ney, Lowell, Mass., assignor to Lowell Manufacturing Company.—*Carpet-Pattern.*—March 23, 1869.

3,421.—William Parkin, Taunton, Mass., assignor to Reed and Barton, same place.—*Bottle-Stand, or Caster.*—March 23, 1869.

3,422.—William Parkin, Taunton, Mass., assignor to Reed and Barton, same place.—*Bottle-Stand, or Caster.*—March 23, 1869.

3,423.—W. H. Reed, New York, N. Y.—*Ottoman.*—March 23, 1869.

3,424.—Richard H. Rice, Newport, R. I.—*Trade-Mark.*—March 23, 1869.

3,425.—George Sharp, Philadelphia, Pa.—*Spoon or Fork Handle.*—March 23, 1869.

3,426.—Garrettson Smith and Henry Brown, Philadelphia, Pa., assignors to William L. McDowell, same place.—*Plates of a Cook-Stove.*—March 23, 1869.

3,427.—Isaac Snider, James Woodruff, and J. M. Woodruff, Salem, Ohio.—*Stove.*—March 23, 1869.

3,428.—S. A. Whitney, Glassborough, N. J.—*Body of a Pickle-Jar.*—March 23, 1869.

3,429.—H. C. Wilcox, Meriden, Conn., assignor to Meriden Britannia Company, same place.—*Fork or Spoon Handle.*—March 23, 1869.

3,430.—Edward Wilhelm, Buffalo, N. Y., assignor to A. W. Fox and Company, same place.—*Trade-Mark.*—March 23, 1869.

3,431.—J. H. Ackerman, New York, N. Y.—*Trade-Mark.*—March 30, 1869.

3,432.—Henry Berger, New York, N. Y.—*Center-Piece.*—March 30, 1869.

3,433.—Simon W. Dexter and Daniel S. Dexter, Pawtucket, R. I.—*Trade-Mark.*—March 30, 1869.

3,434.—Isidore Dreyfus, New York, N. Y.—*Oil-Cup for Journal-Boxes.*—March 30, 1869.

3,435.—John A. Hamlin and Lysander B. Hamlin, Elgin, Ill.—*Trade-Mark.*—March 30, 1869.

3,436.—Robert Hemingray, Cincinnati, Ohio.—*Lamp-Chimney.*—March 30, 1869.

3,437.—Elias Ingraham, Bristol, Conn.—*Front of a Clock-Case.*—March 30, 1869.

3,438.—John Murdock, Jersey City, N. J., assignor to John Savery's Sons, New York City.—*Bird-House.*—March 30, 1869.

3,439.—William Parkin, Taunton, Mass., assignor to Reed and Barton, same place.—*Table-Caster Stand.*—March 30, 1869.

3,440.—William Parkin, Taunton, Mass., assignor to Reed and Barton, same place.—*Fruit-Tazza.*—March 30, 1869.

3,441.—William Atkinson, Philadelphia, Pa.

—*Guide and Friction-Brake for Shuttle-Looms.*—April 6, 1869.

3,442.—William G. Creamer, Brooklyn, N. Y.—*Basket-Rack for Railroad-Cars.*—April 6, 1869.

3,443.—Charles Parker, Meriden, Conn.—*Tobacco-Box.*—April 6, 1869.

3,444.—Alfred Ray, Chicago, Ill., assignor to Marshall Field and Levi Z. Leiter, same place.—*Trade Mark.*—April 6, 1869.

3,445.—Joseph Sedgebeer, Painesville, Ohio.—*Coffee-Mill.*—April 6, 1869.

3,446.—Henry A. Dirkes, New York, N. Y.—*Handle of a Table-Caster.*—April 13, 1869.

3,447.—Henry A. Fanshawe, New York, N. Y.—*Trade-Mark.*—April 13, 1869.

3,448.—John C. Ham, New York, N. Y.—*Carriage.*—April 13, 1869.

3,449.—Wesley W. Hamilton, New York, N. Y., assignor to himself and W. G. Vermilye, same place.—*Eraser.*—April 13, 1869.

3,450.—Henry I. Barbey, New York, N. Y.—*Trade-Mark.*—April 20, 1869.

3,451.—Samuel A. Blake, Milford, Conn.—*Hat, in Imitation of Straw-Braid.*—April 20, 1869.

3,452.—Addis E. Chamberlain, and J. B. Crowley, Cincinnati, Ohio., assignors to themselves, Obadiah N. Bush, and Franklin V. Chamberlain, same place.—*Stove.*—April 20, 1869.

3,453.—James G. Clarke, Cincinnati, Ohio.—*Cook's Stove.*—April 20, 1869.

3,454.—B. P. Corban, Bristol, Conn.—*Clock-Case Front.*—April 20, 1869.

3,455.—R. F. Danforth, Cleveland, Ohio.—*Trade-Mark.*—April 20, 1869.

3,456.—Herman Ilenburg, Philadelphia, Pa., assignor to MacKellar, Smiths and Jordan.—*Printers' Type.*—April 20, 1869.

3,457.—William D. Leavitt, New Orleans, La., and Henry Shaw, Cincinnati, Ohio.—*Grinding-Mill.*—April 20, 1969.

3,458.—William D. Leavitt, New Orleans, La., and Henry Shaw, Cincinnati, Ohio.—*Grinding-Mill.*—April 20, 1869.

3,459.—Henry Loehr, Boston, Mass.—*Hearse.*—April 20, 1869.

3,460.—John Rowe, Cincinnati, Ohio.—*Stove.*—April 20, 1869.

3,461.—Henry Shaw, Cincinnati, Ohio.—*Grinding-Mill.*—April 20, 1869.

3,462.—Enos E. Stow, Plantsville, Conn.—*Hinge.*—April 20, 1869.

3,463.—John Taggart, Boston, Mass.—*Grate-Fork.*—April 20, 1869.

3,464.—S. B. Terry, Waterbury, Conn.—*Clock-Case.*—April 20, 1869.

3,465.—James W. Tufts, Medford, Mass.—*Casing of a Soda Water Apparatus.*—April 20, 1869.

3,466.—Monroe B. Washburn, Brooklyn, N. Y.—*Ventilator-Door.*—April 20, 1869.

3,467.—John T. Webster, New York, assignor to Deborah Powers, Albert E. Powers, and Nathaniel B. Powers, Lansingburgh, N. Y.—*Floor-Cloth.*—April 20, 1869.

3,468.—Alexander Wemyss, Philadelphia, Pa., assignor to Stuart, Peterson and Company.—*Stove.*—April 20, 1869.

3,469.—Bernard I. Beck, Brooklyn, N. Y.—*Lid of a Writing-Desk.*—May 4, 1869.

3,470.—John Martino, Jacob Beesley, and John Currie, Philadelphia, Pa., assignors to Charles Sharpe and Edgar L. Thomson.—*Plates of a Cook's Stove.*—May 4, 1869.

3,471.—William Parkin, Taunton, Mass., assignor to Reed and Barton, same place.—*Table-Caster.*—May 4, 1869.

3,472.—Albert E. Powers, Lansingburgh, N. Y.—*Floor Oil-Cloth.*—May 4, 1869.

3,473.—Charles C. Savery, Philadelphia, Pa.—*Trade-Mark.*—May 4, 1869.

3,474.—Robert Scorer and Robert Ham, Troy, N. Y., assignors to Cox, Church, and Company, same place.—*Cook's Stove.*—May 4, 1869.

3,475.—M. Terhune, Chicago, Ill., assignor to himself and William H. Core, New York City.—*Show-Case.*—May 4, 1869.

3,476.—Silas B. Terry, Waterbury, Conn.—*Clock-Case.*—May 4, 1869.

3,477.—John T. Webster, New York, assignor to Deborah Powers, A. E. Powers, and N. B. Powers, Lansingburgh, N. Y.—*Floor Oil-Cloth.*—May 4, 1869.

3,478.—W. B. Bartram, Danbury, Conn.—*Frame for a Sewing-Machine.*—May 11, 1869.

3,479.—Hugh Christie, Morrisania, assignor to Deborah Powers, Albert E. Powers, and Nathaniel B. Powers, Lansingburgh, N. Y.—*Floor Oil-Cloth, &c.*—May 11, 1869.

3,480.—Hugh Christie, Morrisania, assignor to Deborah Powers, Albert E. Powers, and Nathaniel B. Powers, Lansingburgh, N. Y.—*Floor Oil-Cloth.*—May 11, 1869.

3,481.—Nathan Lawrence, Taunton, Mass.—*Ice-Pitcher.*—May 11, 1869.

3,482.—John Martino, Jacob Beesley, and John Currie, Philadelphia, Pa., assignors to Henry McCleneghan, same place.—*Cook's Range.*—May 11, 1869.

3,483.—John Martino, Jacob Beesley, and John Currie, Philadelphia, Pa., assignors to Charles Sharpe and Edgar L. Thomson.—*Cook's Stove.*—May 11, 1869.

3,484.—Charles T. Meyer, Bergen, N. J., assignor to Edward C. Sampson, New York, N. Y.—*Carpet.*—May 11, 1869.

3,485.—Charles T. Meyer, Bergen, N. J., assignor to Edward C. Sampson, New York, N. Y.—*Carpet.*—May 11, 1869.

3,486.—L. Porter, Rochester, N. Y.—*Sewing-Machine Frame.*—May 11, 1869.

3,487.—Garrettson Smith and Henry Brown, Philadelphia, assignors to E. S. Shantz and Joseph Johnson, Royar's Ford, Pa.—*Stove.*—May 11, 1869.

3,488.—Stephen Spoor, Phelps, N. Y.—*Lamp-Pedestal.*—May 11, 1869.

3,489.—Julius L. D. Sullivan, Somerville, Mass.—*Fireman's Badge.*—May 11, 1869.

3,490.—Charles Zeuner, Cincinnati, Ohio.—*Music-Rack.*—May 11, 1869.

3,491.—Jason Crane, Bloomfield, N. J.—*Fur-Set Box.*—May 11, 1869.

3,492.—Henry Johnson, Wauregan, Conn.—*Set of Blocks for an Alphabet-Puzzle.*—May 11, 1869.

3,493.—Rodman Backus, Albany, N.Y.—*Plates of a Stove.*—May 11, 1869.

3,494.—William O. Davis, Portland, Me.—*Glass-Ware.*—May 11, 1869.

3,495.—Franklin Field, Troy, N. Y., assignor to himself and Charles K. and Charles A. Brown, same place.—*Ornamenting the Edges of Paper Collars.*—May 11, 1869.

3,496.—Henry Berger, New York, N. Y.—*Center-Piece.*—May 18, 1869.

3,497.—Henry Berger, New York, N. Y.—*Center-Piece.*—May 18, 1869.

3,498.—Henry Berger, New York, N. Y.—*Center-Piece.*—May 18, 1869.

3,499.—Thomas Dolan, Philadelphia, Pa.—*Stocking-Fabric.*—May 18, 1869.

3,500.—Thomas Dolan, Philadelphia, Pa.—*Stocking-Fabric.*—May 18, 1869.

3,501.—D. Frank Dunham, Auburn, N. Y.—*Clothes-Line Holder.*—May 18, 1869.

3,502.—Conrad Harris and Paul W. Zoiner, Cincinnati, Ohio.—*Stove.*—May 18, 1869.

3,503.—Otto R. Nitsch, New York, N. Y.—*Fan-Leaf.*—May 18, 1869.

3,504.—William Wadsworth, Cleveland, Ohio.—*Eaves-Trough Fastener.*—May 18, 1869.

3,505.—James White, Cleveland, Ohio.—*Trade-Mark.*—May 18, 1869.

3,506.—Henry J. Willing, Chicago, Ill., assignor to Marshall Field and Levi Z. Leiter, same place.—*Trade-Mark.*—May 18, 1869.

3,507.—Simeon Taylor, Worcester, Mass.—*Door of a Book-Case.*—May 25, 1869.

3,508.—Samuel S. Bent, Port Chester, N. Y.—*Name-Plate.*—June 1, 1869.

3,509.—Edmund Bigelow, Springfield, Mass.—*Soda-Fountain.*—June 1, 1869.

3,510.—Edmund Bigelow, Springfield, Mass.—*Soda-Fountain.*—June 1, 1869.

3,511.—F.W. Brocksieper, New Haven, Conn., assignor to Sargent and Company, same place.—*Drawer-Pull.*—June 1, 1869.

3,512.—Daniel Carpenter, San Francisco, Cal.—*Blackboard-Brush.*—June 1, 1869.

3,513.—Hugh Christie, Morrisania, N. Y.—*Floor Oil-Cloth Pattern.*—June 1, 1869.

3,514.—Hugh Christie, Morrisania, N. Y.—*Floor Oil-Cloth Pattern.*—June 1, 1869.

3,515.—Annie W. Henderson, Pittsburgh, Pa.—*Ornamentation of Glass-Ware.*—June 1, 1869.

3,516.—Julius Herriet, New York, N. Y., assignor to David Wolfe Bruce, same place.—*Printers' Type.*—June 1, 1869.

3,517.—Otto Kornemann and Julius Jungbluth, New York, N. Y.—*Statuette.*—June 1, 1869.

3,518.—George T. Lincoln, Providence, R. I.—*Comb-Back.*—June 1, 1869.

3,519.—William Maddox, Ripley, Ohio.—*Trade-Mark.*—June 1, 1869.

3,520.—George B. Owen, Winsted, Conn.—*Clock-Case.*—June 1, 1869.

3,521.—John S. Pemberton, Atlanta, Ga.—*Trade-Mark.*—June 1, 1869.

3,522.—John Protin, New York, N. Y., assignor to James L. Howard and Company, Hartford, Conn.—*Car-Bracket.*—June 1, 1869.

3,523.—John Protin, New York, N. Y., assignor to James L. Howard and Company, Hartford, Conn.—*Car-Bracket.*—June 1, 1869.

3,524.—Joseph Robley, Brooklyn, N. Y.—*Floor Oil-Cloth Pattern.*—June 1, 1869.

3,525.—Conrad Roder, Philadelphia, Pa., assignor to himself, William S. Weil, and Jacob Lowenstein, same place.—*Gentleman's Scarf.*—June 1, 1869.

3,526.—Conrad Roder, Philadelphia, Pa., assignor to himself, William S. Weil, and Jacob Lowenstein, same place.—*Gentleman's Scarf.*—June 1, 1869.

3,527.—Charles H. Salmon, Philadelphia, Pa., assignor to Thomas Dolan, same place.—*Stocking-Fabric.*—June 1, 1869.

3,528.—Christopher Smith, Warsaw, Ind.—*Plow.*—June 1, 1869.

3,529.—Henry Bride Scholes, New York, N. Y.—*Lamp-Post.*—June 1, 1869.

3,530.—Michael Thornton, Philadelphia, Pa.—*Sole of a Boot or Shoe.*—June 1, 1869.

3,531.—Charles H. Warren, Toledo, Ohio.—*Trade-Mark.*—June 1, 1869.

3,532.—Daniel E. Conklin, Baltimore, Md., assignor to Harbeck, Conklin and Willis, same place.—*Cook's Stove.*—June 8, 1869.

3,533.—William Gorman, New Britain, Conn., assignor to The Russell and Erwin Manufacturing Company, same place.—*Hinge.*—June 8, 1869.

3,534.—Emery Parker, New Britain, Conn., assignor to The Russell and Erwin Manufacturing Company, same place.—*Face-Plate of a Hinge.*—June 8, 1869.

3,535.—Samuel F. Pratt, Boston, Mass.—*Velocipede-Frame.*—June 8, 1869.

3,536.—Solomon C. Spring, Bristol, Conn., assignor to Welch, Spring and Company, same place.—*Clock-Case.*—June 8, 1869.

3,537.—P. M. Consuegra, New York, N. Y.—*Trade-Mark.*—June 15, 1869.

3,538.—George H. Deuell, Brooklyn, N. Y.—*Lantern.*—June 15, 1869.

3,539.—Julius I. Livingston, Pittsburgh, Pa.—*Trade-Mark.*—June 15, 1869.

3,540.—Elemir J. Ney, Middlesex County, assignor to The Lowell Manufacturing Company, Lowell, Mass.—*Carpet-Pattern.*—June 15, 1869.

3,541.—Elemir J. Ney, Middlesex County, assignor to The Lowell Manufacutring Company, Lowell, Mass.—*Carpet-Pattern.*—June 15, 1869.

3,542.—Elemir J. Ney, Middlesex County, assignor to The Lowell Manufacturing Company, Lowell, Mass.—*Carpet-Pattern.*—June 15, 1869.

3,543.—Elemir J. Ney, Middlesex County, assignor to The Lowell Manufacturing Company, Lowell, Mass.—*Carpet-Pattern.*—June 15, 1869.

3,544.—ELEMIR J. NEY, Middlesex County, assignor to THE LOWELL MANUFACTURING COMPANY, Lowell, Mass.—*Carpet-Pattern.*—June 15, 1869.

3,545.—ELEMIR J. NEY, Middlesex County, assignor to THE LOWELL MANUFACTURING COMPANY, Lowell, Mass.—*Carpet-Pattern.*—June 15, 1869.

3,546.—ELEMIR J. NEY, Middlesex County, assignor to THE LOWELL MANUFACTURING COMPANY, Lowell, Mass.—*Carpet-Pattern.*—June 15, 1869.

3,547.—ELEMIR J. NEY, Middlesex County, assignor to THE LOWELL MANUFACTURING COMPANY, Lowell, Mass.—*Carpet-Pattern.*—June 15, 1869.

3,548.—PHILIP ROLLHAUS, Port Chester, N. Y.—*Fire-Place Heater.*—June 15, 1869.

3,549.—J. R. ROSE and EDWARD L. CALELY, Philadelphia, Pa., assignors to COX, WHITEMAN AND COX, same place.—*Stove.*—June 15, 1869; antedated May 25, 1869.

3,550.—ISAAC N. ROSS, Holden, Mass., assignor to EARLE STOVE COMPANY.—*Stove.*—June 15, 1869.

3,551.—ISAAC N. ROSS, Holden, Mass., assignor to EARLE STOVE COMPANY.—*Stove.*—June 15, 1869.

3,552.—ISAAC N. ROSS, Holden, Mass., assignor to EARLE STOVE COMPANY.—*Cook's Stove.*—June 15, 1869.

3,553.—ISAAC N. ROSS, Holden, Mass., assignor to EARLE STOVE COMPANY.—*Cook's Stove.*—June 15, 1869.

3,554.—GARRETSON SMITH and HENRY BROWN, Philadelphia, Pa., assignors to SHARP AND THOMSON, same place.—*Stove.*—June 15, 1869; antedated May 25, 1869.

3,555.—ALEXANDER WEMYSS, Philadelphia, Pa., assignor to STEWART, PETERSON AND COMPANY, same place.—*Frame for a Stove-Door.*—June 22, 1869.

3,556.—ALVA C. BULLOCK, North Providence, R. I.—*Croquet-Mallet.*—June 29, 1869.

3,557.—CHARLES A. BROWN, Troy, N. Y.—*Paper Collar.*—June 29, 1868.

3,558.—H. D. DICKINSON, G. P. KINNEY, and M. F. WILSON, Painesville, Ohio.—*Trade-Mark.*—June 29, 1869.

3,559.—FRANKLIN FIELD, Troy, N. Y.—*Paper Collar.*—June 29, 1869.

3,560.—WILLIAM MILLER, Philadelphia, Pa.—*Medallion.*—June 29, 1869.

3,561.—CHARLES L. MOREHOUSE, Cleveland, Ohio.—*Trade-Mark.*—June 29, 1869.

3,562.—CHARLES HENRY THORNTON, Newark, N. J.—*Terret-Ring.*—June 29, 1869.

3,563.—NICHOLAS S. VEDDER and FRANCIS RITCHIE, Troy, N. Y., assignors to GREER AND KING, Dayton, Ohio.—*Cook's Stove.*—June 29, 1869.

3,564.—ALEXANDER WEMYSS, Philadelphia, Pa., assignor to DAVID STUART and RICHARD PETERSON, same place.—*Frame of a Fire-Place.*—June 29, 1869.

3,565.—ALEXANDER WEMYSS, Philadelphia, Pa., assignor to DAVID STUART and RICHARD PETERSON, same place.—*Stove-Door Bracket.*—June 29, 1869.

3,566.—GERHARD WINTER, New York, N. Y.—*Show-Case.*—June 29, 1869.

3,567.—HANS BACH, Paterson, N. J.—*Photographie-Portrait Holder.*—July 6, 1869.

3,568.—HENRY BRUNNER, Baltimore, Md.—*Trade-Mark.*—July 6, 1869.

3,569.—T. W. BURGER, New York, N. Y.—*Top of an Oil-Can.*—July 6, 1869.

3,570.—DAVID W. DOWNS and FRANKLIN P. RAND, North Providence, R. I.—*Cast-Iron Settee.*—July 6, 1869.

3,571.—GEORGE BYRON KIRKHAM, New York, N. Y.—*Window-Fastening.*—July 6, 1869.

3,572.—B. RAVEN, Pleasantville, Pa.—*Table-Knife.*—July 6, 1869.

3,573.—HENRY M. RITTER, Cincinnati, Ohio, assignor to M. GREENWOOD AND COMPANY, same place.—*Barn-Door Hanger or Roller.*—July 6, 1869.

3,574.—JULIUS BENEDICT, Brooklyn, N. Y.—*Sash-Weight.*—July 6, 1869.

3,575.—CONYERS BUTTON, Philadelphia, Pa.—*Scarf-Pattern.*—July 6, 1869.

3,576.—M. B. HUDSON, Canandaigua, N. Y.—*Air-Chamber for Parlor-Stoves.*—July 6, 1869.

3,577.—ISAAC B. RESOR, Cincinnati, Ohio, assignor to W. RESOR AND COMPANY, same place.—*Cook's Stove.*—July 6, 1869.

3,578.—WILLIAM GORMAN, New Britain, Conn., assignor to THE RUSSELL AND ERWIN MANUFACTURING COMPANY, same place.—*Face-Plate of a Lock.*—July 13, 1869.

3,579.—F. W. HENSON, Philadelphia, Pa., assignor to himself and T. S. HENSON, same place.—*Scarf-Pattern.*—July 13, 1869.

3,580.—ROBERT HOSKIN, Brooklyn, assignor to DEBORAH POWERS, ALBERT E. POWERS, and NATHANIEL B. POWERS, Lansingburgh, N. Y.—*Floor Oil-Cloth Pattern.*—July 13, 1869.

3,581.—FREDERICK M. MAAS, New York, N. Y.—*Trade-Mark.*—July 13, 1869.

3,582.—CHARLES N. MORGAN, Granby, Mass.—*Wrench Head.*—July 13, 1869.

3,583.—ISAAC A. SHEPPARD, Philadelphia, Pa.—*Stove-Door.*—July 13, 1869.

3,584.—JOHN T. WEBSTER, New York, assignor to DEBORAH POWERS, ALBERT E. POWERS, and NATHANIEL B. POWERS, Lansingburgh, N. Y.—*Floor Oil-Cloth Pattern.*—July 13, 1869.

3,585.—WILLIAM H. BROWN, Rochester, N. Y.—*Coal-Hod Spout.*—July 27, 1869.

3,586.—LUCAS C. CLARK, Plantsville, Conn.—*Teapot-Handle.*—July 27, 1869.

3,587.—JOSIAH J. FERRIS, Philadelphia, Pa., assignor to himself and MURPHY AND BROWN.—*Gate.*—July 27, 1869; antedated May 18, 1869.

3,588.—E. C. MOORE, Yonkers, N. Y., assignor to TIFFANY AND COMPANY, New York City.—*Fork or Spoon Handle.*—July 27, 1869.

3,589.—JOSIAH J. PHILBRICK, Zanesville, Ohio.—*Box.*—July 27, 1869.

3,590.—GARRETSON SMITH AND HENRY BROWN, Philadelphia, Pa., assignors to ABBOTT AND NOBLE, same place.—*Plates of a Stove.*—July 27, 1869; antedated June 29, 1869.

3,591.—GARRETSON SMITH AND HENRY BROWN, Philadelphia, Pa., assignors to ABBOTT AND NOBLE, same place.—*Plates of a Stove.*—July 27, 1869; antedated June 29, 1869.

3,592.—H. C. WILCOX, West Meriden, Conn.,

assignor to THE MERIDEN BRITANNIA COMPANY, same place.—*Casket-Handle.*—July 27, 1869.

3,593.—HENRY ASBURY, Philadelphia, Pa., assignor to ENTERPRISE MANUFACTURING COMPANY, same place.—*Trade-Mark.*—August 3, 1869.

3,594.—JACOB BEESLEY, Philadelphia, Pa., assignor to THOMAS J. CLOSE.—*Arm-End of a Settee.*—August 3, 1869.

3,595.—JAMES L. BRICKEY, Hannibal, Mo.—*Trade-Mark.*—August 3, 1869.

3,596.—J. H. BURNETT, Williamstown, N. Y.—*Trunk-Clasp Caster.*—August 3, 1869.

3,597.—GEORGE L. CHAPMAN, Maumee, Ohio.—*Furniture-Leg.*—August 3, 1869.

3,598.—JOHN I. HESS, Philadelphia, Pa.—*Cook-Range.*—August 3, 1869.

3,599.—HENRY ROUNDY, San Francisco, Cal., assignor to CALIFORNIA MARINE METALLIC-PAINT COMPANY, same place. — *Trade Mark.*—August 3, 1869.

3,600.—JOHN CLIFFORD SHOCH, Philadelphia, Pa.—*Cook-Range.*—August 3, 1869.

3,601.—J. H. WALKER, Worcester, Mass.—*Boot-Leg Top.*—August 3, 1869.

3,602.—GERHARD WINTER, New York, N. Y.—*Show-Case.*—August 3, 1869.

3,603.—THOMAS H. WORRALL, East Blackstone, Mass., assignor to THE AMERICAN TWIST-DRILL COMPANY, same place.—*Grinding-Machine.* — August 3, 1869.

3,604.—WILLIAM BLÜM, Newark, N. J.—*Ornamenting Harness-Trimmings.*—August 10, 1869.

3,605.—EDWARD H. BRADLEY. New Haven, Conn.—*Picture-Frame.*—August 10, 1869.

3,606.—WILLIAM GORMAN, New Britain, Conn., assignor to THE RUSSELL AND ERWIN MANUFACTURING COMPANY, same place.—*Door-Escutcheon.*—August 10, 1869.

3,607.—WILLIAM GORMAN, New Britain, Conn., assignor to THE RUSSELL AND ERWIN MANUFACTURING COMPANY, same place.—*Door-Escutcheon.*—August 10, 1869.

3,608.—WILLIAM GORMAN, New Britain, Conn., assignor to THE RUSSELL AND ERWIN MANUFACTURING COMPANY, same place—*Door-Escutcheon.*—August 10, 1869.

3,609.—A. HEGEMAN, JR., New York, N. Y.—*Bridle-Bit.*—August 10, 1869.

3,610.—ALFRED HUTCHINSON, Philadelphia, Pa.—*Frame of a School-Desk.*—August 10, 1869.

3,611.—FRANCIS A. PRATT, Hartford, Conn., assignor to PRATT, WHITNEY AND COMPANY, same place.—*Upright Drill.*—August 10, 1869.

3,612.—C. EUGENE BARBER, Auburn, N. Y., assignor to SHELDON AND COMPANY, same place.—*Trade-Mark.*—August 17, 1869.

3,613.—THOMAS R. PEARSE, Taunton, Mass., assignor to TAUNTON TACK COMPANY, same place.—*Nail or Tack.*—August 17, 1869.

3,614.—HENRY BERGER, New York, N. Y.—*Center-Piece.*—August 17, 1869.

3,615.—WILLIAM GORMAN, New Britain, Conn., assignor to THE RUSSELL AND ERWIN MANUFACTURING COMPANY, same place.—*Door-Escutcheon.*—August 17, 1869.

3,616.—ALONZO HEBBARD, New York, N. Y.—*Handle for Spoon.*—August 17, 1869.

3,617.—M. T. HITCHCOCK, Springfield, Mass.—*Car-Ventilator Door and Frame.*—August 17, 1869.

3,618.—HUGH M. PHINNEY, Cambridge, Mass.—*Hot-Air Register.*—August 17 1869.

3,619.—HENRY G. THOMPSON, New York, N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,620.—HENRY G. THOMPSON, New York, N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,621.—HENRY G. THOMPSON, New York, N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,622.—HENRY G. THOMPSON, New York., N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,623.—HENRY G. THOMPSON, New York, N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,624.—HENRY G. THOMPSON, New York, N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,625.—HENRY G. THOMPSON, New York, N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,626.—HENRY G. THOMPSON, New York, N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,627.—HENRY G. THOMPSON, New York, N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,628.—HENRY G. THOMPSON, New York, N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,629.—HENRY G. THOMPSON, New York, N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,630.—HENRY G. THOMPSON, New York, N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,631.—HENRY G. THOMPSON, New York, N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,632.—HENRY G. THOMPSON, New York, N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,633.—HENRY G. THOMPSON, New York, N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,634.—HENRY G. THOMPSON, New York, N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,635.—HENRY G. THOMPSON, New York, N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,636.—HENRY G. THOMPSON, New York, N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,637.—HENRY G. THOMPSON, New York, N. Y., assignor to THE HARTFORD CARPET COMPANY, Hartford, Conn.—*Carpet.*—August 17, 1869.

3,638.—JAMES NELSON and HARMON G. ELLSWORTH, Lockport, N. Y.—*Sleigh.*—August 24, 1869.

3,639.—Hugh Christie, Morrisania, assignor to Deborah Powers, Albert E. Powers, and Nathaniel B. Powers, Lansingburgh, N. Y.—*Floor Oil-Cloth.*—August 31, 1869.

3,640.—Hugh Christie, Morrisania, assignor to Deborah Powers, Albert E. Powers, and Nathaniel B. Powers, Lansingburgh, N. Y.—*Floor Oil-Cloth.*—August 31, 1869.

3,641.—Hugh Christie, Morrisania, assignor to Deborah Powers, Albert E. Powers, and Nathaniel B. Powers, Lansingburgh, N. Y.—*Floor Oil-Cloth.*—August 31, 1869.

3,642.—Hugh Christie, Morrisania, assignor to Deborah Powers, Albert E. Powers, and Nathaniel B. Powers, Lansingburgh, N. Y.—*Floor Oil-Cloth.*—August 31, 1869.

3,643.—Isaac Lewine, New York, N. Y.—*Fur Collar.*—August 31, 1869.

3,644.—Andrew Little, New York, N. Y.—*Printing-Type.*—August 31, 1869.

3,645.—Karl Müller, New York, N. Y., assignor to Nicholas Müller, same place.—*Clock-Case.*—August 31, 1869.

3,646.—Karl Müller, New York, N. Y., assignor to Nicholas Müller, same place.—*Pair of Figures.*—August 31, 1869.

3,647.—William Parkin, Taunton, Mass., assignor to Reed and Barton, same place.—*Preserve-Dish.*—August 31, 1869.

3,648.—William Parkin, Taunton, Mass., assignor to Reed and Barton, same place.—*Cake-Tazza.*—August 31, 1869.

3,649.—Philip Rollhaus, Port Chester, N. Y.—*Elevated Oven-Range.*—August 31, 1869.

3,650.—John Sealy, Jr., Newark, N. J.—*Ornament for a Child's Hat.*—August 31, 1869.

3,651.—John Sealy, Jr., Newark, N. J.—*Ornament for a Child's Hat.*—August 31, 1869.

3,652.—John Sealy, Jr., Newark, N. J.—*Ornament for a Child's Hat.*—August 31, 1869.

3,653.—Alexander White, Genesco, Ill.—*Stove.*—August 31, 1869.

3,654.—Samuel P. Crins, Providence, R. I.—*Ornament for Wilcox and Gibbs Sewing-Machine.*—September 7, 1869.

3,655.—James C. Evans, Delaware, Ohio.—*Road-Scraper.*—September 7, 1869.

3,656.—Charles Osborne, Brooklyn, assignor to Whiting Manufacturing Company, New York, N. Y.—*Spoon or Fork Handle.*—September 7, 1869.

3,657.—John Rogers, New York, N. Y.—*Group of Sculpture.*—September 7, 1869.

3,658.—Edwin John Godfrey, New York, N. Y.—*Mourning-Card.*—September 14, 1869.

3,659.—Elisha S. Heath, Baltimore, Md.—*Fire-Place Heater.*—September 14, 1869.

3,660.—Charles T. Meyer, Newark, N. J., assignor to Edward C. Sampson, New York City.—*Oil-Cloth.*—September 14, 1869.

3,661.—Charles T. Meyer, Newark, N. J., assignor to Edward C. Sampson, New York City.—*Oil-Cloth.*—September 14, 1869.

3,662.—Henry C. Reynolds, Manchester, N. H.—"*Bit*" *of Chopping-Axes.*—September 14, 1869.

3,663.—W. P. Uhlinger, Philadelphia, Pa.—*Rustic Settee.*—September 14, 1869.

3,664.—Milton Bradley, Springfield, Mass., assignor to The Union Manufacturing Company, New Britain, Conn.—*Hinge.*—September 21, 1869.

3,665.—Milton Bradley, Springfield, Mass., assignor to The Union Manufacturing Company, New Britain, Conn.—*Hinge.*—September 21, 1869.

3,666.—Milton Bradley, Springfield, Mass., assignor to The Union Manufacturing Company, New Britain, Conn.—*Hinge.*—September 21, 1869.

3,667.—Henry Berger, New York, N. Y.—*Bust of Alexander Von Humboldt.*—September 28, 1869.

3,668.—Jonathan Crabtree, Philadelphia, Pa., assignor to James Bromley and Brothers, same place.—*Carpet-Pattern.*—September 28, 1869.

3,669.—Addis E. Chamberlain and John B. Crowley, Cincinnati, Ohio, assignors to Addis E. Chamberlain, O. N. Bush, and F. V. Chamberlain.—*Stove.*—September 28, 1869.

3,670.—M. T. Hitchcock, Springfield, Mass.—*Railway-Car Ventilator Case or Shell.*—September 28, 1869.

3,671.—Julius I. Livingston, Pittsburgh, Pa.—*Cap of a Fruit-Can.*—September 28, 1869.

3,672.—George B. Owen, Winsted, Conn.—*Clock-Case.*—September 28, 1869.

3,673.—Emery Parker, New Britain, Conn.—*Face-Plate of a Latch.*—September 28, 1869.

3,674.—James Patterson Robbins, Philadelphia, Pa.—*Harness-Mounting.*—September 28, 1869.

3,675.—Watson Sanford, New York, N. Y.—*Stove.*—September 28, 1869.

3,676.—Robert Scorer and Robert Ham, Troy, N. Y.—*Plate of a Stove.*—September 28, 1869.

3,677.—Isaac Starr, Jr., Philadelphia, Pa.—*Carpet-Pattern.*—September 28, 1869.

3,678.—George W. Tucker, Manchester, N. H.—*Trade-Mark.*—September 28, 1869.

3,679.—Samuel L. Utter, Brooklyn, N. Y.—*Fire-Place Heater.*—September 28, 1869.

3,680.—Samuel L. Utter, Brooklyn, N. Y.—*Stove.*—September 28, 1869.

3,681.—Nicholas S. Vedder, Troy, and Thomas S. Heister, Lansingburgh, N. Y., assignors to John H. Herron and Company, Pittsburgh, Pa.—*Stove.*—September 28, 1869.

3,682.—John T. Webster, New York, N. Y., assignor to Page, Wilder and Company, Hallowell, Me.—*Floor Oil-Cloth.*—September 28, 1869.

3,683.—John T. Webster, New York, N. Y., assignor to Page, Wilder and Company, Hallowell, Me.—*Floor Oil-Cloth.*—September 28, 1869.

3,684.—John T. Webster, New York, N. Y., assignor to Page, Wilder and Company, Hallowell, Me.—*Floor Oil-Cloth.*—September 28, 1869.

3,685.—John T. Webster, New York, N. Y., assignor to "Crossley Company," Bridgeport, Conn.—*Felt Border.*—September 28, 1869.

3,686.—August Wilhelm, Philadelphia, Pa.—*Reflector.*—September 28, 1869.

3,687.—Alma Bedford, Cold Water, Mich.—*Buckle.*—October 5, 1869.

3,688. — Henry Berger, New York, N. Y.—*Center-Piece.*—October 5, 1869.

3,689. — F. W. Brocksieper, New Haven, Conn., assignor to Sargent and Company, same place.—*Drawer-Pull.*—October 5, 1869.

3,690. — F. W. Brocksieper, New Haven, Conn., assignor to Sargent and Company, same place.—*Latch-Handle.*—October 5, 1869.

3,691. — F. W. Brocksieper, New Haven, Conn., assignor to Sargent and Company, same place.—*Latch-Handle.*—October 5, 1869.

3,692. — F. W. Brocksieper, New Haven, Conn., assignor to Sargent and Company, same place.—*Match-Safe.*—October 5, 1869.

3,693. — F. W. Brocksieper, New Haven, Conn., assignor to Sargent and Company, same place.—*Shuttle-Hook.*—October 5, 1869.

3,694. — F. W. Brocksieper, New Haven, Conn., assignor to Sargent and Company, same place.—*Sash-Lift.*—October 5, 1869.

3,695. — F. W. Brocksieper, New Haven, Conn., assignor to Sargent and Company, same place.—*Sash-Lift.*—October 5, 1869.

3,696. — Stephen Eich, East Toledo, Ohio. — *Door-Knob.*—October 5, 1869.

3,697. — John K. Cappelhoff, New York, N. Y.—*Muff.*—October 5, 1869.

3,698. — Elemir J. Ney, Dracut, Mass., assignor to Lowell Manufacturing Company. — *Carpet-Pattern.*—October 5, 1869.

3,699.—Elemir J. Ney, Dracut, Mass., assignor to Lowell Manufacturing Company. — *Carpet-Pattern.*—October 5, 1869.

3,700. — Elemir J. Ney, Dracut, Mass., assignor to Lowell Manufacturing Company. — *Carpet-Pattern.*—October 5, 1869.

3,701. — Elemir J. Ney, Dracut, Mass., assignor to Lowell Manufacturing Company. — *Carpet-Pattern.*—October 5, 1869.

3,702. — Elemir J. Ney, Dracut, Mass., assignor to Lowell Manufacturing Company. — *Carpet-Pattern.*—October 5, 1869.

3,703. — Elemir J. Ney, Dracut, Mass., assignor to Lowell Manufacturing Company. — *Carpet-Pattern.*—October 5, 1869.

3,704. — Frederick G. Niedringhaus, Saint Louis, Mo.—*Bell.*—October 5, 1869.

3,705.—William Parkin, Taunton, Mass., assignor to Reed and Barton, same place.—*Tea-Service.*—October 5, 1869.

3,706.—William Schwab, New York, N. Y.—*Knitted Cap.*—October 5, 1869.

3,707.—George C. Thilenius, Cape Girardeau, Mo.—*Trade-Mark.*—October 5, 1869.

3,708.—John W. Baldwin, Laconia, N. H.—*Foot-Lathe.*—October 12, 1869.

3,709. — A. F. Barry, New York, N. Y., assignor to himself and Ira G. Lane, same place.—*Elevated Oven-Range.*—October 12, 1869.

3,710. — Wales A. Candee and William C. Richards, Bristol, Conn.—*Bottle.*—October 12, 1869.

3,711.—Byron Clark Smith, Auburn, N. Y., assignor to Hayden and Leitchworth. — *Trade-Mark.*—October 12, 1869.

3,712. — George F. Stone, Baltimore, Md. — *Return-Bend.*—October 12, 1869.

3,713.—Orin L. Bassett, Taunton, Mass., assignor to The Taunton Tack Company, same place.—*Tack-Head.*—October 19, 1869.

3,714. — Orin L. Bassett, Taunton, Mass., assignor to The Taunton Tack Company, same place.—*Tack-Head.*—October 19, 1869.

3,715. — Thomas R. Bearse, Taunton, Mass., assignor to The Taunton Tack Company, same place.—*Tack-Head.*—October 19, 1869.

3,716.—John Bryce, East Birmingham, Pa.—*Ornamenting Glass-Ware.*—October 19, 1869.

3,717. — Jonathan Crabtree, Philadelphia, Pa., assignor to James Bromley and Brothers, same place.—*Carpet-Pattern.*—October 19, 1869.

3,718. — Jonathan Crabtree, Philadelphia, Pa., assignor to James Bromley and Brothers, same place.—*Carpet-Pattern.*—October 19, 1869.

3,719. — David K. Innes and Wesley W. Magill, Cincinnati, Ohio. — *Stove.* — October 19, 1869.

3,720.—Jordon L. Mott, Mott Haven, N. Y.—*Range-Front.*—October 19, 1869.

3,721.—Jordon L. Mott, Mott Haven, N. Y.—*Iron Wash-Stand Slab.*—October 19, 1869.

3,722.—Emery Parker, New Britain, Conn., assignor to The Russell and Erwin Manufacturing Company, same place.—*Shutter-Hook or Bar.*—October 19, 1869.

3,723. — Henry Whitney, East Cambridge-Mass.— *Combined Inkstand and Pen-Rack.*— October 19, 1869.

3,724.— Orin L. Bassett, Taunton, Mass., assignor to The Taunton Tack Company, same place. —*Tack-Head.*—October 26, 1869.

3,725.—Orin L. Bassett, Taunton, Mass., assignor to The Taunton Tack Company, same place. —*Tack-Head.*—October 26, 1869.

3,726.—Frederick Delliker, Trenton, N. J., assignor to The East Trenton Porcelain Company.—*Anchor.*—October 26, 1869.

3,727.—Jonathan Smith Eaton, Boston, Mass. —*Covering Trunks.*—October 26, 1869.

3,728. — George Sharp, Philadelphia, Pa. — *Fork or Spoon Handle.*—October 26, 1869.

3,729. — Elizabeth Mary Stigale, Philadelphia, Pa.—*Flower-Shade and Pedestal.*—October 26, 1869.

3,730.—George William Whitham, Philadelphia, Pa., assignor to MacKellar, Smith and Jordan, same place.—*Printers' Type.*—October 26, 1869.

3,731.—Samuel W. Gibbs, Albany, N. Y.—*Plate of a Stove.*—November 2, 1869.

3,732.—William Gorman, New Britain, Conn., assignor to The Russell and Erwin Manufacturing Company, same place. — *Door-Knob and its Rose.*—November 2, 1869.

3,733.—William Gorman, New Britain. Conn., assignor to The Russell and Erwin Manufacturing Company, same place.—*But-Hinge.*—November 2, 1869.

3,734.—Charles F. Hager, Buffalo, N. Y. — *Rack Pulley.*—November 2, 1869.

3,735.—CONRAD HARRIS and PAUL W. ZOINER, Cincinnati, Ohio.—*Stove.*—November 2, 1869.

3,736.—CONRAD HARRIS and PAUL W. ZOINER, Cincinnati, Ohio.—*Stove.*—November 2, 1869.

3,737.—CONRAD HARRIS and PAUL W. ZOINER, Cincinnati, Ohio.—*Cylinder-Stove.* — November 2, 1869.

3,738.—Suspended.

3,739.—LOUIS ROMMEIKS, Newark, N. J.—*Ornamenting Bridle-Bits.*—November 2, 1869.

3,740.—NICHOLAS S. VEDDER and FRANCIS RITCHIE, Troy, N. Y., assignors to G. H. PHILLIPS AND COMPANY, same place.—*Cook-Stove.*—November 2, 1869.

3,741.—N. BANGS WILLIAMS, New York, N. Y. —*Trunk-Cover.*—November 2, 1869.

3,742.—CHARLES GREIFF, New York, N. Y., assignor to WILCOX AND GIBBS SEWING-MACHINE COMPANY.—*Leg and Treadle of a Sewing-Machine.* —November 9, 1869.

3,743.—N. C. HAWKS, Milwaukee, Wis.—*Printers' Type-Case Stand.*—November 9, 1869.

3,744.—ELBRIDGE J. STEELE, New Britain, Conn., assignor to P. and F. CORBIN, same place.—*Drawer-Pull.*—November 9, 1869.

3,745.—JAMES STORMS and HENRY DORER, Buffalo, N. Y.—*Elevator-Bucket.*—November 9, 1869.

3,746.—JOSEPH B. HOOVER, New York, N. Y.—*Bridle-Bit.*—November 9, 1869.

3,747.—DAVID NEUMANN, New York, N. Y.—*Trade-Mark.*—November 9, 1869.

3,748.—THOMAS YOUNG, Philadelphia, Pa.—*Convex Lid of a Dish or Tureen, &c.*—November 9, 1869.

3,749.—CHARLES WILLIAM ZAREMBA, Chicago, Ill.—*Letter-Box Cover.*—November 9, 1869.

3,750.—EMIL NEY, New York, N. Y. — *Sign.*— November 16, 1869.

3,751.—WILLIAM F. SAYLES and FREDERICK C. SAYLES, North Providence, R. I.—*Trade-Mark.*— November 16, 1869.

3,752.—GEORGE A. SEAVER, New York, N. Y.— *Cotton-Knife.*—November 16, 1869.

3,753.—CYRUS W. STROUT, Hallowell, Me. — *Floor Oil-Cloth.*—November 16, 1869.

3,754.—HERMANN VASSUER, Wallingford, Conn., assignor to SIMPSON, HALL, MILLER AND COMPANY, same place.—*Tea-Service.*—November 16, 1869.

3,755.—WILLIAM S. WORTHINGTON, Newtown, N. Y.—*Perforated Banner.*—November 16, 1869.

3,756.—HENRY BERGER, New York, N. Y.—*Center-Piece.*—November 23, 1869.

3,757.—HENRY BERGER, New York, N. Y.—*Center-Piece.*—November 23, 1869.

3,758.—P. BORN, Selin's Grove, Pa.— *School-Desk.*—November 23, 1869.

3,759.—JOHN BRYCE, East Birmingham, Pa.— *Glass-Ware.*—November 23, 1869.

3,760.—JOHN FLEMING and JOHN HAMILTON, Pittsburgh, Pa.—*Pitcher.*—November 23, 1869.

3,761.—LUTHER W. HARWOOD, Troy, N. Y., assignor to FULLER, WARREN AND COMPANY, same place.—*Plate of a Cooking-Stove.*—November 23, 1869.

3,762.—SAMUEL HILLIER, Allegheny, Pa.—*Coffin.*—November 23, 1869.

3,763.—R. P. MYERS, B. F. ROUSE, and JAMES M. OSBORN, Cleveland, Ohio.—*Stove.*—November 23, 1869.

3,764.—J. R. ROSE and EDWARD L. CALELY, Jr., Philadelphia, Pa., assignors to WILLIAM E. WOOD AND COMPANY, Baltimore, Md. — *Border-Frame of a Fire-Place.*—November 23, 1869.

3,765.—J. R. ROSE and EDWARD L. CALELY, Jr., Philadelphia, Pa., assignors to WILLIAM E. WOOD AND COMPANY, Baltimore, Md.— *Fire-Place Stove.*—November 23, 1869.

3,766.—GEORGE SHARP, Philadelphia, Pa.— *Fork or Spoon Handle.*—November 23, 1869.

3,767.—CHARLES L. W. BAKER, Hartford, Conn. —*Brush.*—November 30, 1869.

3,768.—EDWIN C. CLEVELAND, Worcester, Mass. —*Frame of a Carding-Machine.*—November 30, 1869.

3,769.—HORACE FENN, Plymouth, Conn. — *Trade-Mark.*—November 30, 1869.

3,770.—JULIUS HERRIET, New York, N. Y., assignor to DAVID WOLFE BRUCE, same place.—*Printers' Type.*—November 30, 1869.

3,771.—THOMAS F. LESLIE, Brooklyn, N. Y.— *Label.*—November 30, 1869.

3,772.—WALTER K. MARVIN, New York, N. Y. —*Safe.*—November 30, 1869.

3,773.—WILLIAM SAGE, Indianapolis, Ind.—*Miter-Mold.*—November 30, 1869.

3,774.—GEORGE WILKINSON, Providence, R. I., assignor to GORHAM MANUFACTURING COMPANY, same place.—*Caster.*—November 30, 1869.

3,775.—GEORGE WILKINSON, Providence, R. I., assignor to GORHAM MANUFACTURING COMPANY, same place.—*Caster.*—November 30, 1869.

3,776.—GEORGE WILKINSON, Providence, R. I., assignor to GORHAM MANUFACTURING COMPANY, same place.—*Caster.*—November 30, 1869.

3,777.—GEORGE WILKINSON, Providence, R. I., assignor to GORHAM MANUFACTURING COMPANY, same place.—*Caster.*—November 30, 1869.

3,778.—GEORGE WILKINSON, Providence, R. I., assignor to GORHAM MANUFACTURING COMPANY, same place.—*Caster.*—November 30, 1869.

3,779.—F. KROEBER, New York, N. Y.—*Clock-Case Front.*—December 7, 1869.

3,780.—F. KROEBER, New York, N. Y.—*Pendulum-Clock-Case Front.*—December 7, 1869.

3,781.—ED. ELISHA MACK, Albany, N.Y.—*Collar.*—December 7, 1869.

3,782.—JAMES PATERSON, Elizabeth, assignor to RICHARD H. REEVE and BENJAMIN C. REEVE, Camden N. J.—*Floor Oil-Cloth Pattern.*—December 7, 1869.

3,783.—D. SCHOONMAKER, Springfield, Mass.— *Harness-Buckle.*—December 7, 1869.

3,784.—D. P. BECKWITH, Dowagiac, Mich.— *Stove.*—December 14, 1869.

3,785.—GEORGE JOHNSON, Cincinnati, Ohio, administrator of the estate of GEORGE P. DARROW, deceased, assignor to JAMES L. HAVEN AND COMPANY, same place.—*Plow-Clevis.*—December 14, 1869.

3,786.—Sherman S. Jewett and Francis H. Root, Buffalo, N. Y.—*Stove.*—December 14, 1869.

3,787.—Daniel Keefer, Attica, Ind.—*Masonic Ornament.*—December 14, 1869.

3,788.—William F. Mosely, Brooklyn, N. Y.—*Paper Collar.*—December 14, 1869.

3,789.—Charles H. Waters, Groton, Mass.—*Flower Stand.*—December 14, 1869.

3,790.—Orin L. Bassett, Taunton, Mass., assignor to The Taunton Tack Company, same place.—*Tack-Head.*—December 21, 1869.

3,791.—Orin L. Bassett, Taunton, Mass., assignor to The Taunton Tack Company, same place.—*Tack-Head.*—December 21, 1869.

3,792.—George M. Bull, New Baltimore, N. Y.—*Coffee or Tea Filter.*—December 21, 1869.

3,793.—Robert R. Campbell, Lowell, Mass., assignor to Lowell Manufacturing Company, same place.—*Carpet-Pattern.*—December 21, 1869.

3,794.—Robert Hitchcock, Springfield, Mass.—*Car-Ventilator.*—December 21, 1869.

3,795.—Morton Judd, New Haven, Conn.—*Wardrobe-Hook.*—December 21, 1869.

3,796.—Morton Judd, New Haven, Conn.—*Wardrobe-Hook.*—December 21, 1869.

3,797.—Morton Judd, New Haven, Conn.—*Wardrobe-Hook.*—December 21, 1869.

3,798.—Elemir J. Ney, Dracut, assignor to Lowell Manufacturing Company, Lowell, Mass.—*Carpet-Pattern.*—December 21, 1869.

3,799.—Elemir J. Ney, Dracut, assignor to Lowell Manufacturing Company, Lowell, Mass.—*Carpet-Pattern.*—December 21, 1869.

3,800.—Elemir J. Ney, Dracut, assignor to Lowell Manufacturing Company, Lowell, Mass.—*Carpet-Pattern.*—December 21, 1869.

3,801.—Elemir J. Ney, Dracut, assignor to Lowell Manufacturing Company, Lowell, Mass.—*Carpet-Pattern.*—December 21, 1869.

3,802.—Elemir J. Ney, Dracut, assignor to Lowell Manufacturing Company, Lowell, Mass.—*Carpet-Pattern.*—December 21, 1869.

3,803.—Charles Perkes, Philadelphia, Pa.—*Trade-Mark.*—December 21, 1869.

3,804.—George P. Reed, Boston, Mass.—*Watch-Plate.*—December 21, 1869.

3,805.—George P. Reed, Boston, Mass.—*Watch-Plate.*—December 21, 1869.

3,806.—Henry E. Shaffer, Rochester, N. Y.—*Fruit-Jar Cover.*—December 21, 1869.

3,807.—Abraham Demarest, New York, N. Y.—*Badge.*—December 28, 1869.

3,808.—Emery Parker, New Britain, Conn.—*Key.*—December 28, 1869.

3,809.—Emery Parker, New Britain, Conn., assignor to Russell and Erwin Manufacturing Company, same place.—*Striker-Plate for a Lock.*—December 28, 1869.

REISSUES.

3,250.—Thomas C. Craven, Albany, N. Y.—*Hay Spreader.*—Patented December 8, 1868, No. 84,800; reissued January 5, 1869.

Claim.—1. The combination, with the ends of the central support M and caps *m*, of the bars N, substantially as and for the purpose set forth.

2. The combination of the bars N, having irregular-shaped ends, with the heads or disks L and central support M, substantially as and for the purpose set forth.

3. The combination of the caps *m* with the central support M, substantially as and for the purpose set forth.

4. The combination, with the frame or bearings which support the reel-shaft, of the eccentries E′, substantially as and for the purpose set forth.

5. The combination, with the eccentries E′ and side-rails A, or their equivalents, of the arms *p*, springs *s*, and pins *r*, substantially as and for the purpose set forth.

6. The combination of the driving-gears K with the wheels F, substantially as and for the purpose set forth.

7. The combination, with the frame which supports the reels and the frame which connects the journals of the wheels F, of adjusting-screw R and nuts *v v′*, substantially as and for the purpose set forth.

8. The combination, with the frame of the machine and the driver's seat, of a metallic or other suitable guard or shield, W, arranged substantially as and for the purpose set forth.

9. The employment, in a hay-tedder, of a triangular or three-barred reel, substantially as and for the purpose set forth.

10. A double wire-spring tooth, provided with the two conical coiled springs, arranged and operating substantially as described.

11. The boards T and V, in combination with the hoop Q and guard J′, arranged substantially as and for the purpose set forth.

12. The boards T and V, bands or hoop Q, and guards J′, in combination with the vibrating frame A, all suspended upon the inner ends or journals *e* of short axles E, substantially as and for the purpose set forth.

13. The grooved clasps or fastenings *o o*, in combination with the double-coiled spring-teeth, for securing said teeth to the bars N, as described.

3,251.—William J. Lewis, Pittsburgh, Pa.—*Bolt-Making Machine.*—Patented March 15, 1864, No. 41,929; reissued January 5, 1869.

Claim.—The combination of the dies P P and header A, constructed and arranged, in relation to each other, substantially as described.

3,252.—Benjamin Markley Nyce, Cleveland, Ohio.—*Building for Preserving Fruits and other Substances.*—Patented March 19, 1861, No. 31,734; reissued January 5, 1869.

Claim.—1. An insulated house, constructed substantially as and for the purposes described, having an ice-reservoir above, and separated from it by an air-tight metallic floor.

2. The combination of vestibule W, furnished, as described, with a house so insulated and cooled.

3. The use, in such a house, of a hydrometer, constructed substantially as explained.

3,253.—William T. Mersereau, Newark, N. J.—*Stair-Rod.*—Patented November 20, 1866, No. 59,921; reissued January 5, 1869.

Claim.—1. A stair or vestibule rod, in combination with rings having tips operating in connection with such rings, substantially as described.

2. A ring in combination with a tip hinged to said ring, so that the tip will operate, substantially as described and shown, to permit of the removal of the rod.

3,254. — GEORGE M. PULLMAN, Chicago, Ill., assignee, by mesne assignments, of himself and BEN FIELD. — *Sleeping-Car.* — Patented September 19, 1865, No. 49,922; reissued February 11, 1868, No. 2,862; reissued January 5, 1869.

Claim.—1. The construction and arrangement of the berth A, hinged to the car at B, and supported by the jointed suspenders C, or other analogous devices, the whole so adapted to the car, that when turned up it forms one side of the closed triangular recess, as shown.

2. In combination with the berth A, the sliding partition I, substantially as shown.

3. In combination with the berth A, the movable head-board J, substantially as described.

4. The construction and arrangement of a car-seat, with the back and seat cushions hinged together, and disconnected from the seat-frame, so that the back cushion may be placed on the seat-frame, and the seat-cushion extended to meet the seat-cushion of the opposite seat, substantially as described.

3,255. — ADAM R. REESE, Phillipsburgh, N. J., assignee, by mesne assignments, of MATHIAS RAEZER.—*Horse-Rake.*—Patented October 5, 1858, No. 21,698; reissued January 5, 1869.

Claim.—1. The vibrating cleaner-rods to a two-wheel wire-tooth hay-rake, in combination with a hand-lever for operating the same, operated by the attendant while riding on the seat.

2. In combination with a two-wheel wire-tooth hay-rake, a hand-lever, operated by the attendant while riding on the seat, for simultaneously raising the teeth and operating the vibrating cleaner-rods.

3. In combination with a two-wheel wire-tooth hay-rake, the teeth of which are supported against backward strain, at a point betwixt and within the periphery of the wheels, a hand lever operated by the attendant while riding on the seat, for raising the teeth and operating the vibrating cleaner-rods.

4. A foot-support on the lever, for the purpose of supporting the foot of the attendant while he presses the lever from him while riding on the seat, for the purpose of holding the teeth to the ground while in operation.

5. In combination with a two-wheel wire-tooth hay-rake, with the teeth supported against backward strain at a point betwixt and within the periphery of the wheels, a hand-lever and a connecting-rod or link uniting said lever with the rake-head, in such manner that the operator, while riding on the seat, can raise the teeth, by drawing the upper end of said lever backward, and can depress the same by pressing the lever forward.

6. In combination with a two-wheel wire tooth hay-rake, with the teeth supported against backward strain at a point betwixt and within the periphery of the wheels, a lever and a connecting-rod or link uniting said lever with the rake-head, and operated by the attendant while riding on the seat, for lowering the teeth, by pressing the top of the lever forward, and drawing it backward for raising the teeth, with a device for cleaning the teeth of the gathered hay in their upward motion.

3,256. — EZRA RIPLEY, Troy, N. Y. (Division No. 1.) *Tea-Kettle.*—Patented January 1, 1861, No. 31,035; reissued December 5, 1865, No. 2,122; reissued January 5, 1869.

Claim.—In the manufacture of tea-kettles, such a construction and application of the lid or cover and its appurtenances, that the kettle, by means of an edgewise movement of the cover, shall be opened and closed at its top, substantially as described.

3,257.—EZRA RIPLEY, Troy, N. Y. (Division No. 2.) *Tea-Kettle.*—Patented January 1, 1861, No. 31,035; reissued December 5, 1865, No. 2,122; reissued January 5, 1869.

Claim.—1. An edgewise-movable cover of a tea-kettle or other like vessel, pivoted to a permanently fixed or a removable pintle, substantially as described.

2. A combined bail-lug and pivotal attachment for an edgewise-movable cover, constructed and applied to a tea-kettle or other bailed and spouted vessel, substantially as described.

3. The flat-surfaced base or offset F, formed on a tea-kettle or other bailed vessel, and having a bail-lug rising perpendicularly from it, in combination with an edgewise-movable cover to such vessel, substantially as described.

4. The combination of lug *b*, edgewise-movable cover D, and washer *e*, with the bail or handle C, substantially as described.

5. The construction of the cover D with a perforated offset or ear, *d*, upon its circumference, by which said cover can be pivoted to a tea-kettle or other like vessel, so as to have an edgewise swinging or vibrating movement, substantially as described.

3,258. — D. B. STURDEVANT and B. H. HARMON, Clifton Springs, N. Y.—*Process of Removing Tin from Sheet-Metal.* — Patented March 24, 1868, No. 75,809; reissued January 5, 1869.

Claim. — 1. The process herein described of removing coatings from sheet-metal, by the combined use of hot air and steam, acting upon the mass in a closed retort, substantially as herein set forth.

2. The process herein described of removing tin coatings from sheet-metal, by agitating the metal while subjected to heat.

3. The process herein described of removing tin coatings from sheet-metal, by jarring or agitating the metal while subjected to the combined action of hot air and steam or gases in a closed vessel or retort, substantially as herein set forth.

4. The combination, with a retort provided with a vibratory grate, or equivalent, of an induction-pipe below the grate, and an eduction-pipe above the grate, for the admission of hot air, steam, or gases through the mass, supported by the grate, whether combined or not with water-receptacle, as and for the purposes shown and described.

3,259.—GILBERT W. BARNES, Mount Vernon, N. Y.—*Safety-Bridle.*—Patented August 11, 1868, No. 80,897; reissued January 12, 1869.

Claim. — The cheek-pieces A of the headstall, passing to the driving-rein through the rings of the bit, and supplemental straps B, secured to said cheek-pieces, combined and applied substantially as described.

3,260.—ELIJAH M. CARRINGTON, New York, N. Y.—*Self-Cementing Band for Holding Bank-Notes, Papers, &c.*—Patented August 25, 1868, No. 81,339; reissued January 12, 1869.

Claim.—The self-cementing band, or its equivalent fabric, made substantially in the manner and for the purpose herein set forth.

3,261.—B. B. HILL, Chicopee, Mass.— *Hand-Stamp.*—Patented November 6, 1866, No. 59,395; reissued January 14, 1868, No. 2,836; reissued January 12, 1869.

Claim.—1. The series of type-wheels, having a series of indicating-characters, for the purpose described, and the arrangement therewith of the die and the ink-ribbon, when all parts are attached to and move with the plunger, substantially as set forth.

2. The bracket H, made on or secured to the case G, having a step, *c*, or its equivalent, to enter the lower end of the spindle, and orifice for the screw *e*, for attaching and detaching said ease to the spindle E, substantially as and for the purpose described.

3. The flanch K, in combination with the chase L, for the purpose of easily and quickly attaching the type-plate to or detaching it from a hand-stamp, when constructed and operating substantially as herein described.

3,262.— PETER H. MELLON, Saint Louis, Mo.— *Quilting-Frame.*—Patented June 16, 1868, No. 78,989; reissued January 12, 1869.

Claim.—1. The metallic plates D and keys F, constructed and arranged, in combination with the rollers E, substantially as and for the purposes set forth.

2. In combination with the rollers E, metallic plates D, and keys F, the thimbles on the collars *g*

and the ratchets I, substantially as shown and described.

3,263.—Joseph Reichmann, Dubuque, Iowa.—*Valve for Steam-Engines.*—Patented February 18, 1868, No. 74,593; reissued January 12, 1869.

Claim.—1. The steam and exhaust ports as arranged, whereby to cause motion of the valve-piston, and to check and stop the motion of said piston, substantially as herein set forth.

2. The stationary valve-plate *h*, constructed as described.

3. The combination of the valve *d*, piston *f*, cylinder *c*, plate *h*, and valve *i*, constructed and arranged as described, whereby to induce acting and checking motion, substantially as and in the manner herein set forth.

4. The valve *i* as arranged, whereby to supply steam to the cylinders C and C′, when partially filled with steam, and at the same time to produce exhaust upon the side opposite to that being supplied, as set forth.

5. The valve-plate *h*, constructed and arranged with reference to the ports 2 and 2′, whereby to close the exhaust in their outward movement, and to uncover them to the live steam at their outermost position, substantially as set forth.

3,264.—Robert Murphy, Jasper, N. Y.—*Churn.*—Patented July 5, 1864, No. 43,423; reissued January 12, 1869.

Claim.—1. A barrel-churn, A, rotated upon transverse trunnions *a a*, and provided with counterpoises *dx dx*, the whole being arranged to operate in the manner and for the purpose set forth.

2. Constructing, attaching, and securing the cover to the barrel-churn herein described, as specified.

3,265.—Charles William Siemens and Frederick Siemens, Westminster, England.—*Regenerator-Furnace for Metallurgists and Others.*—Patented March 1, 1864, No. 41,788; reissued January 12, 1869.

Claim.—1. In combination with a furnace, A, and its chimney or smoke-discharge flue P, a system or series of air and gas regenerators, B^1 B^2 B^3 B^4, constructed substantially as specified, and having conduits and dampers, arranged so that air and gas may be led into and through such regenerators and furnace, and out of the chimney, in manner and so as to be operated as and for the purpose or purposes hereinbefore described.

2. The arrangement and combination of the air-space or open chamber C, with the furnace and its system of regenerators, arranged and applied together substantially in manner and so as to operate as described.

3. The arrangement and combination of the air-chamber or space D, or the same and the space E, with the furnace, regenerators, conduits, and damper-chests applied thereto, the whole being substantially as specified.

4. The combination of a furnace with one or more regenerators or means of receiving its waste smoke and gaseous products, and intercepting or receiving heat therefrom, and also with means or devices by which all or a portion of the heat so intercepted or received may be absorbed by the influent air or gas during its passage into or to such furnace, for the purpose of improving or promoting combustion therein.

3,266.—The First National Ore-Smelting and Desulphurizing Company, New York, N. Y., assignees of John Absterdam.—*Roasting and Smelting Metallic Ores in vacuo.*—Patented January 23, 1866, No. 52,120; reissued January 12, 1869.

Claim.—1. Extracting or dilating the impurities contained in ores, when the same are heated in a retort or furnace, by creating and maintaining, within said retort or furnace, a vacuum or partial vacuum, substantially as set forth.

2. Supplying the air, for the combustion of the fuel mixed with the ore in the retort or furnace, by creating and maintaining, within the retort or furnace, a vacuum or partial vacuum, substantially as described.

3. Introducing into the retort or furnace containing the ore, a hydrocarbon-liquid, vapor, or gas, by creating and maintaining, within said retort or furnace, a vacuum, or partial vacuum, substantially as described.

3,267.—Samuel Johnston, Syracuse, N. Y.—*Harvester.*—Patented November 4, 1862, No. 36,843; reissued January 19, 1869.

Claim.—1. A sweep-rake, wholly mounted upon the heel of the finger-beam, or on the inner shoe thereof, in a harvester, which has its cutting-apparatus and platform hinged to the draught-frame in such a manner that the rake-arm sweeps the platform from front to inner side, and maintains a correct position in relation to the finger-beam and platform during the rising or falling movements thereof on the joint or joints.

2. An inclined standard or support, R, or its equivalent, wholly mounted upon the finger-beam or inner shoe of a hinged cutter-bar, and adapted for supporting a sweep-rake in an unchanging position in relation to the platform, without obstructing the free motion of the platform or finger-beam.

3. The combination of a suspended hinge-joint finger-beam and a sweep-rake, mounted directly and wholly upon said suspended hinge finger-beam in a harvesting-machine.

4. So constructing and arranging the several parts of a two-wheel hinge-bar harvester, that the rake-head, mounted on a support attached to the inner end of the finger-bar or shoe, will occupy a position wholly on the grain-side of the inner wheel.

5. The angular or knee-attachment, at the inner end of the rake-arm, for guiding it.

6. The combination of cam, rake-standard, finger-beam, and platform, of a hinged machine, all connected together, as described, so that the operation of the rake will not be interfered with in passing over uneven ground.

7. The double-track or cam-way, on the platform-side of the vertical rake-shaft or pivot, in a two-wheel hinged-bar machine.

8. The combination of the cam-way, arranged in a plane parallel to the rake-shaft, and the knee-attachment to the rake-arm.

9. The combination of a sweep-rake, supported upon a vertical axis, with a radial pivoted arm and a cam, against which the heel or the rake-arm presses, for holding down the rake to the platform while sweeping it off.

10. In combination with a two wheel machine and hinged cutting-apparatus, the support for an automatic rake located on the finger-beam.

11. The combination of an automatic or hand-rake, located wholly upon the finger-beam or shoe of a hinged harvester, and a driver's seat on the main frame.

12. The combination of the automatic or hand-rake standard, attached to the finger-beam, with the cam or guide attached to said standard, the whole vibrating together, in conformity with the platform of said machine, in passing over uneven ground.

13. The combination of the automatic or hand-rake standard, rigidly attached to the finger-beam or shoe of a hinged machine, the cam or guide, and the driver's seat, on the main frame.

14. The metallic support or standard of a sweep-rake, bolted directly on top of the inner end of the finger-bar or the inner shoe.

15. The arrangement and combination, in a reaper and mower, of the hanger I, curved guide O, hinge-joints M and *g*, and shield P′, of shoe P, or their equivalents, constructed and operating substantially and for the purpose described.

16. Constructing and arranging the bearing *n m*, substantially in the manner described, in combination with the pitman-shaft J, shield P′, and hinge-joints M and G, for the purpose set forth.

17. The hanger I I^1 I^2 I^3, *h h′*, constructed as described.

18. The combination of the cam-track, partly inclosed by rails *t* t^1, and a yielding gate t^2, and the guiding-eye R^2, lever Z, crane-like arm U V, pivoted rake-head X, and stale Y, substantially as and for the purposes described.

19. The construction of the jointed crane-like arm U V, substantially as and for the purpose set forth.

20. The construction of the part V of the arm,

with journals, and with points of attachment for the lever Z and part U of the arm, substantially in the manner described.

21. The combination of the yielding gate t^2 and the rails $t\ t^1$, of the grooves or cam-track W, substantially as and for the purpose described.

22. The bearing W, with a groove, and rails $t\ t^1\ t^2$, constructed and operating as described, in combination with the extension $s\ s'$ of the part U of the crane-like arm, for the purpose set forth.

23. The construction and arrangement of the pivoted spring-gate at the end of the horizontal groove or cam-track, substantially as and for the purpose set forth.

24. The combination, in an automatic or hand-rake attachment, of the eye R^2, and the stale Y, for the purpose set forth.

25. The combination and arrangement of the open-slotted adjustable pole-plate $n\ p$, as described, and for the purpose set forth.

3,268. — WILLIAM BAKER, Utica, N. Y.—*Clapboard-Joint.* — Patented May 15, 1854, No. 10,903; reissued September 22, 1863, No. 1,541; extended seven years; again reissued January 19, 1869.

Claim.—1. The construction of the joint of clapboards, or jointed siding, for houses and other buildings, in such manner that the boards, when laid on the frame, shall lie flat and solid, for their whole width, against the frame of the building, and at the same time shall preserve the appearance and advantage of clapboarding, in front, by the outer lip of the upper board, at each joint, overlapping outside the board next below it, for shedding the water, as described.

2. The combination of the lock *a*, in the rear of the joint, for holding the board to the frame at the lower edge, as described, with the extended lip C, Fig. 1, in front, for covering the head of the nail, as described, the whole being constructed, combined, and arranged substantially in the manner and for the purposes herein set forth.

3,269. — P. HOOP, Jr., and R. HOOP, Berlin Cross-Roads, Ohio.—*Hot-Blast Furnace.*—Patented October 27, 1868, No. 83,383; reissued January 19, 1869.

Claim.—1. The rings C, provided with the lugs *e*, in combination with the foundation-plates *c*, as and for the purpose described.

2. The rings C, in combination with the pipes D, made in three or more sections, and having their middle portions outside the chimney, as and for the purpose specified.

3. In connection with an apparatus for heating air for the purposes specified, in which several heating-vessels or chambers are employed, connecting said heaters by a pipe or pipes, D D′, running either partly or wholly outside of the chimney or oven, substantially as and for the purposes described.

4. In a hot-blast apparatus, in which the heaters are connected by pipes, D D′ D″, the arrangement of the joints of said pipes outside of the chimney or oven, so as not to be exposed to the heat thereof, substantially as described.

3,270.—J. G. PUTNAM and J. SCHIEFFELIN, Jr., Tioga, Pa., assignees of J. G. PUTNAM. — *Corn-Sheller.* — Patented May 22, 1860, No. 28,440; reissued January 19, 1869.

Claim. — 1. A divided, yielding perforated concave bed, each section of which is disconnected from the next, and so arranged in the machine as to be free at all points to yield and recede from the cylinder, and also to turn upon both its longitudinal and transverse imaginary axes, substantially as and for the purpose set forth.

2. The combination of the shelling-cylinder, divided yielding perforated concave and elongated journal-slots *c*, to allow the shifting of the journals of the concave section, substantially as shown and described.

3. The arrangement of the divided yielding perforated concave E, feeder B, prongs *b*, guard-plate J, guard L, and shelling-cylinder D, as and for the purpose herein shown and described.

3,271. — CHARLES H. RAYMOND, Southington, Conn. — *Tinman's Machine.* — Patented August 30, 1859, No. 25,278; reissued January 19, 1869.

Claim. — An endwise adjustment applied to the shaft that is fitted to swing in the bearings, substantially as set forth.

3,272. — PAUL SCHMITT, New York, N. Y., assignee of JANE QUANTIN and H. A. PINTARD, administrators of ALPHONSE QUANTIN, deceased.—*Method of Bottling Fluids under Gaseous Pressure.* —Patented March 4, 1856, No. 14,368; reissued October 27, 1868, No. 3,175; again reissued January 19, 1869.

Claim.—1. The above-described device, for filling bottles or other vessels with aerated water and sirup, consisting of conduits or passages A and B, a sirup-measuring chamber, and a discharging-nozzle or their known mechanical equivalents, so arranged that the water and sirup may be discharged from said nozzle common to both, substantially as shown and described.

2. The combination and arrangement in one draught-apparatus of the sirup-measuring chamber and a cock or valve for drawing aerated water, substantially as shown and described.

3. The arrangement of the sirup-conduit and the water-conduit, as a consequence of which the sirup is expelled from its conduit, and such sirup is mingled with the water at some distance from their common outlet, substantially as shown and described.

4. The combination, substantially as described, of a valve or cock for drawing the water, and a device for receiving and dispensing the sirup, as a consequence of which the reception and dispensing of the sirup are accomplished by the manipulation of the valve or cock for drawing the water.

5. The construction and arrangement of the vent-opening and closing device and the water-drawing valve or cock, as a consequence of which they are both operated simultaneously by the movement of water-drawing valve, substantially as shown and described.

3,273. — ALBERT SONNEKALB and JOHN W. LIEB, Newark, N. J. — *Carpet-Bag Frame.* — Patented August 21, 1866, No. 57,399; reissued January 19, 1869.

Claim.—1. A box or L-shaped jaw for a traveling-bag, constructed of sheet-metal, partially cut through transversely and bent lengthwise and transversely, substantially as before set forth.

2. The combination of a box-jaw, constructed of sheet-metal, as before set forth, with a second jaw, of box-form, by means of hinges, the whole forming a complete box-formed frame for a traveling-bag, substantially as before set forth.

3. The hinge, constructed by combining the joint-rod with both an ear and a tubular part of the jaw, substantially as before set forth.

3,274.—HENRY M. STOW, San Francisco, Cal.—*Pavement.*—Patented December 10, 1867, No. 72,110; reissued January 19, 1869.

Claim. — 1. A pavement, composed of alternate tiers of square-ended and wedge-shaped blocks, the wedge-shaped ends of the latter being driven into a foundation-bed of sand or earth, substantially as and for the purpose described.

2. A pavement, composed of blocks, with lower ends wedge-formed, and all driven down into a foundation-bed of sand or earth, substantially as shown and described.

3. A pavement, composed of wood, or in whole or in part of other suitable material, laid on a foundation-bed of sand or loose earth, as described, and a portion of the blocks driven down into said foundation-bed, to pack the same, substantially as and for the purpose specified.

3,275. — ISAAC STRAUB, Kenton County, Ky., administrator of the estate of ABRAHAM STRAUB, deceased.—*Asphaltic Cement.*—Patented November 17, 1863, No. 40,649; reissued January 19, 1869.

Claim.—The within-described cement, when composed of the ingredients, united substantially in the proportions herein specified, for the purpose set forth.

3,276. — EDWIN A. JEFFERY, Trappe, Md., assignee, by mesne assignments, of himself.—*Griddle.*

—Patented August 27, 1867, No. 68,202; reissued January 26, 1869.

Claim.—A griddle, consisting essentially of two plates, A and B, of which one plate can be swung to dump the cakes upon the other, as set forth.

3,277.—DAVID R. PAIST, Willistown, Pa., assignee, by mesne assignments, of himself.—*Harvester.*—Patented June 5, 1866, No. 55,427; reissued January 26, 1869.

Claim.—1. The combination, in a two-wheel harvesting-machine, with rear cut, of a hinged finger-beam and platform, a support for a revolving-rake connected therewith, and a lever, attached to the front end of the drag-bar, for raising, lowering, and inclining the fingers and finger-beam.

2. A lever, attached to the front end of the drag-bar, and arranged in front of the carrying axle, and at right angles, or nearly so, to the path of the driving-wheels, so as to be convenient to the driver, while riding in his seat.

3. The combination, in a two-wheel harvesting-machine, of a flexible finger-beam, a revolving rake-standard connected therewith, and a device for raising, lowering, and inclining the finger-beam and rake-standard, operated by the driver, while riding on a seat supported by the main frame.

3,278.—EDGAR M. STEVENS, JOSEPH B. CROSBY, and JOSEPH W. PEARSON, Boston, Mass. — *Seed-Planter.*—Patented May 22, 1855, No. 12,924; reissued January 26, 1869.

Claim. — 1. The application of elastic-surfaced feed-rollers in seed-sowing machines, when constructed and arranged to receive and deliver the grain, substantially as described.

2. The combination of the rollers, either or both elastic-surfaced, with the hopper or seed-box of a seed-sowing machine, substantially as and for the purposes described.

3. The combination of the rollers, either or both elastic-surfaced, with a spreader, provided with grooves or tubes, and furrow-openers, substantially as described.

4. The combination of seed-box, rollers, and spreader, provided with grooves or tubes, and furrow-openers, all constructed to operate substantially as described.

3,279.—LEONARD ANDERSON, Painesville, Ohio, assignee of JAMES T. GILMORE, same place.—*Machine for Tramming, Staffing, and Fine-Dressing of Millstones.*—Patented October 28, 1862, No. 36,776; reissued February 2, 1869.

Claim.—1. The arm S, provided with a guide, T, of dovetail or other form, for a socket or tool-holding slide to work upon, for the purposes set forth.

2. In combination with the said arm, the shaft *w*, with its crank-plate *y*, beveled gear-wheel *x*, U, the same being attached to and used in combination with the other parts of the machine, to wit, the slide K, cross-plate G, dovetailed guide H, screw-shaft I, nut O, beveled geared wheel N, and crank-plate R, said several parts connecting with the circular pivot-plate F, clips *c* and *c'*, sleeve D, double flange E, hollow journal A, branch feet B, set-screws *c''*, cap-plate *a*, screw-bolts *b*, and lever-nut *y*, the whole constructed and operating as described, and for the purpose specified.

3. The mode described for attaching the machine to the bed and runner-stones, by means of the branched straps and grappling-arms, secured as described, for the purpose set forth.

4. The tramming and staffing block I, with its shaft fitting into the socket-slide *e*, on the guide T of arm S, substantially as and for the purpose set forth.

5. The means employed for raising and controlling the diamond when used in connection with a revolving arm, S, the means consisting of the stock *j*, diamond-handle *l*, spring *n*, finger *o*, lever *p*, and handle *r*, constructed and arranged substantially as shown and described.

6. Attaching the arm S, with its guide T, to the circular plate F, provided with a shoulder, T, when said parts are used in combination with the sleeve D and journal A, and all arranged substantially as and for the purpose set forth.

3,280. — JOHN BROKENSHIRE, Oswego, N. Y.—*Pump.*—Patented August 11, 1868, No. 80,905; reissued February 2, 1869.

Claim.—1. The internal chamber E E, in conjunction with the suction-pipes D, in combination with the barrels A A plungers B B, and valve C C, substantially as set forth.

2. In combination with the above, the opening and plug in line with the suction-pipes D, as and for the purpose set forth.

3,281. — WILLIAM STUART GUINNESS, London, England, for himself and A. G. SEAMAN, New York, N. Y., assignee of WILLIAM S. GUINNESS.—*Sewing-Machine.*—Patented March 15, 1864, No. 41,916; antedated March 9, 1864; reissued February 2, 1869.

Claim.—1. The combination of the driving-shaft arranged lengthwise beneath the frame, the reciprocating needle-arm arranged longitudinally above the table, and always remaining parallel with the driving-shaft and the presser-foot, with the shuttle and feed-bar arranged below the table, and moving transversely to the needle-arm and driving-shaft, as and for the purposes specified.

2. The combination, substantially as set forth, of the longitudinally-slotted feed-bar, the fulcrum-pin *l*, and its support L, with the ledge L^1, guide l^1, and adjusting-screw l^2, whereby the feed can be varied at pleasure.

3. The thread-regulator or take-up P, constructed, arranged, and operating as set forth.

4. The combination, with the shuttle, of the adjustable holder and reciprocating carrier, as set forth.

5. The combination of a needle and a shuttle, operating substantially as described, with a needle-way cut away at one side, to or below the bottom of the shuttle, for the purposes specified.

6. The combination, substantially as set forth, with the reciprocating slide I, of the adjustable holder h^1, whereby shuttles of various sizes may be employed.

7. The combination, substantially as set forth, of the oscillating slotted treadle X, the adjustable arms *x*, the ball-and-socket joint, the pitman, and the balance-wheel, for the purposes specified.

3,282.—HENRY HAUER, Philadelphia, Pa., administrator of the estate of LOUIS BAUHOEFER.—*Method of Treating Cork for the Manufacture of Mattresses, &c.*—Patented November 6, 1866, No. 59,342; reissued February 2, 1869.

Claim.—1. Subjecting particles of cork, to be used as a stuffing-medium for mattresses, cushions, &c., and for other packing-purposes, to the action of the products of combustion, for the purpose specified.

2. Charring, roasting, or partially burning particles of cork, (to be used as a filling-material,) for the purpose described.

3. Subjecting particles of cork to the action of the fumes or vapors of burning or heated aromatic substances, as and for the purpose specified.

3,283. — HENRY HAUER, Philadelphia, Pa., administrator of the estate of LOUIS BAUHOEFER.—*Prepared Cork for the Manufacture of Mattresses, &c.*—Patented November 6, 1866, No. 59,342; reissued February 2, 1869.

Claim.— Particles of cork, roasted, charred, or partly burnt, as set forth, for the purpose specified.

3,284. — ANDREW J. HOLMAN, Philadelphia, Pa., assignee, by mesne assignments, of ISAAC C, TWINING. — *Harvester-Rake.* — Patented August 14, 1860, No. 29,640; reissued February 2, 1869.

Claim.—1. A crown or bevel wheel, to which the rake-arm is pivoted, located on the inner side of the drive-wheel, and below the highest point thereof.

2. The arrangement of the crown or rake-driving wheel, to which the rake-arm is pivoted, on the inner side of the drive-wheel, and within the periphery of said wheel.

3. Hinging or pivoting the rake-arm to the upper face of a crown or rake-driving wheel, so as to permit the necessary rising and falling movements of the rake.

4. A sweep rake hinged to a horizontal, or nearl horizontal, bevel or rake-driving wheel at a poin

inside of the ground or drive-wheel, and below the highest point of said wheel.

5. The use of the inner bearing of the drive-wheel as the support for the shaft, or pivot, of the crown or bevel wheel, to which the rake-arm is pivoted.

6. An automatic rake, hinged or pivoted at a point within the periphery of the driving-wheel, to a crown or bevel wheel which conforms to the movement of the platform, in combination with a lifting-mechanism, controlled by the attendant in his seat on the machine, for adjusting the position of the cutting-apparatus, platform, and rake.

7. An automatic rake, hinged to and operated by a horizontal crown or bevel wheel, in combination with means whereby the rake may be made to discharge the grain more or less frequently, as the condition of the crop may require.

8. The arrangement of the wheels I K G, toothed at their peripheries in sections, in connection with the bent bar *o*, cam H, and rake-bar L, attached to the upper surface of the cam-wheel K, substantially as and for the purpose set forth.

9. The arrangement, with the wheel I, of the pinions *d e*, cam *g*, and lever G′, and spring *c*, substantially as shown, for the purpose of giving the necessary dwells or cessations of movement to the rake, as and for the purpose set forth.

3,285.—Jason B. Loomis, Chelsea, Mass.—*Bustle.*—Patented August 18, 1868, No. 81,281; reissued February 2, 1869.

Claim.—1. Arrangement of ribs or bow-springs *b*, the bow or back-spring *e*, the hook *f*, or its equivalent, and the adjusting strap *g*, the whole being applied to a waistband, as set forth.

2. The combination as well as the arrangement of the shield or abutment *k*, with the bustle, made and provided with the spring *e*, as set forth.

3. The arrangement as well as the combination of the bow-springs or ribs *b e*, the flexile pocket-frames A A, the waistband *a*, and the joining flexile bands *d*.

3,286.—Alois Peteler, New Brighton, N. Y., assignee of Johann N. Peteler.—*Portable Railway.*—Patented September 4, 1866, No. 57,826; reissued February 2, 1869.

Claim.—1. In a portable railway, a section, A, composed of two rails, which are connected by cross-ties, *m*, and provided at their ends with hooks and staples, or any other suitable fastening, as shown and described.

2. A turn-out, B, made in two halves, which are provided at their ends with hooks and staples, or other suitable fastenings, as set forth.

3. A supporting-frame, C, composed of two rails, supported by cross-ties, *m*, which are connected by longitudinal boards *o*, said rails being provided at their ends with hooks and staples, or other suitable fastenings, as shown and described.

4. A crossing, E, constructed as shown in Fig. 5, and provided at its ends with hooks and staples, or other suitable fastening, as set forth.

5. The combination of the perforated ears *a* and turn-table F, constructed and operating substantially as described.

3,287.—William Green, Cleveland, Ohio.—*Cement-Roofing Fabric.*—Patented May 29, 1866, No. 55,087; reissued February 9, 1869.

Claim.—The herein-described sheet-roofing, as a new article of manufacture, made substantially as set forth.

3,288.—William Green, Cleveland, Ohio.—*Roofing-Cement, Paint, &c.*—Patented March 13, 1866, No. 53,140; reissued February 9, 1869.

Claim.—A paint or cement, composed of the ingredients herein set forth, prepared and compounded in the manner specified.

3,289.—George P. Hopkins, Albion, N. Y.—*Cooking-Stove.*—Patented June 2, 1863, No. 38,744; reissued February 9, 1869.

Claim.—1. The magazine D, in combination with the flues C and G and fire-chamber A, substantially as shown and described.

2. The curvature of the magazine D and the flues C and G, as herein set forth.

3. The tubular perforated shaft J, fitted in the lower part of the flue G, and provided with the wing *c* and serrated plate *d*, and placed in such position, relatively with the fire-chamber A and magazine D, to operate as and for the purpose specified.

4. The sliding or adjustable back, L, of the fire-chamber A, arranged as shown, when arranged and combined with the flues C G, perforated shaft J, and the magazine D, as herein set forth.

3,290.—Charles Parker, Meriden, Conn., assignee, by mesne assignments, of John A. Bailey.—*Rolling Taper Bars of Iron.*—Patented April 13, 1858, No. 19,963; reissued February 9, 1869.

Claim.—1. The combination of one roll of a set with eccentrics applied to its journals, for the purpose of imparting reciprocating motion to the roll, substantially as set forth.

2. Combining a rotating eccentric with a second eccentric arranged upon it, so that the reciprocating movement imparted by one of the eccentrics may be varied by the other, substantially as set forth.

3. The combination of one roll of a set with two eccentrics arranged upon each journal, for the purpose of imparting a reciprocating motion to the roll, and varying the said reciprocating motion, substantially as set forth.

3,291.—Eliza Mascher, Philadelphia, Pa., administratrix of the estate of John F. Mascher, deceased.—*Book for Photographs and other Pictures.*—Patented March 8, 1853, No. 9,611; extended seven years; reissued February 9, 1869.

Claim.—1. Binding together, in the form or style of a book, perforated or skeleton leaves, adapted for holding photographic or other similar pictures, so arranged that said pictures may be inserted or removed at pleasure.

2. Binding together, in the form or style of a book, perforated or skeleton leaves, adapted for holding removable photographic or other similar pictures, in combination with leaves containing printed matter.

3. Binding together, in the form of a book, skeleton leaves, for holding removable photographic or other pictures, in combination with a movable flap containing lenses for viewing said pictures.

4. In combination with a series of stereoscopic pictures, bound together in a book, a supplementary flap containing stereoscopic lenses for viewing said pictures.

3,292.—David Hammond and W. R. Reeves, Canton, Ohio.—*Iron Bridge.*—Patented June 21, 1864, No. 43,202; reissued July 30, 1867, No. 2,701; reissued February 9, 1869.

Claim.—1. The peculiar arrangement and combination of the arch-pieces *a a*, covering-piece *b*, bolt *m*, suspension-rod B, or diagonal brace C, with bolt *x* or *w*, and nuts *f* or *h*, the several parts being constructed and arranged substantialy in the manner and for the purpose herein specified.

2. The combination of the arch A, composed of arch-pieces *a a*, covering-piece *b*, clamping-pieces *c c*, and bolts *d d* with nuts *e*, the chord D, suspension-rods B B, braces C C, and shoes E E, the whole forming a bow-string girder, substantially as and for the purpose specified.

3,293.—I. H. A. Hervey, Cleveland, Ohio.—*Skating-Rink.*—Patented January 28, 1868, No. 73,806; reissued February 9, 1869.

Claim.—1. The construction and arrangement of a basin within a building, in combination with openings in the building for the introduction of cold air, substantially as described and for the purposes set forth.

2. The arrangement of openings around a basin within a building, in combination with higher openings in the building, the latter being for the exit of air therefrom, the whole substantially as described, and for the purposes set forth.

3. A skating-rink, provided with a cold-air trunk, D, extending partially or entirely around its foundation or lower part, and provided with doors, *b b′*, at its inner and outer sides, for the admission of external air, in connection with the openings *a* in the roof of the rink, all constructed and arranged substantially in the manner as and for the purposes set forth.

3,294.—Gordon McKay, Boston, Mass., trustee of The McKay Sewing-Machine Company, assignee of Stephen W. Baldwin.—*Nail for Leather-Work.*—Patented September 27, 1864, No. 44,382; reissued February 9, 1869.

Claim.—1. A headless nail, having thin, twisting edges, substantially as described.

2. Articles of leather-work, having their parts fastened together by headless screw-threaded or twisted nails, formed substantially as described.

3,295.—Dexter P. Webster and Herman W. Ladd, Boston, Mass.—*Spring-Bed Bottom.*—Patented April 23, 1867, No. 64,175; reissued February 9, 1869.

Claim.—1. A detachable frame, having spring-supporting cross-bars, interlocking with side-bars, in such a manner that the side-bars shall support the ends of the cross-bars, and at the same time prevent the side-pieces from separating laterally, or in line with the crossbars, without any other fastening, as set forth.

2. Cross-bars D, having plates E, constructed substantially as and for the purpose described, or their ends cut, so as to form a section of an interlocking joint.

3. The third or safety-bar D, in combination with side-bars B and spring-slats, substantially as and for the purpose described.

4. The removable sectional tubular cushions G, applied to the coils of the springs, substantially as described, for the purpose specified.

5. The pendent hooks *a*, constructed substantially as described, in combination with the bedstead-frame A, supporting the slat-bearing frame, substantially as and for the purpose set forth.

6. The combination of the longitudinal slats, conical springs, and the detachable frame, substantially as and for the purpose set forth.

3,296.—Russell Fisk, New York, N. Y.—*Concrete-Pavement.*—Patented October 8, 1867, No. 69,738; antedated July 20, 1867; reissued February 9, 1869.

Claim.—1. The mode, substantially as set forth, of compounding and preparing concrete, and making concrete-blocks for paving.

2. The mode of laying pavements by the use of concrete, and laying concrete-blocks, embedded and united substantially as set forth.

3,297.—William Hanlon and Edward Hanlon, New York, N. Y., assignees of George, William, Alfred, Edward, and Frederick Hanlon.—*Velocipede.*—Patented July 7, 1868, No. 79,654; reissued February 9, 1869.

Claim.—1. A velocipede constructed so that it can be converted from a three-wheel to a two-wheel velocipede, and *vice versa*, by means substantially as and for the purposes set forth.

2. The adjustable or variable saddle, or seat, as and for the purposes described.

3. Making the driving-cranks of a velocipede variable, as and for the purposes described.

4. Making the body of a velocipede, substantially as described, of a bifurcated or forked bar or perch, as set forth.

3,298.—Ebenezer D. Draper, Hopedale, and Edward W. Glover, Medford, Mass.—*Fire-Proof Safe.*—Patented January 14, 1868, No. 73,309; reissued February 16, 1869.

Claim.—1. The combination and arrangement of a heat non-conductor, *c*, of mica, or its equivalent, with each or either of the metallic jambs or sides of the door-frame, and the filling thereof, the whole being substantially as and for the purpose specified.

2. The combination and arrangement of one or more strata of fusible metal, *d*, with the mica heat non-conductor *c*, arranged in a safe, substantially in manner and for the purpose specified.

3. The combination and arrangement of mica, or its equivalent, or of mica and fusible metal, with the sides of the burglar-proof, and the next adjacent internal surfaces of the safe, the whole being substantially as specified.

4. In a safe, the construction of either or all of its jambs, for reception of the door, with an insulating-groove or space, *s*, arranged therein, so as to insulate, or aid in insulating from each other, the portions *a b* of the jambs, the said space being adapted for the reception of one or more insulating-media, as set forth.

5. In a safe, the boxed or chambered door, as constructed with an insulating groove or space, *t*, arranged in its edge or edges, and to extend outside of the filling or stuffing, or the chamber to contain the same, the said space *t* being adapted or intended for the reception of one or more insulating-media, or the same and a fusible metal, as set forth.

6. In a safe, the arrangement of an insulating-space directly around the burglar-proof, or between it and any side of it and the next adjacent inner wall of the safe, such space being designed or adapted for the reception of an insulating-medium, or slow conductor of heat, or the same and a fusible metal or composition which will melt at a low temperature, as explained.

3,299.—Nils P. Lindergreen, Boston, Mass.—*Packing-Can.*—Patented October 13, 1868, No. 83,070; reissued February 16, 1869.

Claim.—An octogon tin can, having four wide and four narrow sides, the joint of the sheet-metal being in the narrow side or sides of the body of the can, substantially as set forth.

3,300.—John McGill, Boston, Mass.—*Solution for Preventing Combustion.*—Patented May 1, 1866, No. 54,382; reissued February 16, 1869.

Claim.—The application of the aforesaid chemical, for the purpose of preventing combustion, as described.

3,301.—E. G. Patterson, Pithole City, Pa.—*Railway-Rail Joint.*—Patented October 6, 1868, No. 82,744; reissued February 16, 1869.

Claim.—1. The chair D, made with the inner sides of its jaws inclined, or wedge-shaped, substantially as herein shown and described, and for the purpose set forth.

2. The clamps F, constructed as described, and provided with bolts G and nuts H, in combination with the fish-plates C, by which they are supported, and with the wooden bar or bars E, which they support, substantially as herein shown and described, for the purpose set forth.

3. The combination of the fish-plates C and chair D with each other and with the ends A and B of the rails, substantially as herein shown and described, to form a rigid support for the said ends of said rails.

4. The combination of the fish-plates C, chair D, wooden bar or bars E, and clamps F, with each other and with the ends A and B of the rails, substantially as herein shown and described, and for the purpose set forth.

5. The fish-plates C, constructed in such a way as to bear wholly, or nearly so, upon the bottom flanges of the rails, and having inclined notches in their outer or sloping sides, substantially as herein shown and described, and for the purpose set forth.

3,302.—Payne Pettebone, Wyoming, and J. E. Patterson and A. W. Brown, Wilkesbarre, assignees of Edwin R. Shepard, Scranton, Pa.—*Rail for Railways.*—Patented March 3, 1868, No. 75,206; reissued February 16, 1869.

Claim.—1. The construction of a compound railroad-rail, composed of two parts, an upper, or head portion, having a vertical rib, and a lower, or base portion, having also a vertical rib, in such manner that the wear of such parts of the upper or lower portion, or both, as bear on each other, shall be compensated for, and all lateral motion of the parts prevented, substantially as set forth.

2. In combination with a compound railroad-rail, an automatic device, adapted to prevent an upward motion of the head, or upper portion, relative to the base, or lower portion of said rail.

3. In combination with a compound railroad-rail, a key or bolt, provided with an inclined or wedging face, for following the movement of the upper portion when it is depressed, and preventing it from being retracted.

3,303.—Adam R. Reese, Phillipsburgh, N. J., assignee of John J. Squire. — *Horse-Rake.*—Patented December 23, 1856, No. 16,318; reissued February 16, 1869.

Claim.—1. In combination with mechanism for raising the teeth operated by the draught of the team, means for throwing said mechanism into gear, placed under the control of the driver in his seat on the machine.

2. In a two-wheel rake, in which the teeth are raised for discharging the gathered hay by the draught of the team, mechanism, under the control of the driver in his seat on the machine, for causing the draught of the team to raise the teeth, in combination with means for automatically releasing the teeth after the hay has been discharged.

3. A feathered sliding clutch on the rake-head, in combination with a clutch-face or pins on the hub of the carrying or driving wheel, for the purpose set forth.

4. The clutch D, and lever B for operating the same, in combination with an arm, F, on the rake-shaft, whereby the rake is lifted by the draught of the team, and automatically released, substantially as specified.

3,304. — Asahel J. Severance, Middlebury, Vt., assignee, by mesne assignments, of Rodolphe Leschot.—*Rock-Drill.*—Patented July 14, 1863, No. 39,235; reissued February 16, 1869.

Claim.—1. A hollow rotating rock-drill, composed of a tubular boring-bar, B, and a cylindrical crown or boring-head, A, armed with diamond or other teeth, $a\ a^1\ a^2$, when said drill is used in combination with a force-pump E, and connected with rotating-machinery, substantially as and for the purposes set forth.

2. The use of a stream of water, when it is forced through a hollow rock-drill by means of a force-pump or other apparatus, which operates upon the same by means of mechanical pressure, substantially as and for the purposes set forth.

3,305.—Stephen Stucky, New Albany, Ind.—*Feed-Water Heater for Boilers.*—Patented July 28, 1868, No. 80,516; reissued February 16, 1869.

Claim.—A shell-reservoir or drum, of any suitable construction, provided with inlet, outlet, and refuse-matter pipes, when placed above or at the water-line of the boiler or boilers, to operate substantially as set forth.

3,306. — Clark W. Bryan, Samuel Bowles, B. F. Bowles, and J. F. Tapley, Springfield, Mass., assignees of Clark W. Bryan.—*Office-Calendar.*—Patented February 26, 1867, No. 62,313; antedated December 11, 1866; reissued February 23, 1869.

Claim. — 1. A calendar, constructed of several printed sheets attached together, and also to the top A, in the manner described, for the purpose of readily tearing off the outside sheet, or the sheet representing any past month, substantially as herein set forth.

2. The attachment of the counting-house calendar to the back of the last of a series of printed sheets, forming a calendar, substantially as herein described and specified.

3,307. — George J. Capewell, West Chesire, Conn.—*Button-Fastening.* — Patented February 12, 1867, No. 62,001; reissued February 23, 1869.

Claim.—1. A button, or button-head, having a recess of inverted-cone form, made in its inner side, to receive an eyelet, or hollow shank, or tube, which, when pressed into said conical recess, will expand radially, and be firmly connected to the button, and, at the same time, secure the button to the garment or fabric, substantially as described.

2. The combination of an eyelet, or hollow shank, with a cone, *e*, or its equivalent, either with or without a washer, substantially as and for the purpose specified.

3. The combination of two or more eyelets with the cone C, or its equivalent, of a button, and either with or without a washer, when arranged and combined for action, and for fastening the cloth, &c., between their two ends, substantially as specified.

3,308. — Thomas A. Conklin, New Britain, Conn. — *Tack-Hammer.* — Patented December 10, 1867, No. 71,986; reissued February 23, 1869.

Claim.—The cast-metal tack-hammer, consisting of the head A, hollow handle B, and claw C, in a single piece, the whole coated, substantially as and for the purposes herein set forth.

3,309.—David Lyman, Middlefield, Conn., and Sidney Fairbank and Washington Whitney, Winchendon, Mass., assignees of Henry Mellish, Walpole, N. H.—*Hollow Wooden Ware.*— Patented May 10, 1864, No. 42,675; reissued February 23, 1869.

Claim.—1. An article of wooden ware, the body of which is made from a strip of wood cut from the log or stock, in the form of a spiro-conical coil or scroll, substantially in the manner described.

2. Forming upon the upper edge of the scroll or strip of wood, cut in the manner described, so as to constitute the body of the article, a strengthening or stiffening bead or molding, substantially as and for the purposes specified.

3. The combination, with the body of the article of wooden ware thus produced, of a bottom groove to receive and hold the lower edge of the said body, whereby the body is maintained in shape by means of the bottom, and without the aid of hoops and other devices.

4. Uniting the upper ends of the contiguous edges of the wooden scroll which forms the body of the article, of wooden ware, whether the same be combined with a bottom such as described, or not, by means of a clasp or fastening-device, applied substantially as herein shown and set forth.

3,310.—Frederick H. Manny, Rockford, Ill., assignee of Albert Franklin.—*Seeding-Machine.* —Patented November 10, 1857, No. 18,579; reissued February 23, 1869.

Claim.—1. The combination of a hopper-bottom, having triangular openings, with a revolving seed-cylinder, when said openings are arranged in such relation to the cylinders that the revolution of the latter draws the seed to the apex of the former, as and for the purpose described.

2. The combination of the hopper-bottom, having triangular openings, with a revolving seed-cylinder, having cells or recesses upon its surface, when said combination is provided with a passage-way between the hopper and cylinder, as and for the purpose described.

3,311. — John S. Paine, Boston, Mass., assignee, by mesne assignments, of David Manuel. —*Bed-Bottom.*—Patented March 19, 1867, No. 63,066; reissued February 23, 1869.

Claim.—1. The compound wire spring, constructed substantially as described, viz, of the C-springs or bends *f f*, the connection or slat-rest *e*, the side-springs or parts *c c*, and the helix-coils *u*, and their prongs *g*, arranged substantially as set forth.

2. The arrangement of the compound wire springs, having spiral ends *a a* attached to the frame of the bedstead A, and held by the cords *b b*, and having, also, long curved sides *c c*, connected with the slats B by the overlap *d*, formed, combined, and operating substantially as and for the purposes herein described.

3. The arrangement of each of the springs C with the slat, so as to embrace it on its opposite edges, and extend below and from it, as specified.

4. The combination of the overlaps *d d* with the slat and its springs, arranged and applied together, and to a supporting-frame, as specified.

3,312. — Dexter Pettengill and Andrew Buckham, Delhi, N. Y., assignees, by mesne assignments, of Dexter Pettengill. — *Slide for Breast-Straps for Harness.* — Patented November 25, 1862, No. 37,006; reissued February 23, 1869.

Claim.—1. The application and use, in combination with the breast-strap of a harness, of a metallic slide, or shield, substantially as and for the purposes set forth.

2. In combination with such slide, or shield, the arrangement of two or more loops, L L, substantially as and for the purposes set forth.

3. In combination with such slide, or shield, the arrangement of the flanged edges F F, substantially as and for the purposes set forth.

3,313.—Shaw's Union Air-Engine Company, Brookline, Mass., assignees of Philander Shaw.—*Hot-Air Engine.*—Patented November 26, 1861, No. 33,799; reissued February 23, 1869.

Claim.—1. The combination and arrangement of the cylinders, pistons, reservoir, and furnace, substantially as herein made known.

2. The combination of the finished or upper part of the cylinder, with its head, piston, and trunk, therewith connected, all operating together, and with inlet and outlet valves, and suitable packing around the said trunk, to form an annular air-pump, substantially as set forth.

3. The combination and arrangement of the chamber or groove *v*, around the cylinder, substantially as specified.

4. The construction and arrangement of the oil-trough M, within the chamber or groove, around and within the cylinder, as herein set forth.

5. The inwardly projecting flange *s*, constructed, combined, and arranged substantially as shown and described.

6. The combination and arrangement of the valve *u*, valve-box *b*, and air-passages *w*, whereby to admit comparatively pure and cool air from the reservoir, in which it is constantly maintained compressed, at the place and times, substantially upon the principle herein made known.

7. In an air-engine, in which the products of combustion pass through the working-cylinder, the devices herein set forth, whereby to force the cool air from the air pump around and through all parts of the engine liable to be overheated by the intense heat from the fire-pot, substantially as herein set forth.

8. The device and arrangement for sending the cool air from the air-pump around and against the valves, valve-boxes, and valve-stems, for the purpose of cooling them.

9. The combination of the valve *p* with the fire-chamber, hot-air passage H′, and the regulating-device Q_3 *q*, whereby to govern the speed of the engine, as herein set forth.

3,314.—Benjamin Stephens, Wheeling, W. Va.—*Composition for Roofing, and for other Purposes.*—Patented September 1, 1868, No. 81,838; antedated April 3, 1868; reissued February 23, 1869.

Claim.—The compound, of coal-tar and pulverized slag, as and for the purposes described.

3,315.—Rufus S. Merrill, Irasburgh, Vt.—*Lamp.*—Patented June 14, 1859, No. 24,397; reissued March 2, 1869.

Claim.—1. The combination, with the wick-tube and deflector of a hydrocarbon-fluid burner, of a jacket, with sides contracted, or tapering towards the upper end of the wick-tube, together with apertures in or such arrangement of the burner, whereby the air outside of the jacket may be properly directed to impinge upon the flame, as set forth.

2. The combination, with a hydrocarbon-fluid burner, of a wick-tube-surrounding jacket, of conical or equivalent form, under an arrangement substantially as described, so that the vapor from within the vessel, and the air from without, may be directed to impinge upon the flame, substantially as and for the purposes set forth.

3. In hydrocarbon-fluid burners, of otherwise ordinary construction, the combination, with a flat-wick tube, of a directer, or jacket, constructed as described, so as to allow of its ready adjustment to and removal from its base, substantially in the manner and for the purposes set forth.

3,316.—George P. Nutting, Chicago, Ill.—*Water-Supply Regulator.*—Patented December 22, 1868, No. 85,121; reissued March 2, 1869.

Claim.—1. The arrangement of the vessel A, steam-pipes J H, chest I, valves *c c*, lever *b*, rod *d*, lever G, and float E, substantially as specified.

2. The arrangement of the vessel A, steam-pipes J H, valve-chest I, lever *b*, rod *d*, lever G, float E, adjustable pin *h*, and whistle-valve lever L, substantially as specified.

3,317.—E. L. Roberts, New York, N. Y.—*Ventilator.*—Patented June 30, 1868, No. 79,395; reissued March 2, 1869.

Claim.—1. In combination with means for effecting a distributed exhaust, as above described, means for effecting a forced exhaust, substantially as and for the purpose described.

2. Mixing heated air, for heating rooms, with the inflowing distributed supply of fresh air, at or near the top of the room, by means substantially as and for the purpose described.

3. The combination, with the supply-passages F or F′, at or near the top of the room, of the vertical tube D, substantially as and for the purpose described.

4. The combination, with the tube D, of the tube E, substantially as and for the purpose described.

5. The combination, with the supply-passages through the ceiling, or near the same, and the vertical supply-tube D, of the exhaust passages through the floor, substantially as and for the purpose described.

6. The combination, with the floor arranged as described, for effecting a distributed exhaust, of the flue H, provided with a heater, substantially as and for the purpose specified.

7. The means for producing a distributed supply and exhaust, consisting of the tubes D F F′, the perforated ceiling, perforated floor, flue H, and heater I, or the equivalents thereof, when all combined and arranged substantially as and for the purpose specified.

3,318.—Henry B. Sears, Liverpool, England, assignee of Samuel Golay.—*Machine for Dressing Millstones.*—Patented January 21, 1868, No. 73,524; reissued March 2, 1869.

Claim.—1. A tool, armed with a diamond, to which a vibrating or picking motion is imparted, and arranged to traverse the face of a millstone, substantially as described.

2. A cutting-tool, in which a diamond or diamonds are secured in recesses, formed in two plates clamped together laterally, substantially as described.

3. A guide-bar, C, secured to the frame of the machine, in combination with an adjustable support c^2, at the outer end, substantially as and for the purpose set forth.

4. A frame, B, carrying a guide-bar, C, and adjustable on a pin, *d*, on the frame of the machine, substantially as and for the purpose described.

5. The plates c^1, in combination with the set-screws *c*, substantially as and for the purpose specified.

6. The detachable guide-bar C, secured to the frame of the machine, and adjustable thereon, as set forth.

7. A carriage, G, hung to the slide D, and adapted for the reception of a cutting-tool at either end, substantially as specified.

3,319.—Stephen W. Smith, New York, N. Y., assignee of P. W. MacKenzie.—*Velocipede.*—Patented August 12, 1862, No. 36,161; reissued March 2, 1869.

Claim.—1. In combination with a saddle-seat for the rider, the employment and use of a cranked axle, arms E, and foot-rest B, so arranged that power applied by the feet of the rider shall give motion to the vehicle, substantially as described and specified.

2. The combination of the following elements, namely, a saddle-seat for the rider, a cranked axle for propelling the vehicle by power applied by the feet of the rider, and a steering-mechanism, so constructed that the direction of travel of the vehicle may be governed by the rider, substantially as described and specified.

3. The universal joint, in combination with the fulcrum of the vehicle and the steering-wheel, constructed and operating substantially as and for the purposes specified.

4. The hinged legs A″, in combination with the body of the horse, and with the cranks C, substantially as and for the purposes specified.

5. The foot-rests upon the arms E, substantially as and for the purposes specified.

6. The double-armed levers *e g* and diagonal cords *f*, in combination with the handle I and steering-wheel B, substantially as described and specified.

3,320.—Zenas Wheeler, San Francisco, Cal.—*Apparatus for Concentrating Metallic Ores.*—

Patented September 6, 1864, No. 44,130; reissued March 2, 1869.

Claim.—1. The arrangement and combination of the corrugated surface B, with a vibratory or oscillating pan, or concentrator.

2. The inclined grooves K L and K′ L′, or their equivalent, in combination with a vibratory or oscillatory pan, or concentrator.

3. The opening D, in combination with a vibratory or oscillating pan, or concentrator.

4. The bowl F and tube F′, or either of them, in combination with a vibratory or oscillating pan, or concentrator, substantially and for the purposes herein specified.

3,321.—S. B. Rowley, Philadelphia, Pa., assignee, by mesne assignments, of Charles G. Imlay. —*Fruit-Jar.*—Patented May 23, 1865, No 47,834; antedated December 6, 1864; reissued March 2, 1869.

Claim.—A fruit-jar, having on its neck a continuous screw-thread, in combination with an annular nut or screw-ring, made of thin, yielding metal, all as set forth, for the purpose specified.

3,322.—Colby Brothers and Company, Waterbury, Vt., assignees, by mesne assignments, of Harvey Murch.—*Mop-Head.*—Patented June 14, 1853, No. 9,781; extended seven years; reissued June 2, 1868, No. 2,957; reissued November 10, 1868, No. 3,188; reissued March 9, 1869.

Claim.—1. The combination of a rigid binder having the ends connected, so as to form a circuit around the cross-head, and secured by a rigid fastening, with a metallic cross-head socketed for the reception of the handle, substantially as described.

2. The combination of a metallic cross-head and handle with a rigid metallic binder, which surrounds the cross-head, and reaches to and is secured on the handle, and passes the joint between the cross-head and handle, so as to serve as a brace to strengthen and support the cross-head, substantially as described.

3,323.—Levi Decker, New York, N. Y.—*Cushion for Billiard-Tables.*—Patented December 18, 1866, No. 60,657; reissued March 9, 1869.

Claim.—The catgut, or other cord E, partially or fully embedded, or otherwise attached at the angle *a* of the rubber cushion C, so as to protect said cushion against the impact of the ball, substantially as herein shown and described, and for the purposes set forth.

3,324.—F. R. Wolfinger, Chicago, Ill.—*Extension-Table.*—Patented November 5, 1867, No. 70,668; reissued March 9, 1869.

Claim.—1. The end rails C, formed in three or four parts, c^1 c^2 c^3 c^4, in combination with the central folds E and side folds D, substantially as herein shown, and for the purpose specified.

2. The combination of the narrow strips or leaves I I with the central parts c^2 c^3 of the end rails C, substantially as shown and described.

3. The narrow leaves I I, resting upon the parts c^2 c^3, in combination with the leaves G^1 G^2 G^3 G^4, as herein set forth and described.

4. The central strips J, (having the legs K,) in combination with the central parts c^2 c^3 of the end rail C, end folds D, and central folds E, substantially as described, and for the purposes specified.

5. The arrangement of the leaves G^1 G^2 G^3 G^4, and narrow strips I I, whereby the leaves G^2 and G^3 are folded upon the end rails C, having the leaves G and strip I in the same horizontal plane, to form the top of the table, and the leaf G^1 folding down over the ends of the said leaves G^3 and G^4, substantially as shown and described.

6. The leaf G^2 hinged in an elevated position upon the side rail B, and supporting the leaves G^1 G^3, the outer end of the leaf G^1 adjusted by the spring-catch H, substantially as set forth.

3,325.—Samuel Danks, Cincinnati, Ohio, for himself and Joseph C. Butler and Lewis Worthington, assignees of Samuel Danks.—*Lining or Fix for Puddling and Boiling Furnaces.*—Patented September 10, 1867, No. 68,715; reissued March 16, 1869.

Claim.—The use of puddlers or boilers, tapping-cinder, squeezer-cinder, or hammer-cinder, or pulverized or melted iron-ore, when mixed with an alkali or alkalies, or lime, common salt, soda, or potassa, separately or combined, in the manner, and in the relative proportions, substantially as and for the purpose specified.

3,326.—John E. Hawkins, Lansingburgh, for himself and Jacob C. Horton, New York, N. Y., assignee of John E. Hawkins.—*Cracker-Machine.*—Patented June 25, 1867, No. 66,082; reissued March 16, 1869.

Claim.—1. The conducting-tubes, divided into parts T and T′, in combination with the knife K, working between them, substantially as described.

2. The knife K, consisting of a thin plate of sheet-metal, provided with apertures for the dough to pass through, in combination with a spring to throw the knife, and the lever *i* and cam *i′*, to move back the knife, so that the dough can again pass through the holes, substantially as described.

3. In combination with mechanism for feeding the dough to form the crackers in cylindrical strips, through tubes or holes, a reciprocating knife, with apertures in it for the dough to pass through, and so operated as to sever from each of said strips, at suitable intervals, a section to form a cracker, substantially as described.

4. The outside tubes, or thimbles, working on the lower sections T′ of the conducting-tubes, and operated substantially as described.

5. The docker, consisting of the plates *o*, *p*, *r*, and *s*, the pickers *v*, stamper W, and spiral springs S′ and *u*, all combined, constructed, and operating substantially as described, to press, prick, and stamp a row of crackers at one operation, substantially as described.

6. The mechanism moved by a crank on the main driving-shaft, by means of which an intermittent motion is given to the grooved rollers, the endless apron, and the docker, substantially as described.

7. In combination with the docker, the thin plate R, constructed, arranged, and operating substantially as and for the purpose described.

3,327.—F. I. Norton and William H. Cloud, Fremont, Ohio, assignees of F. I. Norton. —*Drying-Apparatus.*—Patented April 28, 1868, No. 77,205; reissued March 16, 1869.

Claim.—1. The herein described process of drying perforated timber and other articles of wood, by forcing steam through the apertures, afterwards filling said apertures with heated steam-pipes, as set forth.

2. Drying wagon-hubs and other articles of wood, by fitting them around and upon steam-pipes *d*, within a structure A, so that they may be enveloped by steam, as specified.

3. The combination of the steam-coil C and vertical-radiating and steam-pipes *d*, substantially as and for the purpose described.

4. The combination, with a drying-chamber, A B, of the steam-pipes C *d*, substantially as and for the purpose described.

3,328.—Arnold A. Wheelock, Washington, D. C.—*Railroad-Car Stove.*—Patented February 9, 1869, No. 86,790; reissued March 16, 1869.

Claim.—1. The arrangement of the openings *e e*, waste-cock *r*, and supply-cock *s*, at the upper end of the bent pipes P P, when said pipes are employed substantially as and for the purpose described.

2. The combination of water-reservoir C, conducting-pipes P P, having holes *e e*, water-cock *r*, supply-cocks *s*, with the stove A, having screen T and smoke openings *t*, all constructed and arranged to operate in the manner and for the purpose substantially as described.

3,329.—Otto Gsantner, Newark, N. J.—*Elevated Railway.*—Patented November 3, 1868, No. 83,772; reissued March 16, 1869.

Claim.—1. The hangers C and the bed for the rails, formed in one piece, in combination with the embedded rail, substantially as and for the purpose described.

2. The hangers C made movable, as and for the purpose described.

3. The sliding hangers L, with rails M for shifting the suspended cars from one track to the other, as represented and described.

3,330. — AMARIAH M. HILLS, Hockanum, Conn.—*Lawn-Mower.*—Patented January 28, 1868, No. 73,807; reissued July 14, 1868, No. 3,030; reissued March 16, 1869.

Claim.—1. The balaneed frame on the roller E, in combination with the bail Q, to which the handle S is secured, all constructed and arranged substantially as and for the purpose set forth.

2. The spiral rotary cutter M, provided with the cutting-edges *c*, when hung above the cutter D in a frame, which is adjustable upon the shoes N, in the manner and for the purpose specified.

3. The frame, mounted on the roller E, and provided with the adjustable shoes N, rotary cutter M, fixed cutting-blade D, bail Q, and handles S, all operating substantially as and for the purpose set forth.

3,331.—CYRUS NEWHALL, Hinsdale, N. H.—*Harvester.*—Patented July 29, 1862, No. 36,017; reissued March 16, 1869.

Claim.—1. The eombination, in a harvester, of a loose driving-gear ring, revolving on fixed arms, with a finger-beam suspended from the main frame by connections passing through the driving-ring.

2. The combination, with a two-wheeled harvester, of a finger-beam, hinged to the main frame by coupling-arms passing through one of the driving-wheels.

3. The combination, substantially as set forth, in a harvester, of two wheels, a main frame, a laterally-projecting hinged finger-beam, and a coupling-frame, when the main frame, the finger-beam, and the couplings are all arranged within the periphery of the wheels.

4. The combination, in a harvester, of a laterally-projecting finger-beam with cutters driven by a pitman passing through the driving-wheel.

3,332. — ALVIN T. DUNBAR and ARCHIBALD MCNAUGHT, Alba, Pa. — *Grain-Separator and Thrashing-Machine.*—Patented February 5, 1867, No. 61,816; reissued March 16, 1869.

Claim. — 1. A perforated, longitudinally-slotted grain-platform, G, in combination with vertically and longitudinally moving toothed beating and shaking bars E, arranged so as to play between the slats, and above and beneath the platform, substantially as described.

2. The eombination of simultaneously, vertically, and longitudinally moving toothed beating and shaking bars E, with a longitudinally-slotted platform, G, operating substantially as herein described.

3. The eombination of a thrashing-machine, a perforated and longitudinally-slotted stationary platform G, and toothed beating and shaking bars E, operating substantially as described.

3,333.—E. H. BARNEY and JOHN BERRY, Springfield, Mass., assignees, by mesne assignments, of JOHN COE, administrator of the estate of JOHN H COE, deceased, and WILLIAM B. SNIFFIN.—*Skate-Fastening.*—Patented May 3, 1859, No. 23,826; reissued March 23, 1869.

Claim.—1. The eombination, with a skate, of a movable elamp and a screw, arranged transversely to the skate, for pressing the clamp against the foot of the sole of a boot or shoe, substantially as described.

2. A skate-elamp having a raised or roughened surface, or the equivalent thereof, to hold the edge of the sole of a boot or shoe with a firm gripe, substantially as described.

3. The arrangement of a skate-clamp upon a vertical stud, or pivot, on which it can turn, so as to adjust itself automatieally to the surfaee against which the elamp is drawn, substantially as shown and described.

4. The eurved adjustable slotted bars E F F, eombined and arranged, in relation to each other, and to the foot, or base-plate A, substantially as and for the purpose described.

5. The arrangement, on the serew-shaft K, of a hinged handle, L, in sueh a manner that it can be folded out of the way, after the skate is fastened to the foot, substantially as shown and described.

3,334.—JOHN VREELAND BOGERT, New York, N. Y., and JOHN F. LOWELL, Boston, Mass., assignees, by mesne assignments, of JAMES TYZICK.—*Nail-Extractor.* — Patented June 9, 1868, No. 78,699; reissued March 23, 1869.

Claim.—The combination of the lever A, sliding-fulerum B D, and hook E, substantially as and for the purpose speeified.

3,335.—SAMUEL F. DAY, Ballston Spa, N. Y.—*Electro-Magnetic Telegraph.*—Patented May 24, 1864, No. 42,842; reissued March 23, 1869.

Claim. — 1. Combining, with an indenting telegraphic registering-instrument, a magnet, constructed according to the proportions described in the foregoing speeifieation, or substantially so, so as to accomplish the result stated, by means substantially the same, that is to say, so as to give suffieiency of intensity and power of action to produce uniformly legible indentations in the paper in an ordinary line-eurrent, without the aid of a local battery, as hereinabove set forth.

2. The arrangement of the sounding-box C, the lever D, and the sounding-post G, of a magnetie telegraph, in combination with each other, in the manner hereinbefore described, and to the effect stated.

3,336.—J. B. LEWIS and J. E. UDALL, Concord, Ill.—*Sulky-Plow.*—Patented September 1, 1868, No. 81,799; reissued March 23, 1869.

Claim.—1. The flanges G, eccentries I, bolts H, wrist-pins J, and pins L, when constructed, arranged, and operating substantially as and for the purposes herein described and shown.

2. The compound lever M, when constructed and operating substantially as and for the purposes described.

3. The arrangement of the above-named parts with the frame A, axle B, seat C, traction-wheels K, washers F, plow-beam D, plow E, and quadrant N, when eombined and operating substantially as herein set forth.

3,337.—DANIEL C. LOWBER, New York, N. Y., and GEORGE L. LAUGHLAND, New Orleans, La., assignees, by mesne assignments, of WILLIAM TROWBRIDGE.—*Cotton-Bale Tie.*—Patented March 10, 1868, No. 75,319; reissued March 23, 1869.

Claim.—The deviee herein described, to wit, a seetion or piece of wire, so formed as to be provided with the loop, or eye C, with the two ends bent into hook-form, substantially as herein described, for the purpose set forth.

3,338. — LEVI STEVENS, Washington, D. C.—*Manufacture of Illuminating-Gas.* — Patented February 23, 1869, No. 87,123; reissued March 23, 1869.

Claim. — 1. A separate vaporizing-chamber, for distilling coal and mixing the vapors from coal with hydro-oxygen, or steam, for retorting.

2. The combination of the vaporizing and mixing ehamber with a retort, and the passage *a*, uniting the ehamber with the retort, as and for the purposes substantially as described.

3. The combination of a vaporizing-chamber, B, with the retort B′ and superheater of steam, substantially as and for the purposes described.

3,339.—GEORGE W. VAN BRUNT, D. C. VAN BRUNT, and HIRAM BARBER, Horicon, Wis., assignees of GEORGE W. VAN BRUNT.—*Seeding-Machine.*—Patented July 22, 1862, No. 35,960; reissued March 23, 1869.

Claim.—1. The eoncentric-chambered recess *k*, in the cap G, in combination with a eylinder, E, having radial flanehes *f f*, when arranged to operate in the manner and for the purpose set forth.

2. The cones N, having a horizontal eireular flanch, *m*, at their lower ends, in eombination with the peculiarly-shaped tubes M, when constructed in the manner specified.

3,340.—ALLEN AND WILLARD, Hartford, Conn., assignees of EDWARD WEBSTER.—*Hot-Air Furnace.* — Patented June 12, 1866, No. 55,564; reissued March 23, 1869.

Claim.—1. The plate E, or its equivalent, whereby we are enabled to form an equalized draught-space, E.

2. The central orifice C, in combination with draught-space F.

3. The combination of the inner wall D′, top and bottom plates B B′, tubes I, plate E, or its equivalent, with the fire-pot G.

4. The exit-pipe H, passing through and in combination with the air-box A.

3,341. — ERASTUS STEBBINS, Chicopee, Mass. — *Stop-Cock.*—Patented April 19, 1859, No. 23,721; reissued December 20, 1859, No. 868; reissued March 23, 1869.

Claim.—1. In combination with the valve-spindle C, and valve-seat P, the chambered-valve-nut L, having orifices M, substantially as shown and described.

2. In combination with the rotating screw-spindle C and its reciprocating valve-nut L, the metal washer I and flexible washer H, arranged to operate substantially as described.

3. The relative construction and arrangement of the metal collar I, flexible washer H, and metal washer G, substantially as shown and described.

4. In combination with a flexible washer, a metal collar, formed with a recess adjacent to the valve-spindle, and extending outward therefrom, by which recess the collar is caused to pack the washer tightly around the spindle, when pressed against the washer, substantially as shown and described.

3,342. — EDWARD R. COLE and HENRY S. COLE, Pawtucket, R. I. — *Steam Fire-Engine.*—Patented July 7, 1868, No. 79,730; reissued March 30, 1869.

Claim.—1. The pump-cylinder A, constructed substantially as described, forming the chambers A A^1 and A A^2, by the interposition of plunger B.

2. The descending induction-pipe D D, as arranged in relation to the suction-pipe D D^2, and to the supply-chamber D, all substantially as shown and described, for the purposes specified.

3. The elevated induction-pipe D D, connected with the eduction-pipe C, arranged substantially as described, for the purposes specified.

4. The arrangement of the siphon-formed induction-pipe D D^2, in relation to the air-chamber C C, water-way, or elevated induction-pipe D D, and operative parts A B and A A^2, and B B.

3,343.—REUBEN W. DREW, Lowell, Mass., assignee of LOUIS GODDU.—*Hand-Pegging Machine.*—Patented December 5, 1865, No. 51,387; reissued March 30, 1869.

Claim.—1. The combination of the portable traveling frame, the handle by which the implement is held, the driving-spring, and the pegging-awl plunger, the whole constructed to operate substantially as before set forth.

2. The combination of the portable traveling frame, the handle by which the implement is held, the driving-spring, and the peg-driver, the whole constructed to operate substantially as before set forth.

3. The combination of the portable traveling frame, the handle by which the implement is held, the driving-spring, the plunger, and the crank-handle, the whole constructed to operate substantially as before set forth.

4. The combination of the portable traveling frame, the driving spring, the plunger, and the stop for the plunger, the whole constructed to operate substantially as before set forth.

5. The combination of the portable traveling frame, the driving-spring, the crank-handle, the plunger, and the stop for the plunger, the whole constructed to operate substantially as before set forth.

6. The combination of the portable traveling frame, the driving-spring, crank-handle, peg-driver, and peg-tube, the whole constructed to operate substantially as before set forth.

7. The combination of the portable traveling frame, the driving-spring, peg-driver, peg-tube, and peg-feeder, the whole constructed to operate substantially as before set forth.

8. The combination of the portable traveling frame, the driving-spring, peg-driver, peg-feeder, and knife, the whole constructed to operate substantially as before set forth.

9. The combination of the portable traveling frame and the traveling foot, the whole constructed to operate substantially as before set forth.

10. The combination of the portable traveling frame, the handle by which the implement is held, and the traveling foot, the whole constructed to operate substantially as before set forth.

11. The combination of the portable traveling frame, the driving-spring, the plunger, and the traveling foot, the whole constructed to operate substantially as before set forth.

12. The combination of the portable traveling frame, the handle by which the implement is held, the driving-spring, the plunger, and the traveling foot, the whole constructed to operate substantially as before set forth.

13. The combination of the portable traveling frame, the driving spring, the plunger, the stop for the plunger, and the traveling foot, the whole constructed to operate substantially as before set forth.

14. The combination of the portable traveling frame, the driving spring, the plunger, the traveling foot, and the gauge, the whole constructed to operate substantially as before set forth.

15. The combination of the portable traveling frame, the handle by which the implement is held, the driving spring, the plunger, the traveling foot, and the gauge, the whole constructed to operate substantially as before set forth.

16. The combination of the portable traveling frame, the driving-spring, the plunger, the stop, and the gauge, the whole constructed to operate substantially as before set forth.

17. The combination of the portable traveling frame, the driving-spring, the plunger, the stop, the gauge, and the traveling foot, the whole constructed to operate substantially as before set forth.

18. The combination of the portable traveling frame, the driving-spring, the plunger, the crank-handle, and the traveling foot, the whole constructed to operate substantially as before set forth.

19. The combination of the portable traveling frame, the driving-spring, the peg-driver, peg-feeding apparatus, peg-tube, and traveling foot, the whole constructed to operate substantially as before set forth.

20. The combination of the portable traveling frame, the driving-spring, peg-driver, peg-feeding apparatus, peg-tube, traveling foot, and gauge, the whole constructed to operate substantially as before set forth.

21. The combination of the portable traveling frame, the driving-spring, peg-driver, peg-tube, and traveling foot, the whole constructed to operate substantially as before set forth.

22. The combination of the portable traveling frame, the driving-spring, peg-driver, peg-tube, traveling foot and gauge, the whole constructed to operate substantially as before set forth.

23. An organized hand-pegging machine, containing the devices, constructed, arranged, and combined to operate substantially as described, by which, while with one hand the machine is held to the work, with the other it is moved over the work, the holes punched, and the pegs furnished and driven at regular distances, substantially in the manner set forth.

3,344.—GEORGE W. RAY and VARNUM N. TAYLOR, Springfield, Mass., assignees, by mesne assignments, of JOHN T. BRUEN and G. M. JACOBS.—*Machine for Applying Re-enforcing Patches to Button-Holes of Collars.*—Patented November 27, 1866, No. 59,957; reissued March 30, 1869.

Claim. — 1. The combination of the suspended die-plate D, main die-plate, or bed C, and punches *v w*, constructed and operating substantially as herein described, and for the purposes specified.

2. The feeding-toes *a*, in combination with the dogs *i*, bar *h*, and rods *g*, constructed and operating substantially as and for the purposes herein described.

3. The pusher-bars *b′*, in combination with the dogs *e′*, cross-head *b*, and springs *f′*, constructed and operating substantially as herein described and set forth.

4. The combination of the rolls *n n*, one of which has the ratchet *p* thereon, with the drums *m*, all constructed and operating substantially as herein described, and for the purposes specified.

5. Applying re-enforcing-patches to button-holes of

collars or cuffs automatically; that is to say, by mechanism which moistens or heats the paper, or collar, or patch, and then presses the said patches upon the paper or collar, substantially as described.

3,345.—JOHN TURNER, Norwich, Conn., for himself, and assignee of ISAAC E. PALMER.—*Machine for Making Covered Cord.*—Patented April 14, 1863, No. 38,190; reissued March 30, 1869.

Claim.—1. The arrangement of the main or laying spindle, the strand-spindles, and the hollow spindles, which carry the covering-bobbins, as herein described; that is to say, the said hollow spindles, having their axes in line with the axes of their respective strand-spindles, and arranged aronnd the line of the axis of the main or laying spindle, substantially as herein set forth.

2. The combination, with the spindles F and their disks H′, and bobbins H, of the hollow spindles G, and their disks I′ and bobbins I, the latter spindles, disks. and bobbins revolving independently of the former, substantially as and for the purpose herein shown and described.

3. The combination, with the spindles F and G, of the holes, or openings *g g*, arranged substantially as described, in the spindles G, for operation in concert with guiding-pins *f f*, to the yarns or threads from the bobbins, rotated by the spindles G, substantially as described.

4. In a machine for making covered twist, or cord, producing the revolution of the device or devices by which the covering-yarn is put on in a direction the reverse of that of the device or devices which produce the twisting of the yarns of which the strands are formed, whereby the covering or finishing-material is laid on in a converse direction to the twist imparted to the respective strands, substantially as and for the purpose specified.

5. The combination of a revolving laying-up mechanism, three or more spindles, for twisting the several strands together, and the strand-twisting and covering devices, rotating in opposite directions to each other, the whole operating substantially as herein described.

3,346.—GEORGE E. VAN AMRINGE, New York, N. Y.—*Tube for Steam-Generators.*—Patented December 22, 1868, No. 85,149; reissued March 30, 1869.

Claim.—The construction of tubes of steam-generators, substantially as herein set forth.

3,347.—FRANK B. WELLS, for himself, and J. HERVEY COOK, (assignee of one-half of said invention,) Fishkill on the Hudson, N. Y. — *Binding Books.*—Patented October 20, 1868, No. 83,345; reissued March 30, 1869.

Claim.—Mathematical and other books, provided with silicated leaves or sheets, combined therewith, substantially as and for the purpose specified.

3,348.—JAMES ARMSTRONG, Jr., Elmira, Ill.—*Cultivator.*—Patented December 26, 1865, No. 51,680; reissued March 30, 1869.

Claim.—1. Two longitndinal beams or levers C C, extending both in front and in rear of the axle B of a cultivator, and secured rigidly upon said axle, at any required distance on each side of its center, said beams or levers being pivoted or hinged, at their forward ends, to the shovel-carrying frame D D, substantially as described.

2. The beams or levers C C, applied to the axle of a cultivator, and extending both in front and in rear of said axle, so that when their ends are depressed, the shovel-carrying frame is raised, substantially as described.

3 Rigidly securing the draught-pole E to the transverse brace C′ and front brace *b*, of a shovel-carrying frame of a carriage cultivator, when such frame is hinged at its front end, and it, together with the rear end of the draught-pole, and with said braces, rises bodily, as the cultivator-teeth are elevated, substantially as described.

4. Pivoting the inner shovel-standards G G to a transverse brace C′ of a shovel-carrying frame, which is hinged at its front end, and has the draught-pole attached to it, substantially as described.

5. A carriage cultivator, combining, in its organization, two pairs of longitudinal beams, hinged or pivoted together at their front ends, or levers D D, C C, and a driver's seat, located on extensions which are above the axle, in rear of the axle of the transporting-wheels, and in rear of the plows or shovels, substantially as described.

6. The shovel carrying frame D D, with the driver's seat D′ secured to its rear end, said frame being pivoted by its forward end to two levers, which are secured rigidly to the carriage-axle B, and are provided with foot-stirrups *m m*, substantially in the manner and for the purpose described.

7. The movable stepped block *c*, applied to the axle B of a cultivator-carriage, for adjusting the shovel-frame of the cultivator, substantially in the manner herein described.

8. The longitudinally laterally-rocking rods *e e*, in combination with the pivoted cap *d*, applied in a cultivator, substantially in the manner and for the purpose herein described.

9. The compound pivot-joint *e i*, for connecting the shovel-standards G G to their supporting-frame, and allowing the lateral vibration of the standards, as well as permitting the desired adjustment of the same, either to the right or left, substantially in the manner described.

10. Constructing the shovels *s* with an embracing-extension *t*, which is pivoted to the standard, in the manner described and represented, for the purpose set forth.

11. The combination of the shovel-frame D D C′ with the levers C C, vibrating-standards G G, curved levers I I, and treadles H H, substantially as described.

3,349.—C. AULTMAN, Canton, Ohio, assignee, by mesne assignments, of HENRY FISHER.—*Harvester.*—Patented January 26, 1864, No. 41,411; reissued March 30, 1869.

Claim.—1. The combined raking and reeling apparatus, which rotates around a vertical shaft, when its arms adjust themselves successively from a horizontal to a vertical position, and when the combined apparatus is so located that its arms swing on hinges, which are below the highest point of the drive-wheel, and the extent of the sweep of any one of the arms does not interfere with the driver, seated outside of the drive-wheel, substantially as described.

2. The construction and adaptation of a combined rake and reel, which revolves entirely around a vertical center, so that it may be applied to the harvester at a point which is on the inside of the drive-wheel, and below the top of said wheel, substantially as described.

3. Attaching each of the respective arms of the combined rake and reel to a hinge, or pivot, which is on the inner side of the drive-wheel, and below the top of the same, substantially as described.

4. The adaptation of a raking and reeling apparatus combined, which revolves entirely around a vertical center, for application to the inner side of a harvester, at a point below the top of the drive-wheel, substantially as described.

5. The construction of the cam of the combined rake and reel, in the manner described and shown.

6. The crown-wheel, with a series of pivoted rake and reel arms, in the manner described and shown.

7. Attaching the rake-arm to the central head, below the driving-wheel, and in a line tangential instead of radial to the head, so as to cause the rake to pass the cutting-apparatus in a line more nearly parallel thereto.

8. So arranging the arms of a combined revolving raking and reeling apparatus, that the driver can sit on the machine and drive the team, the shaft of the rake and reel being at or nearly at right angles with the grain-platform, and the arms of rake and reel not sweeping over the seat on which the driver is located, so as not to interfere with him, substantially as described.

9. Driving a revolving rake and reel combined, mounted upon a vertical, or nearly vertical pivot, from a pulley on the inner side of the drive-wheel or main axle.

10. The combination of a horizontal miter-wheel, having combined rake and reel arms attached thereto, a vertical miter-spur wheel, and an endless belt, or its equivalent, extending to a pulley on the driving-wheel or shaft.

11. A driver's seat, supported wholly on the outer end of the main drive-wheel axle.

12. In a harvesting-machine, the frame of which has no support outside the main drive-wheel, a driver's seat, mounted on a support which is wholly outside of said wheel.

13. In a harvester, having a revolving rake and reel, a driver's seat, supported by the outer end of the main axle.

14. In combination with the stationary cam M, extending the rake-head back behind its fulcrum, so as to raise and control the rotating rake by the action of the cam-way on its heel, or rear end, substantially as described.

15. In combination with the rake, the curved projection attached thereto, to push the grain down in advance of the rake, and insure its being cut before the rake shall move it on the platform.

3,350. — AURY G. COES, Worcester, Mass. — *Wrench.*—Patented March 6, 1866, No. 52,968; reissued March 30, 1869.

Claim.—1. As a means of sustaining the support or step of the foot of the movable-jaw screw in position, the metal joint or connection, composed of the notch *a* and the ferrule H, with its eccentric lip, or its equivalent, in manner and for the purpose substantially as before explained.

2. The formation and application of the ferrule H, in such manner that it shall serve the twofold purpose of an abutment, to prevent longitudinal movement of the movable-jaw screw, or its step or support, in one direction, and as a protection against fracture or injury to the handle.

3. The combination and arrangement of the ferrule H with the shank C and the handle F, whereby such handle, or its equivalent, serves the purpose of preventing escape of the lip of such ferrule from the groove or notch in the shank, as described.

3,351.—THOMAS DANIELS, Toledo, Ohio.—*Soda-Water Apparatus.*—Patented January 11, 1859, No. 22,549; reissued March 30, 1869.

Claim.—The extension of the sirup and soda, or carbonic-acid-water pipe, through or over the upper part of the refrigerator, or ice-chamber, into the ice-chamber, and the extension of these pipes to, and the coiling them upon, the bottom of the ice-chamber, as described, where they can be conveniently covered with ice, and by that means, and in that manner, cooling their contents, as they pass through such pipes to the place where they are to be discharged for use, and in that way cooling them so near the place, or faucet through which they are to finally discharge for use, as to discharge such contents as nearly as possible as cold as when they leave the ice-chamber.

3,352.—ALFRED B. ELY, Newton, Mass., assignee of FRANCIS D. BALLOU.—*Boot and Shoe.*—Patented July 4, 1865, No. 48,614; reissued March 30, 1869.

Claim.—The new article of manufacture constituting a boot or shoe, made substantially in the manner described.

3,353.—JACOB B. KINGHAM, Dorchester, Mass.—*Nail-Cutting Machine.*—Patented October 11, 1864, No. 44,637; reissued March 30, 1869.

Claim.—1. Combining and arranging the griping-dies G, K, I′, and N, in the manner substantially as described and for the purpose set forth.

2. Combining, with the pivoted die N and stationary die I′, mechanism for vibrating said die N, in the manner described, so that when the nail is freed from pressure, the said die N will be forced under the die I, Fig. 3, and allow the nail to drop out of the machine, as specified.

3,354.—WILLIAM W. LEWIS, Cincinnati, Ohio.—*Machine for Rolling Horseshoe-Iron.* — Patented February 1, 1859, No. 22,812; reissued March 30, 1869.

Claim.—1. The combination, in a pair of rolls, of a groove with an inclined bottom and one or more creasers, for the purpose of guiding the iron, and producing a thicker edge on the outside of the shoe, substantially as described.

2. The combination of a pair of grooved rollers with one or more creasers, when the bottom of the groove or rolling-surface of either roll is eccentric, so as to make the shoes thicker at the heels than at the point or toe, substantially as set forth.

3. The combination, with a pair of rolls, of annular adjustable creasers, substantially as described.

3,355.—LIBERTY LITCHFIELD, FESTUS C. LITCHFIELD, and LIBYA M. LITCHFIELD, Southbridge, Mass., assignees of LYDIA W. LITCHFIELD, administratrix of the estate of LAROY LITCHFIELD.—*Shuttle for Looms.*—Patented May 1, 1855, No. 12,780; reissued March 30, 1869:

Claim.—1. The combination and arrangement of the spring *d* with the shuttle A, the spindle *a*, the joint pin *b*, the arm *c*, and the abutment or stop *h*.

2. The combination and arrangement of the pin *e* and its head *f* with the shuttle A, the spring *d*, the spindle *a*, the joint-pin *b*, the arm *c*, and the abutment or stop *h*.

3. The combination of means of adjusting the stop *h*, in manner as described, with such stop, the arm *c*, the spindle *a*, the pin *b*, and the spring *d*, arranged with the heel and the joint-pin of the spindle, and in the shuttle, as set forth.

3,356.—HORATIO O. PERRY and JOHN L. LAY, Buffalo, N. Y.—*Reciprocating Steam-Engine.*—Patented May 21, 1867, No. 65,003; reissued March 30, 1869.

Claim. — 1. A vertical compound-engine, A B, having a continuous piston-rod, the cylinders being united by a connection, or connections, which form a space between the proximate heads of said cylinders, substantially as set forth.

2. The combination and arrangement of the shell or frame surrounding the intervening chamber K, with the two cylinders, A and B, the bottom plate connected with, or forming the cover of the cylinder B, constructed substantially as herein set forth.

3. The sleeve *h*, or equivalent extension of the cylinder-head, and packing-box L, in combination with the cylinders A B, arranged and operating substantially as set forth.

4. In combination with the two cylinders, A and B, and chamber K, arranged as described, the removable section forming the main-hole I, whereby access is had to the interior of the lower cylinder, substantially as herein set forth.

5. So combining and arranging the two cylinders, A and B, where a continuous piston-rod is employed, that both cylinders may be packed around said rod, by the use of a single stuffing-box, in a space intervening between the two cylinders, substantially as described, or other equivalent means.

6. So constructing the frame, shell, or casting K, that while it serves the purpose of connecting the two cylinders, and sustaining one upon the other, it shall also serve as a head, or cover, for the proximate ends of one or both cylinders, substantially as shown and described.

7. The sustaining part K, or its equivalent, surrounding the piston-rod, between the proximate heads of the two cylinders, said portion acting as the support of the upper cylinder, and dispensing with any extraneous frame for the purpose, and thereby forming a compact arrangement and construction for a marine engine, substantially as set forth.

3,357.—JAMES S. ATTERBURY and THOMAS B. ATTERBURY, Pittsburgh, Pa. — *Manufacture of Glass-Ware.* — Patented March 3, 1868, No. 75,110; reissued April 6, 1869.

Claim. — 1. As a new article of manufacture, a glass ewer-mouthed pitcher or vessel, having its upper part at least blown in a mold, so that the edge or rim may be of such definite curved shape as that a metallic cap or cover, of a corresponding curved shape, shutting down upon the naked glass, may fit it exactly.

2. The mode, hereinbefore described, of perforating glass vessels for riveting covers thereto.

3. Making ewer-mouthed glass pitchers or vessels by blowing the upper or rim portion at least in a mold, and attaching metallic covers thereto in such manner as that the cover may fit closely to the naked glass rim, substantially as described.

3,358.— GEORGE CARLETON CASSARD, Baltimore, Md., (L. and J. L. CASSARD, assignees of GEORGE CARLETON CASSARD.)—*Lard-Cooler.*—Patented June 16, 1868, No. 78,925; reissued April 6, 1869.

Claim.—1. The central lard-discharge D, when used in a lard-cooler, substantially as and for the purpose set forth.

2. The scrapers R R, springs *s s*, arms P P, (supporting them,) or their equivalents, for the purpose specified.

3. The combination of the cylindrical tank C, inclosed in the tank B, or other suitable arrangement to form the interval F, for the purpose specified, with the vertical (hollow or solid) shaft I, whose bearings shall be above said tank or its contents, all substantially as set forth.

4. The combination of the shaft I, the fixed slats *n n*, and the movable slats *m m*, supported by and rotated with the shaft and its arms, and meshing between the fixed slats, when said parts are employed in connection with the vessel C and tank B, having the interval F, as described.

5. The central discharge, in combination with the funnel-shape bottom of tank C, or its equivalent, not restricting myself to either shape or material in construction, but all substantially as described, and for the purpose specified.

3,359.— JOHN DEGNON, Cleveland, Ohio.—*Governor.*—Patented August 7, 1866, No. 56,908; reissued April 6, 1869.

Claim.—1. The combination of the cylinder A and the propeller B, with the throttle-valve of a steam-engine, and the intermediate devices, substantially as herein set forth.

2. The combination of the cylinder A and the propeller B, with an arrangement of devices, whereby to transmit motion, and communicate changes of the said wheel to the throttle-valve of a steam-engine, as herein stated.

3. The combination of the propeller B, revolving in water in the cylinder A, the spindle C, and rack D, applied with the toothed segment E, attached to the spindle *d*, operated through the medium of the gearing *a b*, substantially in the manner represented and described.

3,360.—JASON B. LOOMIS, Chelsea, Mass., assignee, by mesne assignments, of SAMUEL S. SHERWOOD, New York, N. Y.—*Skeleton-Skirt.*—Patented June 26, 1860, No. 28,941; reissued April 6, 1869.

Claim.—1. The combination, with hoops of a skeleton-skirt, of a tape, braid, or equivalent, extending from hoop to hoop, and sewn through the covering of the hoops, substantially as hereinbefore set forth.

2. The combination, with hoops of a skeleton-skirt, of a tape, braid, or its equivalent, extending from hoop to hoop, and sewn through the covering of the hoop, and returned over the hoop, substantially as hereinbefore set forth.

3. The combination, with hoops of a skeleton-skirt, of a tape, braid, or equivalent, extending from hoop to hoop, and sewn through the covering of the hoop, and through the tapes or vertical support, substantially as hereinbefore set forth.

4. The combination, with hoops of a skeleton-skirt, of a tape, braid, or equivalent, extending from hoop to hoop, and sewn through the covering of the hoop returned over the hoop, and sewn through the tapes or vertical support, substantially as hereinbefore set forth.

3,361.— ALBERTO PAGENSTECHER, Curtisville, Mass., assignee of HENRY VOELTER. — *Reducing Wood-Fibers to Paper-Pulp.*—Patented August 10, 1858, No. 21,161; antedated August 29, 1856; reissued April 6, 1869.

Claim.—1. Placing the blocks of wood to be reduced with their fibers running parallel to the axis of the stone, or transversely to its face, substantially in the manner shown and described.

2. The arrangement of two or more blocks on the circumference of one and the same stone, one block behind the other, so that the fibers torn off, by the action of the stone, from the first block, will be carried under the succeeding block, and again exposed to the grinding-action of the stone, as set forth.

3. The automatic feed-motion, constructed of screw-spindles R, followers P, and jaws Z, in combination with the stone A, substantially as shown and described.

4. The pulleys T and ratchet-wheels *a*, in combination with the jaws Z, screw-spindles R, followers P, and stone A, substantially as described.

5. The separating-mechanism, consisting of a series of perforated and rotating cylinders, in combination with the separating-rollers, channels, and troughs, substantially as shown and described.

3,362.—DAVID S. QUIMBY and DAVID S. QUIMBY, Jr., Brooklyn, N. Y, assignees of STEPHEN R. GOING.—*Cooking-Stove.*—Patented June 17, 1862, No. 35,658; reissued April 6, 1869.

Claim.—1. A draught-regulator, applied in the oven-flue, near where the products of combustion pass away from under the oven, substantially as and for the purposes set forth.

2. In combination with an oven, and the flues thereof, a draught-regulator, formed of a range of holes that are larger at the front than toward the back of the oven, substantially as and for the purposes set forth.

3. A sliding damper, formed with holes decreasing from the front of the range toward the back, and applied in the flue that passes below the oven, substantially as set forth.

3,363.—JOHN E. VAN WINKLE, Paterson, N. J. —*Machine for Opening and Cleaning Cotton.*—Patented June 2, 1863, No. 38,794; reissued April 6, 1869.

Claim.—1. The combination of the apron I and fan H, with the parallel-toothed shafts C C′, *a a*, grid or grating D, and feed-aperture *g*, when the said parts are arranged as herein set forth, to cause the cotton to traverse the beaters longitudinally of the shafts C C′, in passing from the feed-aperture *g* to the apron I.

2. The combination of the oblique-deflecting ribs *w*, with the feed-aperture *g*, longitudinally-operating beaters C C′ *a*, carrying-apron I, and fan H, all arranged in the manner and for the purposes herein set forth.

3. The opening or openings *e*, for the admission of air at the feeding-end of the machine, beneath the grid or grating D, in the described combination with the said grid, or grating, and with longitudinally-operating beaters C C′ *a*, carrying-apron I, and fan H, all arranged and operating as set forth.

4. The eccentric Q, ratchet-wheel *c*, and pawl *d*, or their equivalents, employed in the described combination, with the beaters C C′ *a*, and grating D, to adjust the latter in its distance from the former.

5. The suction-fan H, communicating with the interior of the rotary screen F, in the manner and for the purposes specified, when used in combination with toothed beaters C C′ *a*, and apron I, arranged and operated as set forth.

6. The combination, with the suction-fan H and carrying-apron I, of the roller L and door S, to the end of the box E, through which the cotton is discharged, said roller and door being hung, or arranged so as to be capable of rising and falling, or of adjusting themselves relatively to the apron I, and cotton lying thereon, as it passes under the roller, substantially as and for the purpose or purposes herein set forth.

3,364.— WILLIAM BAXTER, Newark, N. J. — *Steam-Engine-Valve Device.*—Patented October 27, 1868, No. 83,444; reissued April 13, 1869.

Claim.—1. The method herein described of controlling the throw of a steam-valve by interposing between the moving cam and the valve a resisting medium, the action of which on the valve increases or decreases in proportion to the speed of the engine, substantially as and for the purposes described.

2. The combination, with the valve and its moving cam, or eccentric, of the regulating-barrel and piston, interposed between said cam and valve, and connecting the divided valve-rod, substantially in the manner specified.

3. The regulating piston and the barrel for containing the resisting-medium, provided with a channel connecting its ends, with or without an adjusting or

regulating valve, in combination with the valve and its moving cam and connecting-rod, substantially as and for the purposes set forth.

4. The combination, with the steam-cylinder, located within the boiler, or steam-space, or chamber connected therewith, of a wholly uncovered or open valve, also located within said boiler or steam-chamber, sliding on open steam-admission ports, and held or pressed against the valve seat by the pressure of steam alone, without the aid of any mechanical device applied for that purpose, substantially as set forth.

5. The arrangement, herein shown and described, of the cut-off-valve rod and main valve rod, so that the one shall pass through the other, or so that both shall have a common axis, for the purposes set forth.

6. The arrangement of a portable engine, built upon the flange of the steam-cylinder, which at once forms the bed-plate of said engine and the cover of the boiler or steam-space connected therewith, substantially as herein described, whereby the whole may be bodily applied to or removed from the boiler, as set forth.

3,365.—W. A. IVES, New Haven, Conn.—*Hollow Auger.*—Patented October 13, 1868, No. 82,957; reissued April 13, 1869.

Claim.—The circular stock A, having the slot B across its face, in combination with the screw D, adjustable dies, or knife-holders C C, and set-screws *f f*, when constructed and operated substantially as and for the purpose described and set forth.

3,366.—EBENEZER G. LAMSON, Shelburne Falls, Mass.—*Rock-Channeling Machine.*—Patented October 2, 1866, No. 58,435; reissued April 13, 1869.

Claim.—1. The combination of cutting-instruments, for working in or on stone, with the crank-wheel attached to driving-shaft, or otherwise, and an interposed spring, or its equivalent, so as to raise and lower the mechanism, substantially as described.

2. In combination with the stone-cutting machine herein described, which is moved along upon a track, or way or ways, whilst operating upon the rock or stone, the reversible pawl and the worm-gear and clutch, so as to enable the movement of the whole machine along in either direction upon the track, or stop it at will, during the continuous action of the cutters, substantially as described.

3. The interposition of a bow-spring, or other elastic or yielding device, between the cutters or drills, and the operating-mechanism of a stone-channeling drilling, or grooving machine, substantially for the purposes set forth.

4. The combination of the bow-spring, or its equivalent, and the eccentric feed, with worm-gear, when operated upon wheels which run on a track, the friction of which moves the machine along either way, upon the track, substantially as herein set forth.

5. The combination, in a stone drilling, grooving, or channeling machine, of an elastic or yielding instrument, of any construction, and a wrist-pin, or other device, which gives a positive movement to said elastic instrument, which is connected with drills, or cutters, substantially as set forth.

6. A stone-grooving, drilling, or channeling machine, that is provided with a mechanism which will assist in extracting the drills, or cutters from the rock, assist in elevating the same on their upward movement, and add to their velocity or stroke on or into the stone, substantially as and for the purposes described.

7. The adjustable crank-pins *a a* in the cranks M M, whereby the stroke of the drills may be increased or diminished, substantially as described.

8. In combination with a stone-drilling or cutting apparatus, that is moved upon a track, a friction or equivalent clutch, operated by a lever connected to the axle of the carriage, whereby the machine may be allowed to propel along or stop, substantially as set forth.

9. Reciprocating channeling-chisels, applied to opposite sides of a carriage-bed, and driven by a crank-shaft and connecting-arm, said shaft receiving its motions from an engine which is mounted upon said carriage-bed, substantially as described.

3,367.—E. G. LAMSON, Windsor, Vt., assignee of GEORGE W. BISHOP. — *Stone-Channeling Machine.*—Patented January 27, 1857, No. 16,460; reissued April 13, 1869.

Claim. — 1. A stone-grooving machine, upon a frame, which carries an engine, and a boiler, and a stone-channeling or grooving apparatus, with reciprocating cutters operating in connection with the frame, substantially in the manner specified.

2. A frame which carries an engine, and boiler, and a drilling, grooving, or cutting apparatus, when provided with a worm and spiral gear, for the purpose of giving motion to said frame, upon any suitable track or way, by means of friction, substantially as herein specified.

3. Propelling a stone-grooving or cutting machine, or a frame of a drilling, cutting, or grooving machine, by means of a worm, spiral, and bevel gears, which operate upon the wheels of axles which support or carry said frame substantially as specified.

4. A series of vertical inclined chisels, of different lengths, placed, one behind the other, in combination with a revolving hammer or cam, as described, whereby a positive motion is given to all the chisels, from a single hammer or cam for each series of chisels, substantially as set forth.

5. The combination of a feed-mechanism, a stone-channeling or grooving machine, and a steam-engine, all operating substantially as and for the purposes set forth.

6. The combination of wheels having plane surfaces, and which move upon a track having a plane surface, with the frame and propelling-mechanism for drilling, channeling, or cutting stone, whereby I am enabled to feed the machine without too positive a movement, substantially as and for the purposes specified.

3,368.—E. G. LAMSON, Windsor, Vt., assignee of WILLIAM PLUMER.—(Division A.) *Rock-Channeling Machine.*—Patented October 6, 1857, No. 18,352; reissued April 13, 1869.

Claim.—1. Feeding the cutter laterally in a direction at right angles to the cut, or nearly so, whether the cutting-tool be situated horizontally, vertically, or at any angle, by the devices herein described, or their equivalents, so arranged that the cutter or drill can be turned at right angles to the straight track of the machine, and also the requisite feeding motion be obtained, as set forth.

2. The slotted arms *c' d'* and *e' f'*, so arranged and constructed as to permit the whole cutting-apparatus to be turned at right angles to the cut, and to communicate, when fastened together, the lateral feeding motion to the frame *r r*.

3. The arrangement of devices herein described, whereby I am enabled to feed the cutter, working vertically, in a circular direction, and set the cutter at any desired distance from the center upon which the machine turns, by which blocks or pillars of any desired diameter can be cut out, as set forth.

4. A stone-cutting or channeling machine, which moves upon a straight track, mounted upon a circular track, the standards supporting the drill or drills resting upon a turning plate, all so constructed that the drill or drills may be operated on either side of the straight track in circular lines, or fed forward in parallel lines, substantially as set forth.

5. The arrangement, under a stone-drilling machine, substantially as herein set forth, of flanged rollers for keeping the frame and mechanism in place upon the track, substantially as specified.

3,369.—E. G. LAMSON, Windsor, Vt., assignee of WILLIAM PLUMEE—(Division B.) *Rock-Channeling Machine.*—Patented October 6, 1857, No. 18,352; reissued April 13, 1869.

Claim.—1. A stone-channeling or grooving machine, which is constructed to move upon a track, and provided with a reciprocating cutter or cutters, so arranged as to cut seams or grooves outside of frame and track, and in a line with the track, substantially as herein set forth.

2. A stone-channeling or grooving machine, which is constructed to move upon a straight track, which is provided with reciprocating cutters, which are arranged to cut seams or grooves between the tracks or ways, in the manner set forth.

3. A stone-channeling or grooving machine,

which runs upon a track, and which is provided with a cutter or cutters, attached to a cutter-holder, which cutter-holder moves freely on standard guides, the holders being operated upon suitable mechanism for raising the cutter or cutters, substantially as set forth.

4. The arrangement of the cuttter-holders with cutter or cutters, attached to slide freely on standard guides, confined to a frame or plate, which is hung on trunnions, substantially as and for the purposes set forth.

5. A stone-cutting or grooving machine, with chisels or drills, that are operated upon a frame and track, when said frame is supported upon trunnions, and held by adjustable braces, for giving the cutting-instruments any desired angle, substantially as herein set forth.

6. In combination with a stone-grooving or channeling machine, a horizontal rack-bar, placed either in the inner or outer surface of the track, and a pinion, attached to the mechanism of the machine, whereby the same is fed along, substantially for the purposes set forth.

7. Operating the feed-mechanism, as well as the cutting-mechanism of a stone-grooving or channeling machine, by a crank-shaft and eccentric, or equivalent device, substantially as set forth.

8. In a stone-grooving, drilling, or channeling machine, that is moved along upon a track, or way, a double acting pawl, acting upon a ratchet, or their respective equivalents, whereby the pinion is caused to feed into the rack-bar on the track, substantially as set forth.

9. A slotted arm, lever, or elbow, or their equivalents, connected with the feed-mechanism of a stone-drilling, cutting, or channeling machine, whereby I may regulate the progress of the machine, and its cutters on the stone, so as to feed the mechanism faster or slower while the cutters are operating, substantially by the means and for the purposes specified.

10. The hanging frame E′, which carries the cutters on trunnions, and the adjustable brace Y, or its equivalent, for the purpose of giving any desired angle to the cutters, substantially as set forth and described.

11. Giving a forward or backward movement to the stone-cutting machine at pleasure, and simultaneously with the upward stroke of the reciprocating cutters, and confining said machine positively in position upon its track, during the descending stroke of the said cutters, substantially by the means as herein set forth.

12. The employment of an air-cylinder, in a stone-cutting or channeling machine, for the purpose of assisting the force of the cutter or cutters on their descent to the stone, substantially as set forth.

13. The upright screw-shaft Q, arranged upon the frame E′, for the purpose of feeding down the frame H and the cutting-mechanism, substantially as specified.

14. The vertical screw-rods O′ O′, between the standards D D, on each side of the plate C′ for the purpose of allowing the frame E′, which is supported upon trunnions, to be raised or lowered between the standards, and set at any desired angle by the braces Y Y, or their equivalents, and stationed in position, substantially as herein specified.

3,370.—JOHN I. MONROE, Woburn, Mass.—*Horse-Rake.*—Patented March 19, 1867, No. 63,079; reissued April 13, 1869.

Claim.—1. The combination of the elastic tip G with the rigid descending bar e^2 of teeth E, substantially in the manner as described and shown.

2. The divider, as constructed with the head M, teeth L, bar K, spring, N, and bars J, substantially as described and shown.

3. So connecting the divider-head M with the divider, by means of spring N, or its equivalent, as that it shall have an independent yielding or vibratory motion, for passing obstacles, substantially as described and shown.

3,371.—FREDERICK NISHWITZ, Brooklyn, N. Y.—(Division A.) *Harvester.*—Patented February 16, 1858, No. 19,377; reissued March 5, 1861, No. 44; reissued April 13, 1869.

Claim.—1. The combination, in a two-wheeled front-cut harvester, of a tongue, or draught-frame, vibrating about a gear-center, with a frame vibrating about a gear-center, and a laterally-projecting cutting-apparatus, secured by one end only, to the inner front corner of the vibrating frame, the combination being and operating substantially as set forth.

2. The combination, in a two-wheeled front-cut harvester, of a tongue, or draught-frame, vibrating about a gear-center, a frame carrying a countershaft and a crank-shaft, and vibrating about a gear-center, and a laterally projecting cutting-apparatus, connected with the gear-frame at one end only, substantially as set forth.

3. The combination, in a front-cut harvester, of two wheels, a main frame arranged between the wheels, a laterally-projecting cutting-apparatus, secured to the frame at one end only, a vibrating tongue, or draught-frame, and a lifting hand-lever, and cord or chain operated by the driver, substantially as set forth.

4. The combination of a vibrating tongue, a vibrating gear-frame, a lifting-lever, a cord, or chain and pawl, with a tripping-lever operated by the driver's foot, substantially as set forth.

5. The combination, substantially as set forth, of two wheels, a tongue, or draught-frame secured directly to the axle of said wheels, a main frame arranged between the wheels, projecting beyond their peripheries at either end, and vibrating about the main axle, a laterally-projecting cutting-apparatus, connected with the gearing-frame at one end only, and a lifting-lever and cord, or chain.

3,372.—FREDERICK NISHWITZ, Brooklyn, N. Y.—(Division B.) *Harvester.*—Patented February 16, 1858, No. 19,377; reissued March 5, 1861, No. 44; reissued April 13, 1869.

Claim.—1. The combination, as set forth, of an adjustable lever, directly connected with the tongue, or draught-frame, with the laterally-projecting cutting-apparatus, for the purpose specified.

2. The combination with the tongue, or draught-frame, attached at its rear end, near the center of the machine, of the lever, the chain or cord, and the frame, carrying the cutting-apparatus, as and for the purpose set forth.

3. The combination, with the lever attached to the tongue, or draught-frame, of the pawl and treadle, operating as set forth.

4. The combination, with the lever, pawl, and treadle, of an adjustable stop, substantially as set forth.

3,373.—JOHN S. ROWELL and IRA ROWELL, Beaver Dam, Wis., assignees of JOHN S. ROWELL and MICHAEL F. LOWTH, same place.—*Seeding-Machine.*—Patented October 14, 1862, No. 36,672; reissued April 13, 1869.

Claim.—1. The triangular openings *d*, and groove *e*, in the cap I, in combination with the seed-cylinders H, when arranged to operate in the manner and for the purpose specified.

2. Broadly, the brace M, constructed and arranged so to clamp the shank K that it will retain its position when the shovel J is used in tillable soil, yet hold it in such a manner that it will loosen its hold on the shank, and allow it to swing back on the pivot *k*, when the shovel meets with obstructions, as specified.

3. The combination of the forked or friction-brace M, with the pivot *k* for connecting the shanks K, and consequently, the cultivator-teeth J to their drag-bars L, substantially as described.

3,374.—TALIAFERRO P. SHAFFNER, Louisville, Ky.—(Division A.) *Method of Blasting with Nitroleum*—Patented December 18, 1866, No. 60,573; reissued April 13, 1869.

Claim.—The use of nitro-glycerine and silicious matter mixed together, for blasting or military purposes, in the manner substantially as and for the purposes described.

3,375.—TALIAFERRO P. SHAFFNER, Louisville, Ky.—(Division B.) *Method of Blasting with Nitroleum.*—Patented December 18, 1866, No. 60,573; reissued April 13, 1869.

Claim.—1. For blasting-purposes, the use and interposition of a column of water between the "tamping" and "blasting" charges, when the same are arranged in the manner and for the purposes described.

2. As a method of blasting in rock, the adjustment and arrangements of the "tamping" and "blasting" charges, in such manner that the former shall be placed at or near the surface, or upper part of the drill-hole, while the latter is located at the bottom thereof, or in such a manner as that the gases of the two charges may be united, disrupting the rock in the manner and for the purposes hereinbefore described.

3,376.—J. B. Slawson, New York, N. Y. assignee, by mesne assignments, of W. H. McLellan. —*Fare-Boxes for Cars, &c.*—Patented April 16, 1867, No. 63,804; reissued April 13, 1869.

Claim.—1. The arrangement of the metallic screens upon opposite sides of the box, with reference to the tilt C, whereby the fare can be clearly seen and inspected by both the driver and passengers, or either, as herein described, for the purpose specified.

2. The combination of the knob F with the lever A and gate B, all made and operating substantially as set forth, so that the gate will be self-closing, as specified.

3. The device, herein described, for enabling the driver to close the box, consisting of the lever J and arm *q*, operating in combination with the pusher F, as specified.

4. The combination, in fare-box, of the knob or pusher F, lever A, tilts B C, and slide D, all made and operating substantially as herein shown and described.

3,377.—The United States Blasting-Oil Company, New York, N. Y., assignees of Alfred Nobel.—(Division A.) *Mode of Exploding Nitro-Glycerine.*—Patented October 24, 1865, No. 50,617; reissued April 13, 1869.

Claim.—Subjecting nitro-glycerine to the influence of confinement, combined with such degree of pressure, or heat, and pressure, however produced, as to result in the decomposition and explosion of the nitro-glycerine, substantially as hereinbefore described.

3,378.—The United States Blasting-Oil Company, New York, N. Y., assignees of Alfred Nobel.—(Division B.) *Device for Exploding Nitro-Glycerine.*—Patented October 24, 1865, No. 50,617; reissued April 13, 1869.

Claim.—1. The decomposition or explosion of nitro-glycerine when under confinement, as hereinbefore described, by means of heat generated within the mass of nitro-glycerine through the agency of an electric spark, or of a voltaic, magnetic-electric, or static-electric current, however generated, substantially as and for the purposes hereinbefore set forth.

2. The decomposition or explosion of nitro-glycerine, when under restraint or confinement, as hereinbefore described, by the evolution or generation of heated gas or gases, and the consequent production of heat and pressure within or upon the fluid mass of nitro-glycerine, by means of the explosion of gunpowder or their equivalent explosive or fulminating substance under or upon the surface of the nitro glycerine, substantially as and for the purposes hereinbefore set forth.

3. The use and application of the plug of wood, metal, or other suitable material, for holding or containing gunpowder, or other explosive substance, within, upon, or near to the fluid mass of confined nitro-glycerine, together with the parts and arrangements of such plug, in the manner and substantially as hereinbefore described.

4. The application and use of a percussion-cap, fitted to a train, or other fuse used for conducting fire, when used in connection with nitro-glycerine so that the said cap, evolving on its explosion the required heated gases, or the forces of percussion or concussion, shall decompose or explode nitro glycerine, when under confinement, in the manner and substantially as hereinbefore described.

5. The application and use, within the fluid mass of nitro-glycerine, subjected to confinement as hereinbefore described, of lime and water, or other substances which will, on combining under similar circumstances, generate a sufficient degree of heat, for the purpose of decomposing or exploding nitro glycerine by means of heat generated within it, substantially as hereinbefore described.

3,379.—The United States Blasting Oil Company, New York, N. Y., assignees of Alfred Nobel. —(Division C.) *Mode of Manufacturing Nitro-Glycerine.*—Patented October 24, 1865, No. 50,617; reissued April 13, 1869.

Claim.—Making nitro-glycerine (being a mixture of glycerine with nitric and sulphuric acids) by pouring together, into a funnel or other suitable receptacle, separate streams of glycerine and of those acids, and discharging the mixture therefrom into a body of cold water, maintained at low temperature, by any suitable means.

3,380.—The United States Blasting-Oil Company, New York, N. Y., assignees of Alfred Nobel.—(Division D.) *Use of Nitro-Glycerine.*—Patented October 24, 1865, No. 50,617; reissued April 13, 1869.

Claim.—The application and use of nitro-glycerine, simple or compounded, as an explosive for blasting, or for disrupting purposes, in the manner, and substantially as hereinbefore described.

3,381.—The United States Blasting Oil Company, New York, N. Y., assignees of Alfred Nobel. —(Division 1.) *Manufacture of Nitrine or Crystallizing Nitro Glycerine.*—Patented August 14, 1866, No. 57,175; reissued April 2, 1867, No. 2,538; reissued April 13, 1869.

Claim.—The mode or process, substantially as hereinbefore described, of mixing together glycerine, sulphuric acid, and nitric acid, free or nearly free from hyponitric acid, in the production, as a new article of manufacture, of nitrine, or crystallizing nitro-glycerine.

3,382.—The United States Blasting-Oil Company, New York, N. Y., assignees of Alfred Nobel. —(Division 2.) *Process of Manufacturing Nitro-Glycerine.*—Patented August 14, 1866, No. 57,175; reissued April 2, 1867, No. 2,538; reissued April 13, 1869.

Claim.—The combination and use of the vessel or tank A A, the worm F F, the dasher G H, for the purpose of containing, cooling, and agitating the acids and glycerine in the process of making and compounding nitro glycerine, in the manner substantially as hereinbefore described.

3,383.—Elijah Young, Fayetteville, Mo.—*Seed-Planter.*—Patented June 26, 1860, No. 28,936; reissued April 13, 1869.

Claim.—The seed-boxes E-F and their dropping-disks I-H, and delivery-tubes D-*c*, when combined and arranged as and for the purpose set forth.

3,384.—William Baxter, Newark, N. J.—*Steam-Generator.*—Patented October 27, 1868, No. 83,445; reissued April 20, 1869.

Claim.—1. A steam-generator, the fire-box of which is provided with descending flues or fire-tubes, passing from the upper combustion-chamber, through the water-space, and communicating with a jacket surrounding said water-space, and extending up to the water-line of the boiler, or thereabouts, so as to leave uncovered the dome, in which the steam-cylinder is contained and held, substantially as herein shown and specified.

2. The construction and arrangement, in connection with the boiler or steam-space, or chamber connected therewith, of the upper flange of the steam-cylinder, so that it shall form the top or cover of said boiler or chamber, in which the cylinder is suspended and held, as herein described.

3,385.—A. Milton Blake, Canton, Ohio.—*Spring-Chair.*—Patented April 28, 1868, No. 77,161; reissued April 20, 1869.

Claim.—1. The combination of the chair-leg C, socket or spindle D E, and conical spiral spring F, the several parts being arranged substantially as and for the purpose herein specified.

2. The combination of the chair-leg C, socket or spindle D E, conical spiral spring F, and foot plate G, the several parts being arranged substantially as and for the purpose specified.

3,386.—Francis W. Carruth, Boston, and Everett P. Richardson, Lawrence, Mass., assignees, by mesne assignments, of Henry Dunham, Jr.—*Machine for Sewing Boots and Shoes.*—Patented September 9, 1862, No. 36,396; reissued December 16, 1862, No. 1,363; reissued April 20, 1869.

Claim.—1. The last-holder B, and supporting-plate D, when so combined with a sewing-mechanism that their distance from the said sewing-mechanism can be varied to suit irregularities in the work.

2. In combination with a last-carrier, supported substantially as described, so that its distance from the sewing-mechanism may be varied, a feed-movement acting through the said last-carrier, as set forth.

3. In combination with a mechanism for sewing boots and shoes, the last A having a concave bottom, substantially as described.

4. In combination with a mechanism for sewing boots and shoes, a last, having the edge *a* chamfered so as to form a defined ridge or angle on the bottom thereof, as and for the purpose described.

5. The guide, or bearing H, when constructed with two bearing-faces or surfaces, against which the work may be pressed, so that the upper will be bent or held around the edge of the sole, substantially as described.

6. The combination of the guides or gauges H and I, bearing against the same side or face of the work, for the purpose of regulating the entrance and exit of the needle, or other piercing-instrument, and the distance of the stitches from the edge of the sole.

7. The curved needle N, when constructed with a hook upon its side or flank, substantially as described.

8. The combination of the curved needle N and the cast-off P, constructed and operating substantially as and for the purposes stated.

9. The combination of the curved awl O and curved hooked needle N, substantially as described.

3,387.—Francis W. Carruth, Boston, and Everett P. Richardson, Lawrence, Mass., assignees of Henry Dunham, Jr.—*Sewed Boot and Shoe.*—Patented October 17, 1865, No. 50,462; reissued April 20, 1869.

Claim.—1. A machine-made boot or shoe, having its upper connected to the sole by chain-stitches, which pass only partially through the thickness of the sole, and the chain or loops of which are concealed, or embedded, or received within a channel in the sole.

2. A boot or shoe whose upper is connected to the sole by chain-stitches, which dip into the sole without passing through its entire thickness, and are curved in planes transverse to the seam.

3,388.—Jarvis Case, La Fayette, Ind.—*Corn-Planter.*—Patented December 1, 1857, No. 18,730; reissued April 20, 1869.

Claim.—1. The runners D, in combination with the valves *g* and the spreaders *n*, arranged to operate substantially as described.

2. The combination of the hoppers with the slides J, the seed-ducts, with their valves *g*, and the spreaders *n*, arranged to operate substantially as set forth.

3. The combination, in a corn-planter, of the seat H, located in rear of the hoppers, the slides J, operated by the handle M and rock-shaft K, and the valves *g*, substantially as herein described.

4. The combination of the runner D, seed-ducts *d*, and spreader *n*, when arranged to operate substantially as described.

5. The combination of the rock-shaft K, with its arms *f*, and treadle, or foot-lever L, for operating the seed-slides, substantially as described.

6. The arrangement of the indicators *m*, substantially as described, to enable the operator, located on the seat H, to know when to operate the seed-slides, as set forth.

7. So combining, with the operator's seat H, a marker, having, in its arm, a hinged brace, or its equivalent, as that the operator may, from his seat, turn over or reverse said marker, suspend it upon the machine while turning around, and drop it into its working-position, without leaving his seat on the machine, as herein set forth.

8. The combination of the seat H, lever M, slides J, valves *g*, and runners D, when arranged to operate substantially as described.

9. The combination of the seat H, lever M, slides J, valves *g*, spreaders *n*, and runners D, arranged to operate substantially as described.

3,389.—Charles R. Cook, Buffalo, N. Y., assignee of Hiram R. Lavey.—*Harvester.*—Patented May 1, 1866, No. 54,374; reissued April 20, 1869.

Claim.—1. The combination of two spur-driving gears, of unequal size, with two corresponding pinions, for changing the speed of the cutters.

2. So combining two driving-gears, of unequal size, and two pinions meshing therewith, that the speed of vibration of the cutters may be changed without throwing said gears out of mesh.

3. Two gear-wheels or pinions on one shaft, either of which may be clutched to or unclutched from said shaft, for changing the speed of vibration of the cutters, substantially as described.

3,390.—W. N. Ely, Stratford, Conn., assignee, by mesne assignments, of Francis D. Ballou.—*Manufacture of Sewed Boots and Shoes.*—Patented January 10, 1860, No. 26,808; reissued April 20, 1869.

Claim.—1. The combination of the welt and upper with a series of waxed-thread stitches uniting the two, when the same is accomplished by means of a hook-needle waxed-thread sewing-machine, substantially as described.

2. The combination of the welt and sole with a series of waxed-thread stitches uniting the two, when the same is accomplished by means of a hook-needle waxed-thread sewing-machine, substantially as described.

3,391.—Eldridge M. Fowler, Bay City, Mich., assignee of John W. Thompson.—(Division A.) *Mowing-Machine.*—Patented July 15, 1856, No. 15,354; reissued April 20, 1869.

Claim.—1. The combination, substantially as set forth, in a mowing-machine, of a main frame, oscillating on a main axle, and a cutting-apparatus, in rear of said axle, and freely vibratable about an axis, in front of said axle, coincident with the axis of rotation of the counter-shaft.

2. The combination, substantially as set forth, of a cutting-apparatus with a coupling-frame, vibrating about an axis coincident with a counter-shaft having its bearings in pendants from the main frame and in front of the main axle.

3. The combination, substantially as set forth, of a rigid tongue, a main frame, oscillating on a main axle, a counter-shaft, turning in pendants below the main frame, in front of the main axle, and a shaft for reciprocating the cutters, driven from said counter-shaft, and vibratable freely with the cutting-apparatus around an axis coincident with said counter-shaft, independently of the main frame.

4. The combination, substantially as set forth, of a cutting-apparatus, vibratable vertically about an axis coincident with a gear-shaft in front of the main axle, with a shaft for reciprocating the cutters crossing the main axle, and vibrating with the cutting-apparatus.

5. The combination, substantially as set forth, of a separating-divider, supported from the main frame, with a vertically vibratable coupling-arm.

3,392.—Randolph Hayden and James C. Ferree, Middletown, Conn., assignees of Horace Vansands, same place.—*Blind-Fastening.*—Patented May 5, 1857, No. 17 243; reissued April 20, 1869.

Claim.—1. The two-part case, having a screw surface, in combination with the hook A, as a new and useful improvement in the manufacture of blind or shutter fastenings, substantially as described.

2. The recess or slots C D, formed in a two-part shell of a blind or shutter-fastener case, substantially as and for the purpose described.

3. In a blind or shutter fastener, a two-part cylindrical case, in combination with an actuating-spring

and hook A, substantially as and for the purpose described.

4. In a blind or shutter-fastener, a cylindrical case, in combination with a hook-fastening which oscillates upon an axis-pin, with an actuating spring.

3,393. — JAMES I. HENDRYX, Cooperstown, N. Y., assignee, by mesne assignments, of CHARLES CROOK.—(Division A.) *Harvester.*—Patented May 5, 1857, No. 17,205; reissued May 4, 1858, No. 548; reissued April 20, 1869.

Claim.—1. Two driving-gears, of unequal size or diameters, for changing the rapidity of vibration of the cutters.

2. A concentric arrangement of two driving-gears of unequal size, for changing the rapidity of vibration of the cutters.

3,394. —JAMES I. HENDRYX, Cooperstown, N. Y., assignee, by mesne assignments, of CHARLES CROOK.—(Division B.) *Harvester.*—Patented May 5, 1857, No. 17,205; reissued May 4, 1858, No. 548; reissued April 20, 1869.

Claim.—1. A lifting-segment, or cam, with lever and chain or cord attached thereto, for raising and lowering the cutting-apparatus.

2. A lifting-segment, or cam, with lever and chain, in combination with ratcheted teeth, and a pawl, or its equivalent, for holding the cutting-apparatus at any desired height.

3,395.—SAMUEL WARREN HENLON, Selma, Ala. —*Suspender.*—Patented December 1, 1868, No. 84,669; antedated June 1, 1868; reissued April 20, 1869.

Claim.—1. A suspender for garments, made of straps that diverge from the buttoning-loops at each side, so as to pass up and over the shoulder, and across the back, substantially as set forth.

2. A suspender for garments, made of straps, that diverge from the buttoning-loops to pass up and over the shoulder, and across the back, to the opposite point of attachment near the hips, in combination with a loop applied at the point of intersection of the straps at the back, substantially as specified.

3. A suspender formed of two straps, each of which diverges from the point of attachment near the hips, on the one side, so as to pass toward the back and over the shoulder to the point of attachment on the other side, and provided with an adjustment, applied to the front straps, substantially as specified.

3,396.—EVERETT G. PASSMORE, Philadelphia, Pa.—*Harvester.*—Patented April 10, 1866, No. 53,682; reissued April 20, 1869.

Claim.—1. The combination of a main frame, a rigid shoe, a hinged finger-beam, a platform, and its stiffening-bar, with a combined reel and rake, revolving on an axis, vertical or nearly so, in the line of the main axle and finger-beam, substantially as set forth.

2. The combination of a single driving-wheel, a frame located on the grain-side of said wheel, a laterally-projecting finger-beam, and a combined rake and reel, revolving on an axis, substantially vertical, in the line of the main axle and finger-beam, substantially as set forth.

3. The combination of an axle revolving in bearings on the main frame, with a driving-wheel fast on one of its ends, and with a gear on the other, and with a combined reel and rake revolving on an axis, vertical or nearly so, mounted on the main frame, in the line of the main axle and finger-beam, and driven directly from the main axle, substantially as set forth.

4. The combination, substantially as herein set forth, of gearing for driving the cutting and raking devices, mounted on the main frame, in a fixed relation thereto with the driving-wheel and main axle, sliding endwise on the main frame simultaneously, to stop and start both the cutting and raking devices.

5. The adjustable cam-hooks *o*, arranged and operating as set forth.

3,397.—CHARLES N. PETERSEN, Chicago, Ill.—*Wooden Packing for Piston-Rods and other Enginery.*—Patented January 26, 1869, No. 86,316; reissued April 20, 1869.

Claim.— The construction and arrangement of the double conic wooden packing, substantially in the manner herein set forth.

3,398.—OSCAR F. SMITH, Williamsport, Pa., assignee of SAMUEL N. PURSE.—*Harvester.*—Patented December 27, 1859, No. 26,616; reissued April 20, 1869.

Claim.—1. Rotating the crank by means of either of two driven gears, of unequal size, for changing the rapidity of vibration of the cutters.

2. Two pinions on the crank shaft, either of which may be made to rotate the same, for varying the speed of the cutters.

3. So arranging the gearing that the speed of the vibration of the cutters may be changed without changing the direction of rotation of any of the gears.

3,399.—SAMUEL WOODRUFF and H. B. BEACH, Hartford, Conn.—*Pump.*—Patented September 22, 1868, No. 82,371; reissued April 20, 1869.

Claim.—1. The combination of the following devices, viz, the chamber *a* between the inner cylinder and outer case, having a valvular eduction-passage, the valvular piston C, and the plunger G, connected and moving together, and the valvular induction passage or passages at the lower end, substantially as described, and having the mode of operation set forth.

2. In combination with annular chamber *a*, between the cylinder B and the outer casing A, the valvular piston and plunger G, and the induction-valves E, below the cylinder, a series of small eduction-valves D, in the said annular chamber, substantially as and for the purpose described.

3,400. — HENRY MARTIN, Wallingford, Conn. assignee, by mesne assignments, of SYLVESTER W. WARREN. — *Steam-Alarm.* — Patented July 6, 1858. No. 20,835; reissued April 27, 1869.

Claim.—1. An expansive metallic tube, combined with a valve-opener that is stationary at one end, and the other end is moved by the expansion of the tube, and produces an increased movement near the middle of the said valve-opener, substantially as set forth.

2. A horizontal expansive tube, connections to the steam and water spaces of the boiler, and an alarm, in combination with a valve-opener, actuated by an endwise movement applied to one end of said valve-opener, to give an increased movement near the middle of said valve-opener, substantially as set forth.

3,401. — ALFRED E. SMITH, Bronxville, N. Y.— *Axle for Carriages.* — Patented May 8, 1860, No. 28,207; reissued April 27, 1869.

Claim.—The new and usefully-improved article of manufacture of case-hardened malleable cast-iron axle-boxes, by means of the operations hereinbefor described, or equivalents therefor, for the purpose of producing an article cheaper, more expeditiously, and of a better and more useful kind, than heretofore known.

3,402. — NATHANIEL WHEELER, Bridgeport, Conn., assignee of SHERBURNE C. BLODGETT. — *Hemming and Cording Umbrella-Covers.*—Patented January 3, 1854, No. 10,386; antedated July 3, 1853; extended seven years; reissued April 27, 1869.

Claim.—1. A warped surface, substantially such as described, to be used in a sewing-machine for turning hems, substantially as described.

2. In combination with the feed of a sewing-machine, a warped surface, substantially such as described, acting upon the convex side of the cloth, the combination being substantially such as described.

3. A warped surface, in shape substantially such as is described, in combination with a shelf, the two acting in combination, substantially as set forth.

4. In combination with a spiral bridge, acting on the convex side of the cloth, a horizontal groove, covered on the top, and extending to the needle, completing the hem, and holding it in shape to be stitched, the spiral and groove being substantially such as described.

5. In combination with a spiral bridge, acting on the convex side of the cloth, a horizontal groove, covered at top, and extending to and beyond the needle, these parts being substantially such as specified, and acting as described.

6. In combination with a warped surface, acting on the convex side of cloth, to fold it, and a shelf, acting to support the concave side of a fold, a hole or guide for the cord, all these parts being substantially such as specified, and acting in combination, as described.

7. In combination with a slot, and spiral bridge and a shelf, all being and acting substantially as described, a cord-guide and groove, covered at top, the whole forming a cording-apparatus.

8. In combination with a warped surface, substantially such as described, and capable of acting on the convex side of the material, a channel, in which the horizontal part of the cloth whose edge is being hemmed may lie, and through which it passes, as described.

9. A needle-hole, or aperture for the passage of a needle, in combination with a groove, covered at top, and so shaped, substantially as described, as to partially surround a hem, whereby the line of stitching may be suitably placed in relation to a hem partially inclosed in the groove, the combination being as described.

10. A warped surface, substantially such as described, in combination with a shelf and a channel, which the cloth being hemmed may traverse, the combination being substantially such as hereinbefore set forth.

3,403.—A. S. Whittemore, Willimantie, Conn. —*Thrashing-Machine.*—Patented February 18, 1868, No. 74,650; reissued April 27, 1869.

Claim.—1. In combination with the rotary flails, the bearing F, for the support of the grain being thrashed at a point beyond the reach of the flails, substantially as and for the purpose herein specified.

2. The thrashing-machine, constructed as described, of a frame, A, having a bearing, F, shaft B, arms *e e*, and flails *e' e'*, substantially as herein described.

3,404.—James S. Goode and John W. Bookwalter, Springfield, Ohio, executors of the estate of James Leffel, deceased.—*Gate and Guide of Water-Wheels.*—Patented January 14, 1862, No. 34,150; reissued October 11, 1864, No. 1,792; again reissued October 27, 1868, No. 3,171; again reissued April 27, 1869.

Claim.—1. Gates H, pivoted centrally, as to the pressure of water, when they are closed, but this is only claimed when the gates are constructed as described, and so arranged around the wheel as to form converging throats, so that, when closed, there shall be an equilibrium of pressure on the opposite ends thereof, substantially as set forth.

2. Gates H, which have their faces, from *z''* to *z'*, outwardly flaring, and their faces, from *z'* to *z*, when closed, on a curve concentric with the wheel, and pivoted to the flanges *c* and *e*, at a point, *d*, in the middle of the latter faces, substantially as set forth.

3. The series of gates H, when constructed and pivoted substantially as set forth, connected and combined with the mechanism for simultaneously operating them, substantially as set forth.

4. The plates H, located and arranged, in relation to each other, and to the wheel substantially as described, thereby forming the converging chutes, to direct the water in a line, tangential to the wheel, into an annular vortex-chamber, substantially such as described, and substantially as set forth.

5. The plates H, substantially as herein described, and arranged around the wheel so as to form converging throats, in combination with the parallel flanges *c* and *e*, respectively attached to the crown-plate A and cylinder R, the whole being so connected as to form a portable case for a water-wheel, substantially as set forth.

6. The arrangement of the rods, ring, lever, segmental rack, and pinion, for operating the gates, but this we claim only when so arranged that the pinion shall be stepped upon the upper or crown-plate, above the gates, substantially as and for the purpose set forth.

3,405.—George Brodie, Plum Bayou, Ark.—*Metallic Band for Baling.*—Patented March 22, 1859, No. 23,291; reissued April 27, 1869.

Claim.—1. The bale-tie, formed by passing the bent ends or loops of the hoop A into the link B, and holding them there by means of the pins C C, passed through them and over the sides of the link, in the manner herein described, and shown in Figs. 1 and 3.

2. The bale-tie, formed by passing the loops of the hoop A into one or more recesses in the link B, through a slit or opening in its side, and holding said loops in the recesses, by placing pins C within them, and thus giving such extension to the loops as to prevent their being withdrawn from the recesses while the pins remain in place, in the manner herein described, and as shown in Figs. 4 and 5.

3. The connecting-link of a bale-tie, having a slit or opening in its side or end, through which the hoop can be introduced into the link as herein described, and as represented in Figs. 6, 7, 13, and 14.

3,406.—M. G. Hubbard, Syracuse, N. Y., assignee of L. M. Batty.—(Division A.) *Harvester.*—Patented September 19, 1865, No. 49,962; reissued April 27, 1869.

Claim.—1. Locating on the cross-shaft, which forms the center of the vertical movement of the cutting-apparatus, a bevel-wheel, for driving the crank-shaft and a pair of spur-pinions, of unequal size, for varying its speed.

2. The combination, in a harvesting-machine, of two independent driving-wheels, two spur-gears, of unequal size, and two corresponding pinions, for changing the speed of vibrations of the cutters.

3. So hanging the cutting-apparatus that its vertical vibration shall be around the center of two spur-pinions, which are so arranged as to vibrate the cutters with a changeable speed.

4. The combination of a main frame, two driving-wheels, two spur-gears, of unequal size, and two corresponding pinions, for varying the speed of the vibration of the cutters, with a cutting-apparatus, so attached, with respect to the cross-shaft which carries the bevel-wheel, that the vertical movement of said cutting-apparatus shall be around said shaft as a center.

3,407.—M. G. Hubbard, Syracuse, N. Y., assignee of L. M. Batty.—(Division B.) *Harvester.*—Patented September 19, 1865, No. 49,962; reissued April 27, 1869.

Claim.—1. The swivel-jointed stay-rod E, the upright guide-rod N, with the set-bolt and nut *u*, and the shoe H, in combination with the swivel-joint *v*, when operating conjointly, as and for the purpose set forth.

2. The cam-lever F, with the standard, and flexible joint *t'*, as herein set forth.

3. The arrangement of the outer shoe J, block T, and set-screw *z''*, for raising and lowering the shoe, independently of the cutter-guard, substantially as set forth.

4. The coiled supporting-spring *e*, with the set-screw *f*, in combination with the frame or arm B, as herein described, for the purpose set forth.

3,408.—William E. Prall, Washington, D. C., (for himself,) and A. C. Rand, New York, N. Y., assignee of William E. Prall.—*Hot-Water Elevator.*—Patented April 21, 1868, No. 77,090; reissued April 27, 1869.

Claim.—The combination of the steam-generator, condenser, and system of pipes and valves, whereby to force the water from the generator to the level of the connecting steam-pipe through which the steam escapes to the condenser, and by its condensation produces a vacuum sufficient to cause the water to rise into and fill, or partially fill the generator, and thus accomplish automatically the alternate partial filling and partial emptying of the generator, substantially in the manner set forth.

3,409.—The Metallic Compression Casting Company, Boston, Mass., assignees of John Joseph Charles Smith.—*Clay Mold and Pattern for Casting Metals.*—Patented December 29, 1868, No. 85,340; reissued April 27, 1869.

Claim. — A mold or pattern made of moist clay-powder, formed under high but slowly applied pressure, for use in casting metals, substantially as described.

3,410. — ALFRED E. SMITH, Bronxville, N. Y.— *Axle for Carriages.* — Patented December 24, 1867, No. 72,555; reissued April 27, 1869.

Claim.—The D-shaped washer J, in combination with the screw-tap H, and diaphragm E, whether formed at the end of the box A, or within the edge thereof, and operating substantially as hereinbefore set forth.

3,411. — DANIEL URMY and JOHN MANZ, Wilmington, Del., assignees of JESSE URMY.—(Division A.) *Grain and Grass Harvester.*—Patented July 24, 1855, No. 13,330; reissued January 3, 1860, No. 882; again reissued April 27, 1869.

Claim. — 1. The harvester-shoe D, or any equivalent thereof, having in combination the guide-way and horizontal slot s^2, and the slot for the cutter higher than the guide-way, the finger-bar having no other connection with the cutter's driving-wheel than that received through this shoe, and it (the shoe) having no other connection with this wheel than that received through the axial bolt v, so as to obtain the advantages obtained by this combination of elements.

2. The harvester's cutting-apparatus, having in combination the shoe D, as set forth in the first claim, and the open fingers g, or equivalents thereof, which have a portion under the finger-bar, and the portions above and below the cutter no other connection than by that portion in front of the cutter.

3. The harvester's cutting-apparatus, having in combination the shoe D, and open fingers g, as set forth in the first and second claims, and the narrow divider H, or any equivalent thereof, which is of a less width, where cut against, than the distance between points of the fingers, or the length of a section of the cutter on the cutter-bar.

4. The harvester's cutting-apparatus, having in combination the shoe D, and open fingers, g, as set forth in the first and second claims, except the horizontal slot in the shoe is not included, and the narrow divider H, or any equivalent thereof, which is of a less width, where cut against, than the distance between points of the fingers, or the length of a section of the cutter on the cutter-bar.

5. The combination of the shoe D, having the guide-way and horizontal slot s^2, the finger bar G having an axis between it and the main frame, about parallel with its line of forward motion, the open fingers g, and the pitman o, about horizontal with the cutter-bar, and having its axial connection directly therewith, as well as with the crank-wrist, and both about parallel with the axis between the finger-bar and frame, or equivalents of these parts.

6. The combination of the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt v, and the open fingers g, with the pitman o, having its axial connection directly with the cutter-bar, as well as with the crank-wrist, and both about parallel with the axis v, or equivalents of these parts.

7. The combination of the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt v, and the open fingers g, with the pitman o, about horizontal with the cutter-bar, and having its axial connection directly therewith, as well as with the crank wrist, and both about parallel with the axis v, or equivalents of these parts.

8. The harvester's cutting-apparatus, having, at the inner end, the shoe D, or an equivalent thereof, which is fitted with the guide-way and horizontal slot s^2, and the axial bolt v, at the outer end the narrow divider H, or an equivalent thereof, which is of a less width, where cut against, than the length of a section of the cutter on the cutter-bar, and between this shoe and divider, fingers, which have a portion above as well as below the cutter, while they have no other connection with each other than that in front of the cutter, so that the clogging matter may escape at the rear.

9. The harvester's cutting-apparatus, having the shoe D, and narrow divider H, as explained in the last claim, and, between them, fingers, which have that portion next the side of the cutter, on which is the edge, of steel, or harder metal than that portion connected to the finger-bar.

10. The harvester's cutting-apparatus, having the shoe D, and narrow divider H, as explained in the eighth claim, and between them, fingers, that portion of which, next the side of the cutter, on which is the edge, can be removed by the attendant, for grinding or replacing with a new part.

11. The harvester's cutting-apparatus, having the shoe D, the narrow divider H, and the open fingers, as explained in the eighth claim, and the clearing-projections u^2, or any equivalent thereof.

12. The combination of the caster-wheel e^3, or an equivalent thereof, with the cutting-apparatus described in the eighth claim.

13. The combination of the caster-wheel e^3, or an equivalent thereof, the line of whose axle, in respect to the axle of the cutter's driving-wheel, is different, when this wheel e^3 is run backward around the cutter's driving-wheel, than when run forward with it, with the outer end of the finger-bar G, or an equivalent thereof, which has no other connection with the main frame of the machine than that derived through the shoe D, or an equivalent thereof, having the guide-way and horizontal slot s^2, and the axial bolt v through it.

14. The combination, in the harvester, of the shoe D, or an equivalent thereof, having the guide-way and horizontal slot s^2, and the axial bolt v, and the box f, or an equivalent thereof, which sustains, between the cutter-bar and its driving-wheel, a gear-shaft, which, at one end, and one end of this box, receives the motion of the driving-wheel, and imparts it at the other end, and other end of this box, on its road to the cutter-bar.

15. The combination of the following parts or elements in the harvester: The supporting and internal driving-wheel C, the spur-pinion that gears therewith, the bevel-driver k, the bevel-pinion l, the crank-shaft m, and the shoe D, or any equivalent combination of parts which has one internal cog-wheel, one spur-wheel, two bevel-wheels, the crank-shaft, about horizontal, a guide way and horizontal slot in the shoe like unto slot s^2, and through it an axis like unto the axis v.

16. The combination of the shoe D, having the guide-way and horizontal slot s^2, the finger bar G, having an axis between it and the main frame about parallel with its line of forward movement, the divider H secured to the outer end of this finger-bar, and the reel K, maintaining substantially the same relative position to the finger-bar and divider, while vibrated upon this axis between the finger-bar and frame, or equivalents of these parts.

17. The combination of the reel K with the finger-bar, sustained by the shoe D, having the guide-way and horizontal slot s^2, and axial bolt v, or equivalents of these parts.

18. The combination of the reel K and the guiding-plate x'' with the finger-bar G, sustained by the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt v, or equivalents of these parts.

19. The combination of the reel K and the guiding-board I with the finger-bar G, sustained by the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt v, or equivalents of these parts.

20. The combination of the finger-bar G, the divider H, and the reel K, with the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt v, when this finger bar, divider, and reel, maintain substantially the same relative position to each other while vibrated upon the axis v, or the equivalents of these parts.

21. The combination of the reel K, the diameter of which can be varied by the attendant to make it larger or smaller, as he desires, with the finger-bar G, sustained by the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt v, or equivalents of these parts.

22. The combination of the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt v, and the herein-described axis, about at right angles to the axis v, upon which the fingers and cutters can be vibrated so as to bring their front ends higher or lower, in respect to their rear ends.

23. The combination of the finger-bar G, the divider H, the reel K, the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt v, and

the herein-described axis, about at right angles to the axis v, upon which the fingers and cutters can be vibrated, or equivalents of these parts acting conjointly.

24. The combination of the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt v, the main frame A, having an inner and outer supporting-wheel, and the lever i^2, having an axial connection with both this frame and shoe, or equivalents of these parts, for cutting the crop well, and enabling the attendant, while riding on the main frame, to raise the finger-bar, confined to this shoe, over an obstruction while mowing.

25. The combination of the shoe D, having the guide-way and horizontal slot s^2, the finger-bar G, having no other connection with the cutter's driving-wheel than that received through the shoe, the open fingers g, the narrow divider H, the main frame A, having an inner and outer supporting-wheel, and the lever i^2, or equivalents of these parts for cutting the crop well, and enabling the attendant, while riding on the machine, to raise the cutting-apparatus from the ground when he desires.

26. The combination of the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt v, or their equivalents, with the main frame A, or its equivalent, having an inner and outer supporting-wheel, and the wheel w^1, or its equivalent, by which some portion of the weight of this shoe is carried, when mowing, independent of the raising or lowering of the inner and outer edges of the frame.

27. The combination of the shoe D, having the guide-way and horizontal slot s^2, and and the axial bolt v, with the supporting-wheel w^1, or its equivalent, the main frame A, having an inner supporting-wheel, while this wheel, w^1, is its outer supporting one, the horizontal lever i^2, having an axial connection with both the shoe and frame, and the vertical holding-rack for this lever, rigidly secured to the frame, or equivalents of these parts, by which the attendant is enabled to have his shoe held at the proper height and distance from the frame while reaping.

28. The combination of the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt v, with the main frame A, the tongue E, and the axis g^1, or equivalents of these parts.

29. The combination of the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt v, with the main frame A, the tongue E, its cogged segment h^1, its axis g^1, the cogged segment i^1, its axle j^1, and holding-dog, or drop-latch m^1, or an equivalent of these parts, by which the attendant is enabled to have this tongue and frame, to which is connected this shoe, held in the desired position.

30. The combination of the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt v, the main frame A, the tongue E, its axis g^1, and cogged segment h^1, the cogged segment i^1, its axis j^1, and the lever l^1, and its holding dog, or drop-latch m^1, or an equivalent of these parts, so that the attendant can, while riding on this frame, change the angle of the tongue thereto, and to the horizontal slot s^2, and axial bolt v, and also have the tongue held, as placed, in relation thereto.

3,412.—Daniel Urmy and John Manz, Wilmington, Del., assignees of Jesse Urmy.—(Division B.) *Grain and Grass Harvester.*—Patented July 24, 1855, No. 13,330; reissued January 3, 1860, No. 882; again reissued April 27, 1869.

Claim.—1. The combination of the automatic rake c, which removes the cut grain from the platform at intervals, or in gavels, by sliding it thereon and therefrom, the platform J having in front of it the open fingers g, and between it and the main frame an axis about parallel with its line of forward movement, or equivalents of these parts.

2. The combination of the automatic rake c, having between it and its driving-wheel the vertical gear-shaft r^3, through which this wheel's motion is received, and removing the cut grain from the platform at intervals, or in gavels, by sliding it thereon and therefrom, the platform J having in front of it the open fingers g, and between it and the main frame an axis about parallel with its line of forward movement, or equivalents of these parts.

3. The combination of the automatic rake c, having between it and its driving-wheel the adjustable gear-wheel t^3, by which the attendant is enabled to stop the motion of this rake, which slides the gavels on and from the platform, while the machine is being moved from place to place, the platform J having in front of it the open fingers g, and between it and the main frame an axis about parallel with its line of forward movement, or equivalents of these parts.

4. The combination of the automatic rake c, having between it and its driving-wheels, bearing upon the ground, the different-sized gears u^3 u^3, and the adjustable gear-wheel t^3, by which the attendant is enabled to change the frequency of this rake's removal of the gavels, by sliding them on and from the platform, and the platform J, having an axis between it and the main frame about parallel with its line of forward movement, or equivalents of these parts.

5. The automatic rake c, having between it and its driving-wheel, the cam v^3 and the holder d^4, or their equivalents, by which this rake, which slides the gavels on and from the platform, is caused to move more rapidly in one part of its circuit than while in another part, in combination with the platform J, having in front of it the open fingers g, and between it and the main frame an axis about parallel with its line of forward movement, or equivalents of these parts.

6. The combination of the shoe D, having the guide-way and horizontal slot s^2, the platform J, having an axis between it and the main frame about parallel with its line of forward movement, and the automatic rake c, which slides the gavels on and from the platform, or equivalents of these parts.

7. The combination of the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt v, or their equivalents, with the automatic rake c, which removes the gavels from the platform, by sliding thereon and therefrom at intervals.

8. The combination of the shoe D, having the guide-way and horizontal slot s^2, and axle bolt v, the finger-bar G having in front of it the open fingers g, and at the outer end the narrow divider H and the automatic rake c, which slides the cut grain on and from the platform at intervals, or in gavels, or equivalents of these parts.

9. The automatic rake c, or its equivalent, having its return course for engaging with the gavels, which it slides on the platform and therefrom at intervals, or in gavels, governed by the holder d^4, or an equivalent thereof, which is further inward than its ax connection with its driving-mechanism, and fast to the main frame.

10. Making the connection of the platform J, or an equivalent thereof, to the finger-bar of the harvester, the inner end directly to the finger-bar, by a batten that is about at right angles thereto, and the outer end to the divider, secured to the outer end by screw-bolts, substantially as described, so that the platform may freely slide over the ground, and be quickly removed.

11. The combination of the shoe D, having the guide-way and horizontal slot s^2 and the axial bolt v, and the automatic rake c, having between it and its driving-wheel the vertical gear-shaft r^3, or its equivalent, and removing the gavels from the platform, by sliding them thereon and therefrom at intervals, or equivalents of these parts.

12. The combination of the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt v, and the automatic rake c, having between it and its driving-wheel the adjustable wheel t^3, by which the attendant is enabled to stop the motion of the rake while the machine is being moved from place to place, or equivalents of these parts.

13. The combination of the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt v, and the automatic rake c, having between it and its driving-wheels, bearing upon the ground, the different sized gears u^3 u^3, and the adjustable gear-wheel t^3, by which the attendant is enabled to change the frequency of the rake's sliding the gavels on and from the platform, or equivalents of these parts.

14. The combination of the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt v, and the automatic rake c, having between it and its driving-wheel the cam v^3, and the holder d^4, by which it is caused to move more rapidly in one part of its circuit than while in another part, or equivalents of these parts.

15. The combination of the platform J, having between it and the main frame an axis, about parallel with its line of forward movement, the reel K, which presses the standing grain back to the cutters, and the automatic rake *c*, which slides the cut grain on and from the platform at intervals, or in gavels, or equivalents of these parts.

16. The combination of the platform J, having between it and the main frame an axis, about parallel with its line of forward movement, the reel K, which maintains substantially the same relative position to the finger-bar and divider, connected with this platform, while vibrated upon the axis, between it and the frame, and the automatic rake *c*, which slides the cut grain on and from the platform at intervals, or in gavels, or equivalents of these parts.

17. The combination of the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt *v*, the finger bar G, having in front of it the open fingers *g*, the reel K, which presses the standing crop back to the cutters, and the automatic rake *c*, which slides the gavels on and from the platform at intervals, or equivalents of these parts.

18. The combination of the shoe D, having the guide-way and horizontal slot s^2, and the axial bolt *v*, the reel K, which maintains substantially the same relative position to the finger-bar and divider, connected to this shoe, while vibrated upon the axis *v*, and the automatic rake *c*, which slides the gavels on and from the platform at intervals, or in gavels, or equivalents of these parts.

19. The combination of the platform J, having between it and the main frame an axis, about parallel with its line of forward movement, the automatic rake *c*, which slides the gavels on and from the platform at intervals, and the horizontal axis g^1, on which the relative heights of the front and rear edges of the platform can be varied, or equivalents of these parts.

20. The combination of the platform J, having between it and the main frame an axis about parallel with its line of forward movement, the automatic rake *c*, which slides the gavels on and from the platform at intervals, and the horizontal axis g^1, the cogged segment h^1, the cogged segment i^1, its axle j^1, and its holding-dog or drop-latch m^1, by which the attendant is enabled to have the front edge of this platform held higher or lower in respect to the height of the rear edge, or equivalents of these parts.

21. The combination of the platform J, having between it and the main frame an axis, about parallel with its line of forward motion, the automatic rake *c*, which slides the gavels on and from the platform at intervals, and the horizontal axis j^1, the lever l^1, and its holding-dog or drop-latch m^1, by which the attendant is enabled to change the relative heights of the front and rear edges of this platform, on and from which the rake slides the gavels at intervals while the machine is in operation, and also have these edges held as placed.

22. The combination of the platform J, the automatic rake *c*, and the guard-board L, or their equivalents, with the main frame of the harvester, said platform having between it and the frame an axis about parallel with its line of forward movement, said rake sliding the gavels on and from the platform at intervals, and said guard-board holding the gavels,

3,413. — Bradford S. Pierce, New Bedford, Mass., and Mason R. Pierce, Woodstock, N. Y.— *Machine for Making Drain-Pipes.*—Patented April 19, 1859, No. 23,703; reissued February 28, 1865, No. 1,897; again reissued January 14, 1868, No. 2,841; again reissued April 27, 1869.

Claim.—1. The case, in combination with the core, and with the core-socket, when the latter is constructed and operates in the manner herein described.

2. In a mold, for molding drain-pipe, a core-socket, and a case, constructed, arranged, and combined in the manner described, so that the core-socket shall constitute a working portion of the mold during the whole of the molding process, substantially as and for the purposes set forth.

3. The combination, with the core and core-socket, of suitable mechanism for removing the core through the core-socket, from the finished pipe, without injury to the latter, substantially in the manner and for the purposes described.

4. The arrangement of the mold-case and core upon a suitable platform, or base, in the manner described, so that the pipe can be molded and the core discharged therefrom, without changing the position of the pipe and mold-case, substantially as set forth.

5. The arrangement of the mixing-apparatus and of the core-relieving devices above the platform which conveys the molds, in the manner and for the purpose substantially as specified.

6. The combination of the case, core, and core-socket, with the perforated revolving disk, substantially as and for the purposes described.

3,414.—John R. Abbe, Providence, R. I.—*Machine for Heading Bolts.* — Patented January 19 1869, No. 85,983; reissued May 4, 1869.

Claim.—1. The reciprocating swiveled jaws J J′, provided with slot M, and constructed substantially as described, in combination with the pin R on the frame, all arranged and operating essentially as shown and described.

2. In combination with the swiveled jaws J J′ and pin R, the spring-pawl L, operating to hold and open the said jaws, in the manner set forth.

3. The stops N, with their adjusting-screws *n*, in combination with the reciprocating swiveled jaws, operating automatically to close the said jaws, substantially as described.

4. The swiveled jaws J J′, having an oscillating motion around the center *h*, in combination with the reciprocating table H, substantially as shown and described.

5. The combination, with the stationary dies or former G G, of the intermittently-reciprocating upset F, cam or cams D D′, and intermittently-reciprocating jaws I I′, arranged to have a lateral or turning and opening and closing action, and the several parts being adjustable, to regulate the pressure to suit different-sized bolts, substantially as shown and described.

3,415.—Joseph Fox, Lansingburgh, N. Y.—*Cracker Machine.*—Patented February 1, 1859, No. 22,793; reissued May 4, 1869.

Claim.—1. The depressions in the spaces between the grooves in one or both of the rollers B and B′, that form the strips of dough from the sheet, substantially as and for the purposes hereinbefore specified.

2. The feed-bed of free rollers A′, in combination with the grooved rollers B B′, substantially as herein described and specified.

3. Moving the grooved rollers B B′, arranged with respect to each other, as herein specified, with a regular intermittent, or step-by-step motion, substantially in the manner and for the purposes hereinbefore specified and set forth.

4. The ways, or guides E, in combination with the grooved roller B B′, substantially as and for the purposes herein described and specified.

5. The perforated bar G, in combination with the ways or guides E, substantially as and for the purposes herein described and set forth.

6. The knife H, in combination with the perforated bar G, substantially as and for the purposes hereinbefore described and specified.

7. The rollers B B′, ways or guides E, perforated bar G, and knife H, all combined and operated, substantially as hereinbefore specified.

8. Feeding the said strips of dough Y through the perforated bar G, and opposite the knife H, with a regular intermittent, or step-by-step motion, in the manner and for the purposes hereinbefore specified.

9. Passing strips of dough Y through apertures in a plate or bar G, and cutting off short sections of said strips, by means of a sudden blow with a blade or knife, H, substantially in the manner and for the purposes hereinbefore described and specified.

10. The employment of the clamp-bars I I, in combination with the knife H, as herein described, to cut off and hold the sections of the strips of dough, as the strips are fed through the bar G, as specified.

11. Forming short sections of skin-covered strips of dough into disks, or crackers, by pressure applied

to the ends of the sections by the devices, substantially as herein described.

12. The rollers, substantially as described, by which the crackers are rolled on the apron, and by which the skin on the upper surface of the pressed crackers is completed.

13. The straight-edges R and R′, for evening the rows of crackers before rolling and docking, as specified, in combination with the rollers and dockers, substantially as herein described and set forth.

14. The combination of the docker O with the movable clearer-plate Q and springs *g g*, substantially as and for the purposes herein shown and specified.

15. And, finally, the endless apron L, inclined plane T, follower U, and second endless apron S, all combined and operated substantially in the manner and for the purposes herein described and specified.

3,416.—WARREN GALE, Peekskill, N.Y.—*Straw-Cutter.*—Patented March 7, 1854, No. 10,592; reissued June 26, 1866, No. 2,293; extended seven years from March 7, 1868; again reissued May 4, 1869.

Claim.—1. The pivot E, provided with a flanch, for fastening the pivot to the machine in combination with a moving knife of a feed-cutter.

2. The fixed pivot F, on which the moving knife works, provided with a flanch, for fastening to the machine, and made adjustable thereon, by means of slots *a a*, or their equivalent, substantially as described.

3. A knife-handle, to which the knife is directly attached, constructed with a bend at or near the pivot end, and with an upward bend of that part next to the outer end of the knife, and with a further bend downward at that part of the helve to be grasped by the hand, substantially as described.

4. The pivot E, provided with a flanch, for fastening the pivot to the machine, in combination with the bent handle, substantially as described.

5. The bent handle, in combination with the movable knife, substantially as described.

6. The arrangement of the adjustable gauge-plate G, in front of the fixed knife, in such a manner that it shall be raised above the fixed knife, in proportion to the increased distance at which it is adjusted away from the knife, to give a longer cut, and *vice versa*, substantially as herein set forth.

7. A chopping-handle, to which the knife is attached, hung or pivoted at one end, and with an upward bend, or curve at that end, and with another curve at the end to be grasped by the hand, when this handle is provided with a flange, or projection on its back part, formed by the extension of the knife, to aid in preventing the uncut feed from being pushed over the handle, substantially as described.

3,417.—GEORGE W. LADD and JOHN A. BROWN, Providence, R. I., assignees, by mesne assignments, of GEORGE W. LADD.—*Method of Making Side Bands of Watch-Cases.*—Patented June 11, 1867, No. 65,579; reissued May 4, 1869.

Claim.—1. The method of constructing the side band for watch-cases, substantially as herein described, for the purpose specified.

2. A side band for a watch-case, composed of a central band, A, and the side rims B and C, the article being of the character substantially as specified.

3,418.—GEORGE M. MORRIS and JOHN MCCREARY, Cohoes, N. Y.—*Lubricator for Loose Pulleys.*—Patented February 4, 1868, No. 74,116; reissued May 4, 1869.

Claim.—1. Providing the interior of a loose pulley, or other wheel, revolving upon a shaft or axle, with one or more longitudinal grooves, C, as and for the purposes herein specified and described.

2. The annular grooves *b b*, in combination with the longitudinal groove C, within the hub of a loose pulley, or other wheel, revolving upon a shaft or axle, substantially as and for the purposes herein shown and described.

3. The bushing E, within the hub of the loose pulley, constructed as described, having the chamber F, around its periphery, communicating with the shaft by means of the opening *m*, the shoulders *g*, of said bushing, fitting snugly within the hub, and provided with the annular grooves *h h*, communicating with the shaft and chamber F, by means of the openings *k k*, substantially in the manner and for the purposes herein shown and specified.

3,419.—JACOB H. MYERS, Rochester, N. Y., assignee, by mesne assignments, of J. B. CREIGHTON.—*Railway Day and Night Car.*—Patented May 18, 1858, No. 20,254; reissued September 21, 1858, No. 602; again reissued May 4, 1869.

Claim.—1. The employment, in combination, of the transverse backs and seats of a passenger railroad-car, to form a berth.

2. The combination of two pairs of contiguous backs and seats, so that when spread out horizontally they shall form a lower berth of the proper length.

3. The employment of the backs of the seats in the formation of lower berths.

4. The formation of an upper removable berth, by distending a canvas from suitable supports on the upper part of the car.

5. The within-described method of forming and concealing, when not in use, in the spaces between the windows, an upper tier of beds, as set forth and for the purpose specified.

3,420.—N. PETRÉ, New York, N. Y., for himself, and assignee of JOSEPH H. SUGGETT. (Division 1.) *Combined Latch and Lock.*—Patented July 30, 1867, No. 60,213; reissued May 4, 1869.

Claim.—1. The eccentric barrel K, in combination with the latch-bolt F and notched hub E, substantially as described, and for the purpose specified.

2. The notched eccentric, in combination with the spring-latch bolt and its projection *f* and hub B, as described, whereby the latter is prevented from engaging with the latch when locked, substantially as described, and for the purpose specified.

3. In combination with the eccentric, for raising and lowering the bolt by means of a pin-key, a loose key-pin, N, in said eccentric, so that the eccentric cannot be turned by appliances fastened on the key-pin, substantially as described.

3,421.—W. H. REED, New York, N. Y., Chairman of Committee on Organization, assignee of D. M. SOMERS and WALTER S. ATWOOD.—*Button.*—Patented December 31, 1867, No. 79,929; reissued May 4, 1869.

Claim.—The combination, with the button or its shank or neck, of an independent central stem or rivet, when said neck and stem are so constructed as that the one may be made to fit within or enter the other, and the two be secured together by compression applied laterally, or to the outside of them, in rear of the button, between the latter and the material to which the button is attached, substantially as specified.

3,422.—MICHAEL RIEHL, Philadelphia, Pa.—*Machinery for Trimming Books.*—Patented August 28, 1855, No. 13,501; reissued May 4, 1869.

Claim.—A device for cutting paper, books, &c., consisting of a knife having a vertical reciprocating motion, as well as a drawing, oblique, or quarter-circle motion, suitable to effect the cutting of the paper, books, &c., imparted to it by a continuously-turning wheel, crank, or equivalent, connected to said knife, substantially as described.

3,423.—BENJAMIN S. ROBERTS, United States Army.—*Machine for and Method of Compressing Cartridge-Shells to a Tapered Form.*—Patented March 9, 1869, No. 87,593; reissued May 4, 1869.

Claim.—Conjointly, the hereinbefore-described machine for and method of tapering metallic cartridge-shells throughout their entire length, in the manner shown.

3,424.—FREDERICK A. WOODSON, Anna, Ill.—*Hot Air Furnace.*—Patented February 2, 1869, No. 86,620; reissued May 4 1869.

Claim.—A furnace by which the volatile matters are separated from the ponderable constituents of

fuel and re-united with a fresh supply of air at the point of greatest heat, substantially as and for the purpose described.

3,425.—T. B SMITH, Ansonia, and B. W. CORNING, New Britain, Conn., assignees, by mesne assignments, of T. B. DOOLITTLE. — *Fruit-Box.*— Patented June 19, 1866, No. 55,631; reissued May 4, 1869.

Claim.—The manufacture of wooden boxes composed of end pieces of sufficient thickness of stock to receive and hold the nails, in combination with a veneer partially cut crosswise, and bent around and secured to said end pieces, all substantially as described.

3,426.—WILLIAM C. DURANT, West Troy, N. Y.—*Base-Burning Stove.*—Patented July 23, 1867, No. 66,957; reissued May 11, 1869.

Claim.—1. In combination with a fuel-magazine, B, of stoves, a deflector mouth-piece, C, either of a single or compound form of construction, substantially as herein described, and arranged to operate as and for the purpose set forth.

2. The combination of hook-headed pendent lugs or brackets *c* on the fire-pot base-plate W, with the respectively located coinciding notches or recesses *e*, in the flange of the bed-plate ring E, substantially as described, for the purpose of easily and quickly mounting or hanging said bed-plate ring with its fire-grate in operating-position, as set forth.

3. The combination of the dumping fire-grate, with an under suspended and horizontally-vibrating or shaking bed-plate, and with a lever operating them, when said fire-grate can be dumped, but not vibrated, independent of the bed-plate, substantially as and for the purpose set forth.

4. In combination with a horizontally-vibrating grate and bed-plate, and with a lever for shaking them, the terminating of the end of the journal or shank by which they are vibrated in a pocket, *z*, so that said shank shall not project beyond the exterior of the stove, but be accessible and operated from the outside by the shaker through a suitable opening in said exterior, substantially as and for the purpose described.

5. Arranging a boiler-plate, with or without the oven on the exit flue of a base-burning stove, substantially as described for the purpose specified.

3,427.—JOSIAH J. SHERMAN, Albany, N. Y.—(Division B.) *Apparatus and Process for Evaporating Liquids.*—Patented February 16, 1869, No. 86,948; reissued May 11, 1869.

Claim.—The condensing-apparatus, consisting of one or more supplemental chests, with their steam-chambers and evaporating-vats, when constructed and adjusted with relation to one another, and in relation to one or more primary evaporators, so as to take up and utilize, for purposes of further condensation by succeeding processes of evaporation, heat generated in the latter, before it is allowed either to pass them or escape into the atmosphere, or otherwise, all substantially as described.

3,428.—JOSIAH J. SHERMAN, Albany, N. Y.—(Division B.) *Apparatus and Process for Evaporating Liquids.*—Patented February. 16, 1869, No. 86,948; reissued May 11, 1869.

Claim. — 1. The evaporating-apparatus, whether embracing one or more supplemental steam-chests, substantially as described, when placed directly upon or over a primary or other antecedent vessel or vessels containing a liquid subjected to heat, in combination with any suitable mechanical device for either raising it vertically, or removing it horizontally, or both, from such primary or other vessel or vessels, or their surroundings, for any purpose whatever.

2. The supplemental evaporating-apparatus, substantially as described, whether consisting of but one or more chests or vessels when supported immediately over, or upon, or at any distance, either wholly or partially, over, or under, or diagonally from a primary or other antecedent vessel or vessels containing a liquid subjected to heat, in combination with a cover or covers, either opening or removable, or both, to such primary or other vessel or vessels with a connection or connections between such primary or other vessel or vessels and such apparatus, so as to afford open access to the whole or any part of such primary or antecedent vessel or vessels, or their surroundings, for any purpose whatever.

3,429.—H. C. STORRS, New York, N. Y.—*Knob-Latch.*—Patented January 21, 1868, No. 73,666; reissued May 11, 1869.

Claim.—1. The combination of the sliding bolt F with the latch-bolt B, arranged so that by the closing of the door both bolts are forced inward, the bolt F retained within the case; the bolt B, shooting into the keeper, is locked through the instrumentality of the bolt F, substantially as herein set forth.

2. The combination of the locking-bar *b*, pivoted to the latch-bolt, with the bolt F and latch-bolt B, substantially as shown and described.

3,430.—WHEELER AND WILSON MANUFACTURING COMPANY, Bridgeport, Conn., assignees, by mesne assignments, of ALLEN B. WILSON.—*Sewing-Machine.*—Patented June 15, 1852, No. 9,041; extended seven years; reissued May 11, 1869.

Claim.—1. In combination with an eye-pointed reciprocating needle, a hook, so shaped and moved, substantially as specified, as to act upon loops of needle-thread, substantially as described.

2. In combination with a hook, shaped and moved substantially as specified, a bobbin containing under or lower thread, located, in reference to the hook, substantially as set forth.

3. In combination with an eye-pointed needle, a hook and a bobbin, all operating in combination, to form a stitch, substantially in the manner specified.

4. A ring, in combination with a hook and bobbin, all operating substantially as specified.

5. In combination with a hook, shaped and operating substantially as specified, a pad, constructed and operating substantially as described.

6. In combination, an eye-pointed needle, hook, bobbin, and pad, all operating substantially as set forth.

7. The method, substantially as herein described, of mounting a rock-shaft, which carries a needle-arm, whereby the needle may be adjusted, substantially as hereinbefore set forth.

8. The device herein described, for feeding the cloth along in a sewing-machine, consisting of a tooth having an upward motion, for grasping the cloth between itself and a smooth surface, a motion forward for feeding the cloth along, a downward motion for freeing the tooth from the cloth, and a backward motion, out of contact with the cloth, substantially as above set forth.

9. A tooth having four motions, substantially in the manner and for the purposes set forth, in combination with a surface bearing upon the cloth with a yielding pressure, and a slotted platform, whereby the cloth is not only fed, but is also clamped, so as to be held at rest between the platform and the yielding surface, at certain times, in the operation of the parts, the combination being and operating substantially as described.

10. A tooth, operating as described, in combination with a cam for lifting the tooth, and moving it forward, and a spring for moving it backward, the combination being substantially such as described.

11. The relative arrangement, substantially as herein described, of a rod to which a tooth is attached, beneath a platform, and a cam beneath the rod, and acting upon it.

12. A feeding-tooth having four motions, as described in combination with a slotted platform, in such manner that the tooth rises, at times, through the slot, above the level of the platform, as described.

13. In combination with a feeding-tooth, moved forward by a positive motion, as described, and rearward by a spring, an eccentric, acting substantially as described, whereby the extent of forward motion is determined, substantially as set forth.

3,431.—BEAUMAN BUTLER, Saint Johnsbury Centre, Vt., for himself, and BENJAMIN M. TILLOTSON, Manchester, N. H., assignee of CHARLES F.

RAMSAY.—*Saw-Frame.*—Patented October 20, 1868, No. 83,131; reissued May 11, 1869.

Claim.— 1. The saw-frame, constructed with either or both of its two ends, A′ C E and B C E′, either rigid or flexible, when braced by the connection of the central part of the rod E E′, to the cross-piece C, substantially as set forth.

2. The provision, in a buck-saw frame, of the spring, or cushion G or G′, substantially as and for the purpose set forth.

3. The slotted ears I I, or their equivalent, employed to connect the cross-bar and end-piece, and permit mutual play between them, substantially as described.

3,432. — PATRICK A. DOHERTY, Boston, Mass., assignee of JANE G. WATERMAN, (widow,) and JAMES D. MARTIN, administrator of the estate of NATHANIEL WATERMAN, deceased. — *Table-Tray or Waiter.*—Patented May 12, 1863, No. 38,519; reissued May 11, 1869.

Claim.— 1. A table-waiter, or tray, as made or provided with the lip C, or its equivalent, applied to and projecting down from its rear part, such lip being for the purpose specified.

2. A table-waiter, or tray, as made with the rim extended partially around it and above its bottom, in manner substantially as specified.

3. A table-waiter, or tray, as having not only a rim extended partially around and above its bottom, as set forth, but with a lip, or its equivalent, extended down from its rear edge, the whole being substantially as explained.

3,433. — DAVID HAMMOND, Canton, Ohio. — *Bridge.* — Patented July 3, 1866, No. 56,043; reissued April 30, 1867, No. 2,586; again reissued May 11, 1869.

Claim.—1. The arch A, composed of the wrought-iron arch-pieces C C, having one or more flanges *x y* rolled thereon, and united by intervening clamping-pieces and clamping-bolts, and the covering-piece B, the several parts being connected and combined substantially as and for the purpose specified.

2. The combination of two or more wrought-iron arch-pieces C C, having one or more flanges *x y* rolled thereon, when said arch-pieces are united by intervening clamping pieces and bolts, constructed as herein specified, and are used in the construction of a wrought-iron arch-girder, substantially as is herein specified.

3. The clamping-piece Q, herein described, whether the same be made as a single or as a double bolted clamping-piece, when constructed and used substantially as and for the purpose specified.

4. The post or brace-clamping pieces herein described, whether the same be made as double-bolted clamping-pieces, as shown in Fig. 4, or as single-bolted clamping-pieces, as shown in Fig. 5, when used substantially as and for the purpose specified.

5. The securing-piece *o*, provided with bolt o^1 and nut o^2, when constructed and used substantially as and for the purpose herein specified

6. The combination of the arch-pieces C C, covering-piece B, truss-post F, with jam-nuts N N, and post-clamp M, with raised portion *m*, the several parts being arranged substantially as and for the purpose specified.

7. The combination of the arch A, constructed as specified in first claim, the chords D D, arch-shoes G G, truss-posts F F, and diagonal braces E E, the whole forming a wrought-iron girder, substantially as and for the purpose specified.

3,434.—JOHN G. MURDOCK, Cincinnati, Ohio.— *Hydrant.* — Patented May 26, 1863, No. 38,694; reissued May 11, 1869.

Claim.—1. In combination with the valve-seated supply-pipe, or chamber D *d*, the moving water-way and plunger E F, wholly external to said chamber, and shutting against the pressure.

2. A wasting-hydrant, having the described hollow plunger and moving water-way, shutting against the pressure, in combination with a valve-seated supply-pipe, or chamber, as set forth.

3. The wasting open-mouthed barrel A B W, valve seat *d*, valve G, gaskets I J, and ventage W, combined in the manner described with a moving water-way, shutting against the pressure, substantially as and for the purposes set forth.

3,435. — ELISHA WATERS and GEORGE A. WATERS, Troy, N. Y. — *Boat.* — Patented June 30, 1868, No. 79,421; reissued May 11, 1869.

Claim.—1. The construction of the shell or skin, and the decks (when decks are used) of boats, of or from paper prepared and arranged in a layer or layers, each of which is arranged and combined, one with the other, in the manner and for the purposes substantially as herein described, contained, and set forth.

2. A boat, constructed of paper, in the manner substantially as herein described and set forth, and suitably stayed, braced, supported, and strengthened, by means of ribs, stays, braces, or strips, constructed of paper, wood, or other suitable material, and the same arranged upon the inner side of such boat, in the manner substantially as herein described and set forth.

3. The shell or skin of a boat, constructed of paper, in the manner substantially as herein described, in combination with an inner frame-work, suitably constructed, and each arranged in the manner and for the purposes substantially as herein described and set forth.

3,436. — WILLIAM E. MARSTON, Troy, N. Y., assignee of ELIZABETH HAWKS.—*Heating-Stove.*— Patented December 1, 1868, No. 84,626; reissued May 11, 1869.

Claim.—1. The base, A, constructed substantially as herein described and set forth, with a partition, B, or any equivalent therefor, thereby dividing said base into two chambers, which partition is provided with suitable openings or apertures, *b b*, and with the slides or damper L, substantially as and for the purposes herein described and set forth.

2. The arrangement of the outer, or surrounding cylinder, D, and of the inner cylinder, E, when used in combination with vertical partition-plates F, whereby a flue space, or chamber, M, is formed for the passage of the smoke, and also for the passage and consumption of any escaping gases or products of combustion, and which also form a radiating-chamber, S, in the front of such rear vertical chamber M, in the manner substantially as herein described and set forth.

3. The combination of the base-chamber *o* with the intermediate combustion-chamber Q, and with the rear base-chamber N, by the means of the partition B, having therein the damper L, or any other equivalent therefor, the whole being arranged and operated in the manner substantially as herein described and set forth.

4. The downward-draught damper I, constructed and arranged upon the top of the inner cylinder, E, when used in combination with the upper combustion-chamber, P, with the fuel-chamber H, lower or intermediate combustion-chamber Q, the chamber *o* in the front of the base A, lower and base damper L, the rear chamber N in the rear part of the base A, and with the rear vertical chamber M, each operating in the manner and for the purposes substantially as herein described and set forth.

5. The arrangement and combination of the cylinders D and E and the upright plates F F, thereby forming a flue or chamber for the passage of any escaping products of combustion from the consuming fuel, and also, and thus and thereby forming in front of such flue or chamber, and between said cylinders, a hot-air chamber for the radiation of the heat, in the manner substantially as herein described and set forth.

6. The double and sliding dampers L L, when constructed, combined, and operated in a stove, furnace, or heater, in the manner and for the purposes substantially as herein described and set forth.

3,437. — ALFRED ARNOLD, Tenafly, N. J.—*Tea and Coffee Pot.* — Patented December 10, 1867, No. 71,837; reissued May 18, 1869.

Claim. — 1. In combination with *b b′*, or their equivalents, the heating-surface D, when so arranged that it will come in contact with the hot surface of the stove, receive its heat, and then recede therefrom, substantially as is herein set forth.

2. Arranging C, or other support, on which the boiler oscillates, so that the plane of D will conform to that of the stove when in contact.

3. The combination of *b b'*, D, and E, in one vessel.

4. Arranging the boiler to oscillate on its own base, without employing a separate device to support it, substantially as described.

3,438.—ALFRED BARDELL and SAMUEL SMITH, New York, N. Y.—*Construction of Coal-Scuttles.*—Patented March 12, 1867, No. 62,807; reissued May 18, 1869.

Claim.—1. The combination of a body and base-rim with a bottom so constructed as to have a flange which can be sprung into the recess formed upon the body, and thereby bring together three thicknesses of sheet-metal just above bottom of the scuttle or other utensil, substantially as and for the purpose herein described.

2. A struck-up and corrugated sheet-iron bottom, B, in combination with the body and base-rim, substantially as and for the purpose herein described.

3,439.—P. CORBIN and F. CORBIN, (a joint-stock corporation,) New Britain, Conn., assignees of ANDREW TURNBULL.—*Door-Bell.*—Patented June 13, 1865, No. 48,242; reissued May 18, 1869.

Claim.—A pivoted or swinging cam-piece, in combination with the hammer and bell, when said cam-piece produces a positive motion of the hammer by movement in each direction, substantially as set forth.

3,440.—THOMAS S. DAVIS, Jersey City, N. J.—*Steam-Engine Exhaust-Valve.*—Patented December 29, 1868, No. 85,289; antedated December 23, 1868; reissued May 18, 1869.

Claim.—The valve B, and its arrangement relating to the seat D in the exhaust-passage A of a locomotive or other analogous engine liable to be reversed, as herein set forth.

3,441.—WENDELL T. DAVIS and AUSTIN DE WOLF, Greenfield, Mass., assignees of OZI M. PIKE.—*Machine for Cutting Vitreous Substances.*—Patented December 29, 1868, No. 85,396; reissued May 18 1869.

Claim.—A tool for cutting glass, or other vitreous substances, constructed to operate substantially as described.

3,442.—DANIEL A. DRAPER, Cambridge, Mass.—*Device for Forming Letters and Figures on Type-Blocks.*—Patented May 7, 1867, No. 64,410; reissued May 18, 1869.

Claim.—1. The combination of the within-described devices for producing letters, figures, &c., upon the edges of type-blocks, for hand-stamps and other purposes, substantially as set forth.

2. As a new article of manufacture, a type-block with letters, figures, or characters produced thereon, in the manner substantially as described.

3,443.—HELEN DOUGHERTY, Rochester, N. Y., assignee, by mesne assignments, of JOHN B. DOUGHERTY.—*Machine for Making Splints for Barrel-Hoops.*—Patented February 23, 1864, No. 41,688; reissued May 18, 1869.

Claim.—1. As an improvement in the manufacture of hoops, the cutting of the hoops from the edge of the plank or board, by cuts alternately in a right-angled line and a bevel-line with the side of face of the plank or board, or in alternate bevel-lines, as set forth.

2. The combination of the knives K K with the knife O, for the purpose of cutting the taper of the ends of the hoop at the same time that the hoop is cut from the timber.

3. The combination of the tilting-bars *b*, cams M, and springs *s*, as and for the purpose specified.

3,444.—ALONZO HITCHCOCK, GEORGE G. SAXE, and JAMES H. ROBERTSON, New York, N. Y., assignees of RILEY W. CARPENTER.—*Tremolo-Attachment.*—Patented June 27, 1865, No. 48,366; reissued May 18, 1869.

Claim.—1. The application of means to the instrument, by which the air may be agitated, to produce a tremulous note, substantially as described.

2. The arrangement of an agitator, applied to the production of a tremolo outside the trunk, wind-chest, and other air-passages of the instrument, and operated independently of the bellows-power.

3. The arrangement of a fan, or agitator in the instrument, at right angles to the keys, and parallel to the line of reeds, or pipe-mouths, at any convenient distance from them, as described.

3,445.—GEORGE W. LA BAW, Jersey City, N. J.—*Miter-Machine.*—Patented May 29, 1855, No. 12,956; reissued May 18, 1869.

Claim.—1. The knives or cutters G, H H, and X, attached to the stock F, in combination with the mechanism for operating the same, substantially as described, and for the purposes specified.

2. The knives, or cutter X, arranged as described, in combination with mechanism for operating the same, for cutting miters, substantially as described, and specified.

3. The mechanism for holding the material for cutting miter and square joints, consisting of the bar C, slotted both vertically and horizontally, and the eccentric lever D, constructed substantially as described, and for the purpose specified.

3,446.—WILLIAM W. LEVERING, New York, N. Y.—*College-Cabinet.*—Patented December 18, 1866, No. 60,529; reissued May 18, 1869.

Claim.—1. Arranging a slate or blackboard on two opposite sides of the cabinet, so that a desk may be used on one side, and a blackboard on the other, at the same time, substantially as described.

2. Combining, permanently, with a table, or desk-lid, or board, slated or blackboard surface, on the under side, for its appropriate and proper use, substantially as described.

3,447.—C. H. MCCORMICK, Chicago, Ill., assignee, by mesne assignments, of HAMILTON A. PARKHURST.—(Division C.) *Harvester.*—Patented February 23, 1858, No. 19,442; reissued May 18, 1869.

Claim.—1. The combination, in a two-wheeled harvester, of a main frame, and a laterally-projecting cutting-apparatus with a coupling-frame, hinged both in front and rear of the wheels, in line with the crank-shaft, substantially as set forth.

2. The combination, in a two-wheeled harvester, of a main frame, and a laterally-projecting short finger-beam, with a coupling-frame, encompassing the inner wheel, and hinged to the main frame above the plane of the cutters, substantially as set forth.

3,448.—JOHN MCKIBBEN, Lima, Ohio.—*Bridle.*—Patented December 8, 1868, No. 84,838; antedated December 1, 1868; reissued May 18, 1869.

Claim.—1. The rein E, provided with stops *h h h*, in combination with guides *f f*, rings *i* and *j* on the bit, and tubes *e*, at the rear edges of the blinders, and through which the reins pass, all arranged substantially as and for the purposes set forth.

2. The reins E, suspended by loops, or swivels *a*, short snap-hooks *b*, and rings *c*, from the head-strap D, all substantially as specified.

3,449.—METALLIC COMPRESSION CASTING COMPANY, Boston, Mass., assignees of MICHAEL SMITH.—*Apparatus for Casting Refractory Metal.*—Patented October 22, 1867, No. 70,038; reissued May 18, 1869.

Claim.—1. The provision of, and combination with, one or a series of molds for casting metal, of a separate injecting-vessel or cylinder, J, said cylinder being provided with a piston or plunger, K, and an internal non-conducting lining, made of clay and plumbago, or other non-conducting material equivalent thereto, said lining to be detached, and used in the manner and for the purpose described.

2. The provision, on said cylinder J, of a temporarily-closable, but self-opening communication with the molds, as and for the purpose set forth.

3. The combination of the mold-box D, detachable thimble I, injecting-vessel J, and plunger K, all constructed, arranged, and operating in the manner and for the purposes explained.

4. The arrangement of a series of molds, having consecutive orifices or gates, a slab or follower, B, and set-screw F, and inclosed in a box, D, as and for the purpose set forth.

5. The subjects of clause last recited, when inclosed in an air-tight chest, G, having connections with an air-exhaust, for the purpose specified.

3,450.—D. P. SHARP, Ithaca, N. Y.—*Horse-Rake*—Patented December 12, 1865, No. 51,486; reissued May 18, 1869.

Claim.—1. The rake-teeth, arranged to oscillate for a limited distance independently of each other, around the rake-head as a fulcrum or bearing, substantially as specified.

2. The combination of the eyes or sockets *d d d* with the metallic plates *c*, and coiled teeth E, all arranged to operate as and for the purposes specified.

3. The stops *d'*, when used in connection with the teeth, applied to the rake-head, substantially as and for the purpose specified.

3,451.—MARTIN VOORHEES, Princeton, and GEORGE W. N. CUSTIS, Camden, N. J.—*Process and Apparatus for Seasoning and Impregnating Wood with Preservative Materials.*—Patented February 23, 1869, No. 87,226; reissued May 18, 1869.

Claim.—1. For the purpose of treating wood, textile fabrics, or other material, in whole or in part, with the vapors of oleaginous, antiseptic, or other substances or compounds, the vaporization of such substances or compounds, in the same chamber in which the wood, &c., may be placed, or in a section thereof, or in a projection forming substantially a part of the same.

2. The return of the condensed vapors to the body of the heated substance from which evolved, to be revaporized as often as may be deemed desirable.

3. Such arrangement of apparatus that the condensed material may be caused to flow back into the body of the substance from which evolved, or to flow from the chamber at will.

4. The combination, with a wood-treating chamber, of an air-space around it, so that the air may be confined therein, or be caused to flow over the surface of the treating-chamber at will.

3,452.—ELIZA C. STEWART, Troy, N. Y., sole legatee and executrix of the estate of PHILO P. STEWART, deceased.—(Division A.) *Cooking-Stove.*—Patented January 18, 1859. No. 22,681; reissued May 31, 1864, No. 1,684; again reissued July 7, 1868, No. 3,027; again reissued May 18, 1869.

Claim.—1. The supplying of a continual current of atmospheric air, heated by the front plate of the fire-box or chamber of combustion or by the front and end plates thereof, and in a flue, chamber, or space, immediately in front of the same, or in front and at the end of said fire-chamber, and in combination therewith, to the oven of a cooking-stove, in which the oven is in the rear of the fire-chamber, and at the same time extends under the same, so as to connect with the said flue, chamber, or space, and thus and thereby permit the said heated air to enter the said oven, in the manner and for the purposes substantially as herein described and set forth.

2. The flue, space, or intervening chamber F, immediately in front of the fire-box or chamber of combustion, having a fire-grate and ash-pit or chamber combined therewith, or in front and at the end of said fire-chamber, and the whole arranged and suspended in the front and upper corner or part of the oven I, into which space or intermediate chamber atmospheric air is admitted, through apertures *x'*, or any equivalent therefor and thereof, and which are and shall be in and through the plate or door or doors in the front part of the cooking-stove, and in combination with the oven of such stove, so that the air heated within such intermediate chamber, substantially as herein set forth, may or shall be conducted to and into the oven, for the purposes and by the means substantially as herein described and set forth.

3. The admitting of air to said chamber F, and through it to said oven, constructed and arranged as described, by means of the apertures *x*, in the front plate or doors, or by means of the apertures *x''* in the side plate of the stove, or by any equivalent for either or both of said apertures, substantially as and for the purposes herein described and set forth.

4. In a stove constructed with an oven, and with a fire-box or chamber of combustion, having a fire-grate therein, and an ash-pit or chamber below, and all combined therewith substantially like the one hereinabove described and set forth, the making of the front plate of the stove to open with a door or doors, K, and the attaching an apron in the front of the stove, so as to receive and contain a kitchen or other suitable roaster, substantially as specified herein, so that the heat radiated by the front plate of the fire-box or combustion-chamber shall be aided by the heat radiated by the oven-plates therein, in the manner and for the purposes substantially as herein described and set forth.

5. The employment and arrangement of the front doors K, provided with apertures *x*, or any equivalent thereof and therefor, therein, in combination with the fire box or chamber of combustion *a*, by means of which atmospheric air, in a highly-heated condition, is admitted to the oven of a cooking-stove, for the purposes substantially as herein described and set forth.

6. The employment and arrangement, in the front of a cooking stove, of a door or doors, K, or any equivalent thereof and therefor, so that the same, or a part thereof, shall open in front of the fire-box or chamber of combustion, in combination with the fire-chamber or chamber of combustion, having a fire-grate therein, and ash-pit chamber combined therewith, and arranged and suspended in the front part of the oven of a cooking-stove, in the manner and for the purposes substantially as herein described and set forth.

7. The employment and arrangement of a suitable door or doors in the front of a cooking-stove, which shall in part or in whole open into that part or portion of the oven which extends forward and under the fire-box or chamber of combustion, and other parts necessarily employed and used therewith, in the manner and for the purposes substantially as herein described and set forth.

8. The arrangement of a fire chamber or chamber of combustion with a fire-grate, and an ash-pit or ash-chamber combined therewith, and the whole suspended in the front part and upper corner of oven of a cooking-stove, in the manner and for the purpose substantially as herein described and set forth.

9. The employment and arrangement of the additional or extra bottom or incasement *r*, in combination with the flues of the bottom of a cooking-stove, and underneath the oven I, in the manner and for the purposes substantially as herein described and set forth.

10. The employment and arrangement of the additional or extra back and incasement *u*, in combination with the ascending or descending flues in the rear end of a cooking stove, and between the rear end of the oven and the rear vertical end plate of the stove, in the manner and for the purposes substantially as herein described and set forth.

11. The employment of a corrugated plate, perforated along the front thereof, for the top of the oven I, as arranged in connection with the flue H and fire-chamber or chamber of combustion, and with the rear and vertical plate of the oven of a cooking-stove, substantially as and for the purposes herein described and set forth.

12. The employment and arrangement of the front damper or valve Y, in the front and hearth of a cooking-stove, in combination with the flue or flues, as the case may be, immediately underneath the oven and bottom plate of the oven of a cooking-stove, having the fuel-chamber and ash-pit arranged as hereinbefore specified, in the manner and for the purposes substantially as herein described and set forth.

13. The employment and arrangement of the boiler or reservoir, having a removable or detached cover or top, and containing two inclined flues or tubes, which are separated at the bottom or lower ends thereof, and which unite at the top or upper ends thereof, and thus and then form but one pipe, in the manner and for the purposes substantially as herein described and set forth.

3,453. — ELIZA C. STEWART, Troy, N. Y., sole legatee and executrix of the estate of PHILO P. STEWART, deceased.—(Division B.) *Cooking-Stove.*—Patented January 18, 1859, No. 22,681; reissued May 31, 1864, No. 1,684; again reissued July 14, 1868, No. 3,041; again reissued May 18, 1869.

Claim. — 1. The employment and arrangement of the top plate of a cooking-stove, extended over and beyond the rear end and upper portion of the descending and ascending flues, back of the oven thereof, in such manner as to receive and support a reservoir, or water-tank, upon or over a suitable opening therein, and with a heating chamber, below or underneath the same, in the manner and for the purpose substantially as herein described and set forth.

2. The arrangement and employment of the heating-chamber D, or its equivalent, in combination with the rear ascending and descending flues of a cooking-stove, and with the reservoir, or water-tank C, in the manner and for the purposes substantially as hereinbefore described and set forth.

3. The combination of the reservoir, or water-tank C with the chambers D and S, on the rear end of a cooking-stove, having ascending and descending flues, in the manner and for the purposes substantially as herein described and set forth.

4. The arrangement and combination of the chamber S, or any equivalent thereof, upon or with the rear end of a cooking-stove, containing ascending and descending flues, in the manner and for the purpose substantially as herein described and set forth.

5. The vertical end plate of a cooking-stove, containing the opening O, or any equivalent therefor, for the passage of hot air, or the escaping heated products of combustion, against the reservoir, or water tank, substantially as herein described and set forth.

6. The employment and arrangement of the damper L, or any equivalent therefor, within the flues of a cooking-stove, having a boiler, or reservoir, supported over or beyond the descending or ascending flues of said stove, so that the heated products of combustion may be either thrown against said reservoir, and directly into the exit flue, or may be caused to pass through other parts of said stove, and then against said reservoir, and into said exit-flue, for the purpose of heating the water contained in said reservoir, substantially as herein described and set forth.

7. The flue B, constructed as described, in combination with the reservoir C, substantially as and for the purpose shown.

8 A reservoir, or water-tank, for the warming or heating of water therein, in combination with the descending and ascending rear flues of a cooking-stove, substantially as and for the purpose shown.

3,454.—THOMAS BAKEWELL and JOHN LIPPINCOTT, Pittsburgh, Pa, assignees, by mesne assignments of PEARSON CROSBY.—*Hanging Reciprocating-Saws.* — Patented October 4, 1859, No. 25,632; reissued May 25, 1869.

Claim.—1. Hanging reciprocating-saws by means of buckles B, having a continuous bearing on a strap or straps attached at or near the end of the saw, in combination with a pin or pivot, by which the buckle is attached to the stirrup, the buckle being left free to adapt itself to the rake or inclination given to the saw, substantially as described, and for the purposes set forth.

2. Pivoting the stirrup of reciprocating-saws by a single pin or pivot to a buckle bearing against straps fastened across the ends of the saw, substantially as described.

3. A buckle for hanging reciprocating-saws, consisting of side pieces, each with a continuous lip or lips, for engaging the straps on the ends of the saw, and pivoted by a pin, *q* or *k*, at a single point only, to the stirrup by which it is connected with the sawgate, substantially as shown and described.

3,455.—ALBERT H. CARROLL, Baltimore, Md.—*Picker for Looms.*—Patented April 13, 1869, No. 88,845; reissued May 25, 1869.

Claim.—A picker, constructed as shown in the drawings, and provided with a layer of cloth, felt, or other suitable material, all substantially as and for the purposes set forth.

3,456.— AARON CHANDLER, Davenport, Iowa, and SAMUEL F. ESTELL, Richmond, Ind.—*Folding-Desk.*—Patented February 16, 1869, No. 87,025; reissued May 25, 1869.

Claim.—In combination with the book-box A, the slots *u*, in the standards S, S, the pins *t*, and pivoted braces D, substantially as described and for the purpose set forth.

3,457.—A. W. COATES, Alliance, Ohio.—*Horse-Rake.*—Patented August 27, 1867, No. 68,288; reissued May 25, 1869.

Claim.—The toggle H, constructed as described, whereby the rake teeth are held down, when the arms *d d* are in line, or nearly so, with each other, and lifted by drawing up the handle *e*, which raises the inner ends of the arms *d d'*, the weight of the driver assisting, substantially as herein shown and described.

3,458.—CARLOS B. CURTISS, Bridgeport, Conn., assignee, by mesne assignments, of CORNELIUS ST. JOHN. — *Lamp-Shade.*—Patented July 4, 1865, No. 48,632; reissued May 25, 1869.

Claim.—1. In a lamp-shade, hinging the several sides, so that they may be turned upon their respective hinges, to operate in the manner substantially as herein set forth.

2. The combination of the pyramidal lamp-shade A and the series of reflectors C C, &c., arranged and applied to it, substantially as and so as to operate as specified.

3. The pyramidal shade, as made with the heat resisting and reflecting lining and the adjustable reflectors, arranged substantially as specified.

3,459.—EDWARD GWYN, Tiffin, Ohio, assignee of CHARLES W. ISBELL.—*Gas and Water Pipe Joint.*—Patented July 24, 1860, No. 29,281; reissued May 25, 1869.

Claim. — 1. The combination of the spigot and bell, constructed to taper in reverse directions, as regards their contiguous surfaces, and in relation to or from the mouth of the bell, essentially as specified.

2. A pipe-joint, substantially as herein described, by constructing the spigot and bell, so that on fitting two lengths or sections of pipe together, they are made self-centering, and leave a packing-space around the spigot, of a wedge-like form or character, increasing in diameter from the month of the bell, essentially as and for the purpose or purposes herein set forth.

3. The combination, with the reversely-tapering bell and spigot, of the shoulder F to the inner portion of the bell, and curved extremity G to the inner end of the spigot.

4. The combinations of the openings C C and annular projection D with the reversely-tapering bell and spigot, substantially as shown and described.

3,460.—SILAS E. JACKSON and MORGAN P. JACKSON, Booneville, N. Y.—*Mowing-Machine.*—Patented December 29, 1857, No. 18,975; reissued May 25, 1869.

Claim.—1. The combination, with the cutting-apparatus and main frame of a harvesting-machine, of a flexible or yielding draught-connection, which extends from a part of the machine below the main axle, and near the heel-end of the finger-beam, or the shoe which supports it, to a point underneath, and in line with the tongue, but not connected thereto, for the purposes stated.

2. The combination, with the frame, having a laterally-projecting finger-beam, of a harvester, of a pole or guiding-device arranged to project forward of the line of cut, and a draught-connection, which is independent of such pole or guiding device of the machine, substantially as and for the purpose stated.

3. The combination, with the frame which supports the finger-beam in a harvesting-machine, of an oblique flexible or yielding draught-connection, but independent as a draught-connection from the pole by which the machine is guided, for the purposes stated.

4. The combination, with an independent flexible or yielding draught-connection, substantially as described, of a supporting-device for retaining the forward end of said connection and the whiffletree-

devices in elevated positions under the tongue, but which supporting-device does not prevent an independent longitudinal movement of the connection, for the purposes stated.

5. The combination, with the stud M and brace N, of the draught-chain O and ring *r*, substantially as and for the purposes set forth.

3,461.—JOHN F. KELLER, Hagerstown, Md., assignor to ABRAHAM MILLER, WILLIAM H. PROTZMAN, ALPHEUS R. APPLEMAN, and WILLIAM UPDEGRAFF, same place.—*Machine for Sowing Fertilizers.*—Patented January 8, 1861, No. 31,084; reissued July 5, 1864, No. 1,718; again reissued May 25, 1869.

Claim.—1. The arrangement of a series of spiked rollers, B, when placed vertically and moved through a partial revolution by a reciprocating motion, substantially as set forth, whereby the fertilizers are both delivered and prevented from clogging.

2. The combination of the clearers H and feed-slide R, (Figs. 5 and 6,) the latter having the peculiar openings G, with sharp edges for cutting the fertilizer away, substantially in the manner and for the purposes described.

3. The combination and arrangement of the rollers B, cranks C, and bar D, as and for the purpose specified.

3,462.—GEORGE A. LAWRENCE, Springfield, Mass., assignee, by mesne assignments, of MICHAEL SIMONS.—*Strainer for Coffee and Tea Pots.*—Patented March 5, 1867, No. 62,697; reissued May 25, 1869.

Claim.—The arrangement and combination of the removable strainer C, having a handle, D, thereon, with the guides B B, when made of Britannia-ware, or of other substance or metal, rendered non-corrosive, and attached to, and operating on the inside of the base of a tea or coffee pot, all constructed and operating substantially in the manner and for the purposes herein described and set forth.

3,463.—ROBERT O. LOWREY, Salem, N. Y.—*Bed-Bottom.*—Patented March 16, 1869, No. 87,948; reissued May 25, 1869.

Claim.—1. The slats A, having the holes *c*, with recesses for the points of the hooks to rest in, substantially as shown and described.

2. Connecting the adjoining springs of the series by means of the blocks E, constructed and applied as shown and described.

3. An elbow-spring, constructed substantially as herein described, with a hook on its upper or free end, for loose attachment to an opening in a slat, in the same vertical plane, or nearly so, with its attachment below, and with a shoulder formed on each side of the hook for the slat to bear upon, as set forth.

4. The combination of the slats A with the elbow-springs D and cross-bar B, when constructed and arranged substantially as described and for the purpose set forth.

3,464.—SILAS G. RANDALL, New Braintree, Mass.—*Seeding-Machine.*—Patented September 13, 1859, No. 25,443; reissued May 25, 1869.

Claim.—1. The harrowing plate-wheels D, revolving upon axes oblique to the line of draught, arranged in series, and inversely duplicated, substantially as shown and described, for the purposes specified.

2. The arrangement and combination of the series of plate-wheels D D, seed-boxes A, and horizontal bar B, substantially as herein described and shown, so that as the bar B is drawn along, the plate-wheels shall assume an oblique position, as set forth.

3,465.—JOHN SANDERS, Harrisburgh, Pa., administrator of the estate of RICHARD NORRIS, deceased.—*Exhaust-Nozzle for Steam-Engines.*—Patented November 24, 1868, No. 84,370; reissued May 25, 1869.

Claim.—The arrangement of the valves *c c*, rods *d d*, springs *e e*, partition *h*, and exhaust-pipes *b b*, constructed as described.

3,466.—THE S. STOW MANUFACTURING COMPANY, Plantsville, Conn., assignees of J. J. LAUBACH.—*Machine for Pressing the Locks of Sheet-Metal Plates.*—Patented January 6, 1857, No. 16,337; reissued May 25, 1869.

Claim.—The combination of the groover-roller F and the pressure-roller J, when combined and arranged so as to be moved simultaneously by the rack-bar E, or its equivalent, substantially as described, and for the purposes set forth.

3,467.—C. WHEELER, Jr., Auburn, N. Y., assignee of WILLIAM P. MAXSON.—*Harvester.*—Patented September 9, 1856, No. 15,703; reissued May 25, 1869.

Claim.—1. An adjustable cutter-frame, made in one piece, adapted to support a laterally-projecting finger-bar, and the bevel-wheel and pinion-shaft, for operating the cutters in combination with an arm or support for the driving-wheel, which is adjustable upon or around the pinion-shaft, as a center.

2. A driving-wheel, located outside of the cutter-frame, on a vibrating arm or support, in combination with an adjustable cutter-frame and reciprocating cutters.

3. A driving-wheel mounted on a vibrating arm, outside of the cutter-frame, said wheel having no outside support, in combination with an adjustable cutter-frame, a cutter-bar, a grain-platform, and an adjustable grain-wheel.

4. The vibrating drive-wheel arm, or support, located outside the cutter-frame, and provided with a lever for adjusting the height of said cutter-frame, substantially as described.

5. The combination, in a harvesting-machine, of the following elements, namely, a cutting-apparatus and a gear-frame, arranged inside of the driving-wheel, which is adjustable around the axial center of the first pinion-shaft; a platform, to receive, and an automatic rake to discharge the grain at one side, out of the path of the cutters; and a seat for the driver, so located that he will sit behind the axis of the driving-wheel.

3,468.—JOHN WILKESON, Buffalo, N. Y., assignee, by mesne assignments, of BENJAMIN M. VAN DERVEER.—*Pipe for Railway Water-Tank.*—Patented April 27, 1858, No. 20,108; reissued May 25, 1869.

Claim.—1. The combination, with a water-house, or reservoir, of a pipe-head and a water-pipe, when the latter constitutes a permanent appendage of the water-house, and is so constructed and arranged that it is capable of being placed and retained in such connection with the pipe-head as to form a continuous conduit, or passage for water from the interior of the house, or reservoir, through the pipe, and of having its connection with the pipe-head cut off, or broken, in such a manner that any water remaining in the pipe will at once run out, leaving it clear and dry, and thereby obviating all danger of its freezing or bursting, substantially as set forth.

2. The combination, with a water house, or reservoir and a water-pipe, having the capacities described, of a suitable weight, or counter-balance, so arranged and operating, that when the connection of the pipe with the pipe-head is cut off, or broken, it will automatically raise the pipe, so that any water remaining in it will at once run out, leaving it clear and dry, and will retain it in a convenient position, near to the water-house, in readiness for further use, substantially as and for the purposes specified.

3,469.—JAMES GREER and RUFUS J. KING, Dayton, Ohio.—*Cooking-Stove.*—Patented March 16, 1869, No. 87,925; reissued June 1, 1869.

Claim.—1. The fender B B′, constructed substantially as herein described, so as to admit of its being opened, for the purpose of getting at the fire, for broiling and other purposes.

2. The combination of the imperforate inner doors or fender B B′, forming the front wall of the fire-chamber, and affording access thereto for the removal of its contents, and the outer doors C C′, provided with the registers D, and forming, in connection with said inner doors, a space or passage for heating the draught-air and directing it to the bottom of the fire-space, and also to keep said outer doors cool, substantially as described.

3,470.—J. D. NIETSCKE, Somerset, Ohio.—*Preserving Dead Bodies.*—Patented September 24, 1867, No. 69,238; reissued June 1, 1869.

Claim.—1. The apparatus for filling the coffin with gas, consisting of the tube G, having the perforation *k*, in combination with the tube I, having the perforation *l*, and with the collars *h h'* and the cap O, substantially as and for the purposes specified.

2. Saturating defunct bodies with antiseptic gases, in an air-tight coffin, substantially as and for the purposes specified.

3,471.—AARON C. VAUGHAN, Philadelphia, Pa.—*Head-Light for Locomotives.*—Patented November 26, 1867, No. 71,431; reissued June 1, 1869.

Claim.—1. In combination with a parabolic reflector, an extension or rim J, shaped in the form of a frustum of a cone, attached to the parabola.

2. A parabolic reflector, and, attached thereto, the frustum of a cone, either with or without the use of a lens, substantially as described.

3,472.—J. C. BLYTHE, MARK JOHNSON, JAMES S. NOBLES, and CHARLES W. G. NOBLES, Perry, N. Y., assignees of J. C. BLYTHE.—*Flour-Bolt.*—Patented August 7, 1866, No. 56,887; reissued June 1, 1869.

Claim.—1. The combination, with the bolting-screen or cylinder, and the arms B B, sustaining the same, of the ribs C C, retreating or standing back, as described, so as to give a free sifting-action to the whole circle of the bolting-cloth, in the manner and for the purpose specified.

2. The combination, with the bolting-screen or cylinder, and the arms B B sustaining the same, of the radial partitions E E, dividing the interior of the said screen or cylinder into compartments, in the manner and for the purposes specified.

3. The combination, with the bolting-screen or cylinder, and the ribs C C, and arms B B sustaining the same, of the hoops D D, attaching and holding in line of the arms, and removable at pleasure, as herein set forth.

4. The construction and mode of attaching the bolting-screen or cylinder with an inside skeleton, substantially as described, whereby the whole inner surface of the bolting-cloth, except the parts covered by the hoops D D, is free and unobstructed, as herein set forth.

3,473.—J. L. BOOTH, Rochester, N. Y.—*Railroad-Rail.*—Patented August 28, 1866, No. 57,467; reissued June 1, 1869.

Claim.—The construction of steel-capped rails, substantially as herein described and shown.

3,474.—CORNELIUS AULTMAN, Mansfield, Ohio, assignee, by mesne assignments, of IRA HART.—*Machine for Thrashing and Cleaning Grain.*—Patented July 31, 1860, No. 29,374; reissued June 1, 1869.

Claim.—1. The combination, in a grain-separator, of two separating-platforms or shakers, which move in opposite directions, and are supported by or mounted upon vibrating links or arms, in such manner that both of said platforms shall rise during the entire extent of their throw in one direction, and fall during the entire extent of their throw in an opposite direction.

2. In a grain-separator, having two separating-platforms or shakers suspended or supported in such manner that they rise throughout the entire extent of their throw in one direction, and fall throughout their entire throw in an opposite direction, operating said platforms in such a manner that they shall rise and fall simultaneously.

3. The combination, in a grain-separator, of two separating-platforms or shakers, and lifting-rods or fingers, for lifting the straw from the platform over which it passes after leaving the thrasher.

4. The combination, in a grain-separator, of a concave deflector and a lifting separating-platform or shaker, provided with lifting-rods or fingers.

5. The scrapers K, which sweep the lower screen, when constructed with three sides, and arranged as shown, for the purpose set forth.

6. The combination of a stationary, adjustable deflector, N, with a swinging one, M, in the cap O of the machine, as set forth.

3,475.—C. JILLSON, Worcester, Mass. (Division A.) *Machine for Making Tapered Wire-Blanks.*—Patented September 15, 1857, No. 18,205; reissued June 1, 1869.

Claim.—1. The improved pattern-plate, *o*, swiveled at one end to the frame E, and slotted transversely at the other, to admit of different adjustments, as set forth.

2. The combination of a series of rests, *v*, with the socket or projecting support F, and cutting-tool, substantially in the manner and for the purposes described.

3. The combination of the rest *v*, yielding gauge *m*, and retreating knife C, all arranged and operating together, substantially as specified.

4. The construction and arrangement, substantially in the manner described, of mechanism for simultaneously gauging the blank and retiring the knife.

5. The arrangement of the reciprocating cutter C, projecting or supporting socket-piece F, and rest *v*, substantially as and for the purposes specified.

3,476.—C. JILLSON, Worcester, Mass.—(Division B.) *Method of Forming Conical Points on Wires, Rods, &c.*—Patented September 15, 1857, No. 18,205; reissued June 1, 1869.

Claim.—The process or method, herein described, by which a conical point is formed upon wire and analogous articles, namely, by adjusting the tool so as to commence the apex of the cone, or point, in the axial line of the wire, and turning the metal therefrom, in a continuously-increasing circle, until the base of the intended cone is reached, and the point formed, substantially in the manner set forth.

3,477.—CHARLES H. SAYRE, for himself, and THE REMINGTON AGRICULTURAL WORKS, Utica, N. Y., assignees, by mesne assignments, of CHARLES H. SAYRE and GEORGE KLINCK.—*Cultivator-Tooth.*—Patented February 12, 1856, No. 14,254; reissued June 1, 1869.

Claim.—1. So constructing a cultivator-tooth, that when made of thin or sheet-metal, a part thereof will form a tubular shank, B, whereby said tooth may be drawn up and securely attached to the frame, substantially as described.

2. Forming shoulders or braces G from sheet-metal, by bending or swaging it, substantially as and for the purpose set forth.

3. A cultivator-tooth made from sheet-metal, in such a manner as to form braces G and tubular shank B, substantially as described.

4. A cultivator-tooth made of sheet-metal, so as to form a tubular shank, B, and brace G, in combination with the nut F, screw-thread *a*, and plate A, substantially as and for the purpose described.

3,478.—JOHN F. SEIBERLING, Akron, Ohio.—*Harvester.*—Patented October 15, 1861, No. 33,496; reissued June 14, 1864, No. 1,701; again reissued June 1, 1869.

Claim.—1. The combination, substantially as described, of a shoe, to which the finger-beam is attached, a coupling-arm, pivoted at one end to the fore part of the shoe, and at the other to the main frame, and a brace-bar, rigidly secured to the coupling-arm at one end, and pivoted to the main frame at the other, with an intermediate coupling connecting the heel of the shoe with the brace-bar, for the purposes set forth.

2. The combination, substantially as described, of a shoe, extending behind the finger-beam, with a swiveling-link connecting the shoe and short coupling-arm, for the purpose of allowing the finger-beam to fold horizontally.

3. A short arm, or connection, one end of which supports the rear end of the shoe, and the other end of which is rigidly combined with a brace-bar, one end of which is supported by the rear inner corner of the main frame, and the other end by an arm, to which it is rigidly attached, extending from the front end of the frame to which it is pivoted, for the purpose set forth.

4. The arrangement of the hinged bars F F', for supporting the heel of the finger-beam, and for elevating and depressing the same, by means of a lever, G, said hinged bars being used in connection with a shoe, H, and its flexible attachment, substantially as set forth.

3,479.—AMALIE STIEREN, Natrona, Pa., assignee by mesne assignments, of EDWARD STIEREN, deceased.—(Division A.) *Process of Treating the Mother-Water of Salines to Obtain Useful Products.*—Patented December 12, 1854, No. 12,077; extended seven years; reissued June 1, 1869.

Claim.—1. The herein-described process for obtaining the crystals of the sulphate of magnesia from bittern-water of saline springs.

2. The herein-described process for obtaining iodine from the bittern-waters of saline springs.

3. The herein-described process for obtaining bromine from the bittern-waters of saline springs.

3,480.—AMALIE STIEREN, Natrona, Pa., assignee, by mesne assignments, of EDWARD STIEREN, deceased.—(Division B.) *Apparatus for Obtaining Bromine and other Products from the Mother-Water of Salines.*—Patented December 12, 1854, No. 12,077; extended seven years; reissued June 1, 1869.

Claim.—1. The within-described apparatus, for the production of sulphate of magnesia, or Epsom salts, from bittern-water of the salines, consisting of the pan A, vats B and F, filtering-tubs D D, &c., vat F, box G, pan H, and vessels I I, &c., all constructed and arranged substantially as and for the purpose herein set forth.

2. The eduleorating or filtering tubs D D, &c., constructed substantially as herein described, and for the purpose set forth.

3. The retort L, when constructed substantially as and for the purpose specified.

4. The apparatus used for the production of bromine, consisting of the stone vessels N and P, and the earthenware or burnt clay vessels O, R, S, and T, together with their communicating siphon-shaped pipes *n*, *o*, *p*, *s'*, and *t'*, all constructed and arranged to operate substantially as and for the purpose shown.

5. The vessels N and P, constructed of sandstone, granite, porphyry, or their equivalent, substantially as and for the purpose herein shown and described.

6. The application of steam to and within the vessels N and P, or their equivalent, substantially as and for the purpose herein shown.

7. The use of sandstone, granite, or porphyry, or their equivalent, in the construction of vessels for use in the production of bromine.

3,481.—C. J. STODDARD, Worcester, Mass.—*Hay-Spreader.*—Patented June 28, 1859, No. 24,588; reissued June 1, 1869.

Claim.—1. The combination, in a hay-making machine, of a frame, connected with the axle of the supporting-wheels, and a frame carrying rotating rakes, and vibratable about said axle, the combination being and operating substantially as set forth.

2. The combination, in a hay-making machine, of two wheels, a draught-frame, carrying a driver's seat, a vibratable frame, carrying rotating rakes, and a catch on the draught-frame, to hold up the rakes.

3. The combination, in a hay-making machine, of a draught-frame, carrying the driver, with a vibratable rake-frame, raised or lowered by the driver.

4. The combination, substantially as set forth, in a hay-making machine, of two wheels, a frame arranged between the wheels, and carrying the driver, and a vibratable frame, also arranged between the wheels, and carrying rotating rakes.

5. The combination, in a hay-making machine, of a frame vibratable on the axle of the supporting-wheels, with rotary rakes, mounted on the frame outside the periphery of the driving-wheels, and raking a swath wider than the distance between the wheels.

6. The combination, in a hay-making machine, of a frame vibratable about the axle of the supporting-wheels, with rakes rotated from the outer side of the driving-wheels.

7. The combination, in a hay-making machine, of a frame vibratable about the axle of the supporting-wheels, and a main frame, with a driving-belt, traversing pulleys on the axle and rake-shaft, substantially as set forth.

8. The combination, in a hay-making machine, of a perforated rotating shield, with rake-teeth, adjustable radially, relatively to their axis of rotation.

9. The combination, with a hay-making machine, of rotating rake-teeth, adjustable relatively to their axis of rotation.

10. The combination, with a hay-making machine having rotating teeth, of a stop to cause the teeth to act as rakes.

11. Making one set of the adjustable rotating rake-teeth longer than the others, for use as a hay-rake, as set forth.

12. The combination, in a hay-making machine, of rake-teeth, adjustable radially, relatively to their axis of rotation, with a frame vibratable about the main axle.

3,482.—EUGENE SULLIVAN, Boston, Mass., assignor to THE AMERICAN HORSE-COLLAR COMPANY, same place.—*Fabric for Covering Horse-Collars.*—Patented June 16, 1868, No. 79,024; reissued June 1, 1869.

Claim.—1. The combination of the within-described strong and elastic fibrous fabric with a water-proof layer or coating, composed wholly or in part of vulcanized caoutchouc or gutta-percha.

2. As a new manufacture, my improved horse-collar, the bearing-surface of which is formed of the within-described strong, elastic, and water-proof fibrous and gum fabric.

3,483.—LORING COES, Worcester, Mass., assignee, by mesne assignments, of GEORGE C. TAFT.—*Wrench.*—Patented November 10, 1863, No. 40,590; reissued June 1, 1869.

Claim.—1. An improved Coes wrench, so constructed that the thrust or back-strain of the rosette-screw, when the wrench is used, shall be borne by the shank, instead of the handle of the wrench, substantially as described.

2. A notch formed at right angles to the line of motion of the movable jaw, in the shank of a Coes wrench, for relieving the handle from the back-strain of the rosette-screw, substantially as described.

3. The combination of two or more parallel grooves, *d*, in the shank A, with two or more corresponding projections, *e*, on the rosette D, the same not being spiral, but running at right angles to the line of motion of the jaw, substantially as described.

3,484.—J. F. SEIBERLING, Akron, Ohio, assignee of FANNY HOLMES, executrix of the estate of JOHN E. NEWCOMB, deceased.—(Division 1.) *Harvester.*—Patented January 9, 1855, No. 12,215; extended seven years; reissued June 1, 1869.

Claim.—1. The combination, with the tongue and carriage, or main frame of a reaper and mower, of an intermediate spring-connection, substantially as and for the purposes set forth.

2. The combination, with tongue N and frame A, of the peculiarly-constructed spring-metal piece O O', substantially as described.

3. The combination, in a harvesting-machine, of the following elements, viz, two main supporting-wheels, a main frame, arranged between the two supporting-wheels, and vibrating around the main axle, a vibrating tongue, a seat for the driver, and a laterally-projecting finger-beam, connected, at one end only, to the forward end of the vibrating frame.

4. The combination, with the finger-beam of a front-cut two-wheeled combined reaping and mowing machine, connected at one end only to a vibrating frame, which admits of its rising and falling, to conform to the inequalities of the ground, of two small adjustable wheels, the outer wheel being connected with the outer shoe, so as to run on the ground back of the finger-beam, and the inner wheel arranged in advance of the back of the finger-beam, and connected to the machine at a point forward of the line of cut, whereby the finger-beam, whether adjusted for reaping or mowing, is supported and prevented from dropping into water-furrows, or dragging on the ground, substantially as described.

5. The combination, with the frame A, of the caster-wheel Q and adjustable frame Q', substantially as described.

6. The combination, with shoe S' and standard 8, on said shoe, of the supporting-wheel T, and its arm S, hinged to the forward end of shoe, substantially as and for the purposes as set forth.

7. The combination, with the outer shoe, of an arm,

hinged to the forward end of said shoe, and extending back to support a wheel which runs upon the ground in rear of the shoe, when the machine is in operation, substantially as described.

8. A metallic finger-beam for mowing and reaping machines, having a ledge, 12, and shoulder, 2, formed on its front upper corner, for receiving and guiding the back of the scythe, substantially as set forth.

9. A metallic finger-beam, for reaping and mowing machines, having a flange or down-projection upon its rear under side, for the purposes stated.

10. The combination of the grooved pressure-plate or bar *f*, and adjusting-screws *g*, with the scythe-plate, substantially as and for the purposes set forth.

3,485.—J. F. SEIBERLING, Akron, Ohio, assignee of FANNY HOLMES, executrix of the estate of JOHN E. NEWCOMB, deceased.—(Division 2.) *Harvester-Dropper.*—Patented January 9, 1855, No. 12,215; extended seven years; ; reissued June 1, 1869.

Claim.—1. The combination, with the finger-beam of a reaping-machine, of a dropping-platform, with mechanism for operating the same, whereby the driver, from his seat on the machine, can, by the simple action of the foot, release said platform so that it may drop toward the ground at regular or irregular intervals, to discharge the cut stalks of grain in gavels upon the ground.

2. The combination, with the inner and outer shoes of a reaping-machine, of pivots *a a*, substantially as and for the purposes described.

3. The combination, with a dropping-platform, the pivots or journals of which are supported by the inner and outer shoes, substantially as described, and in rear of the finger-beam, of an operating-crank or projecting arm, attached to the inner pivot or journal, for the purposes stated.

4. The combination, with the crank or projecting arm I, arranged as described, for operating the platform, of a shield or guard, R, or equivalent device, for shielding said arm from cut stalks of grain, substantially as stated.

5. The combination, with the operating-crank I, arranged substantially as described, of an elevating, holding, and depressing rod or bar, arranged parallel, or nearly so, with the line of motion of the machine, for the purposes stated.

6. The combination, with the crank or projecting arm, combined with the journal which supports the inner end of a dropping-platform in a reaping-machine, of a holding rod or bar, for retaining said platform in an elevated position until a sufficient quantity of cut stalks of grain has accumulated to form a gavel.

7. The combination, with the rod or arm which holds the rear of the platform in an elevated position while the cut stalks of grain are accumulating to form a gavel, of a stop or check-piece on the frame of the machine, for retaining the operating-rod, for the time being, in a fixed position, and relieving the driver, substantially as stated.

8. The combination, in a reaping-machine, of mechanism for automatically elevating the dropping-platform, with a retaining stop or device for holding said platform in an elevated position until released by the action of the driver's foot.

9. The combination, in a reaping-machine provided with a grain-dropping platform, of a foot-device, so arranged and combined with the devices and mechanism by which the platform is operated, that they can be thrown into gear at pleasure by the foot of the driver, for the purposes stated.

10. The combination, in a reaping-machine, with a finger-beam, arranged so that it can rise and fall, to conform to the inequalities of the ground over which it is drawn, of a dropping-platform, and devices or mechanism for operating the same, in such a manner that the platform can, by means of mechanism thrown into action or gear by the driver's foot, be retained in an elevated position, or allowed to drop, to discharge the gavel, at the pleasure of the driver.

11. The combination, with the platform-arm or crank I, of rod or bar J, cam K, stop *m*, loop *f*, and foot-spring piece K, with its projections *e* and *d*, substantially as and for the purposes set forth.

12. The combination, with the finger-beam of a reaping-machine, of a grain-platform, adjustable or extensible in the direction of its width, substantially as and for the purposes stated.

13. A dropping-platform, for supporting the cut stalks of grain, in a reaping-machine, made in longitudinal sections, one section of which can be moved so as to reduce the platform in width, the width of the section so moved, for the purposes stated.

3,486.—CORNELIUS AULTMAN, Mansfield, Ohio, assignee, by mesne assignments, of CYRUS ROBERTS.—*Machine for Thrashing and Separating Grain.*—Patented April 16, 1861, No. 33,085; reissued June 8, 1869.

Claim.—1. The combination of the perforated feed-board *a*, with the vibrating conveyor, substantially as specified.

2. Constructing the concave with diverging distributing-grooves, or channels, substantially as described.

3. The combination, with grooves in the concave, of supplemental distributing-grooves or channels, in front of the concave, substantially as described.

4. The combination, in a grain-separator, of two separating-platforms, or shakers, each provided with lifting-rods or fingers.

5. Two vibrating conveyors or separators, moving in opposite directions, for counterbalancing each other, and one of which projects underneath the cylinder, in combination with lifting-fingers, or their equivalent, for the purpose set forth.

6. Constructing the separator in sections, having opposite and simultaneous vibrating motion, in combination with lifting-fingers overlapping the opening between the sections.

7. The method of separating the grain from the straw by drawing out and attenuating, and, at the same time, shaking, by means of lifting-fingers, the mass of mixed straw, grain, and chaff over the openings between the sections of the separator, substantially as described.

8. The diaphragm *d'*, the fingers *j*, above the space *d''*, and bottom *d*, below, in combination, substantially as described.

9. The combination, with a vibrating conveyer and separator, of fine rods or fingers, over the throat of the conveyor, and coarse vibrating and shaking fingers above the finer ones, the coarse fingers shaking up the straw, and making a coarse separation, and the fine fingers making it finer and more complete, thereby facilitating the winnowing.

10. The combination of the head-trap *z'*, with a wheat-screen, *z*, acting together, substantially as described.

3,487.—JOHN A. LIEB, Newark, N. J., for himself, and assignee of JOHN SCHAMADEL.—*Caster for Trunks.*—Patented June 13, 1865, No. 48,214; reissued June 8, 1869.

Claim.—A caster consisting of a flexible plate and a roller, striking up lugs, or ears for the roller-journal from inside of the flexible plate, substantially as described.

3,488.—DANIEL MATER, Bellmore, Ind.—*Plow.*—Patented October 6, 1868, No. 82,858; reissued June 8, 1869.

Claim.—1. The arrangement of the transversely-adjustable shield F, with reference to the beam of the plow and shovel C, substantially as shown and described.

2. In combination with the beam and standards, the brace-rods H, clamps I, and nuts I', substantially as and for the purpose set forth.

3. The construction of the shovel C' with its guides or studs, for retaining the same in position, in connection with the staple for securing it to the standard.

4. The arrangement of the bolts *b b b*, at equal distances apart, in combination with the rear standard and brace, as set forth, for the purpose described.

3,489.—W. H. NETTLETON, Bristol, Conn., assignee of WILFORD H. NETTLETON, CHARLES RAYMOND, and ANSON HATCH.—*Machine for Turning Pillars for Clock-Movements.*—Patented November 17, 1857, No. 18,661; reissued June 8, 1869.

Claim.—1. The combination, substantially as described, of the wire to be operated on; the straight-

ener and its sliding carriage, or support; mechanism for drawing forward the wire, and with it the straightener and its carrier; mechanism for holding the wire in a fixed position after each successive drawing, or feed forward; and mechanism for gradually forcing the straightener and its carriage back to their original positions after each movement forward, for the purposes of straightening the wire and feeding it up to the cutters and jaws.

2. The compound levers *i* and 19, made and acting in connection with the feeding-slide *h* and clamp 14, substantially as and for the purposes specified.

3. The holding-jaws *k* and 26, constructed and combined substantially as described, in combination with the screws 28 and 29 and the cam *n*, substantially as and for the purpose set forth.

4. The holding-jaws *k* and 26, constructed and combined substantially as described, in combination with the screws 28 and 29, cam *n*, and turning-tools 32, substantially as and for the purpose set forth.

5. The combination of the feeding-device *h*, hopper 37, jaws *k* and 26, and the turning-tools 32, as and for the purpose set forth.

3,490.—Edmund D. Reynolds and O. Bradford Reynolds, North Bridgewater, Mass.—*Combined Cultivator and Harrow.*—Patented January 24, 1865, No. 46,025; reissued June 8, 1869.

Claim.—1. In combination with a wheeled frame or carriage-body, a share or shares, secured to a beam or beams, so arranged as to swing vertically, the share or shares being thus left free to move in vertical directions while in operation, and so as to be self-adjusting as to depth of penetration into the soil, each share also having provision for angular adjustment, relatively to its beam, substantially as shown and described.

2. In combination with the shares *g*, the rotary harrow, arranged to swing vertically, substantially as set forth.

3,491.—Anna Weissenborn, New York, N. Y.—*Tuck-Creasing Attachment for Sewing-Machine.*—Patented May 28, 1867, No. 65,141; reissued June 8, 1869.

Claim.—1. The combination, with a stationary gauge-plate, A, of the movable blade A^{12}, having a creasing-edge, A^{12}, and the creasing-wheel A^{10}, or their stated equivalents, when the said blade and wheel are connected together and adjustable in relation to the gauge, substantially as described.

2. In combination with the above, a spring, substantially as described, for pressing the wheel against the edge.

3. In combination with the elements of the first clause the wheel-elevating devices A^5 B.

4. The combination, with a stationary gauge-plate and with creasing-mechanism, substantially such as described, connected together and adjustable thereon, of a set-screw, for confining the said creasing-devices in proper position with the gauge.

3,492.—Benjamin J. Greely, Boston, Mass.—*Suspender.*—Patented October 10, 1865, No. 50,351; reissued June 8, 1869.

Claim.—1. Suspenders, consisting of straps, passing over the shoulders, uniting under the arms, the two connected together behind, and provided with suitable devices for sustaining the pantaloons at the sides, the whole arranged so as to operate substantially as described.

2. In combination with the straps and devices for sustaining the pantaloons, specified in the first claim, the adjustable strap A, when so arranged as to form a combined shoulder-brace and suspender.

3. The combination, with suspenders and pantaloons, of a spring-hook and ring, substantially as and for the purpose specified.

3,493.—J. H. Myers, Philadelphia, Pa., assignee of Collins B. Brown.—(Division A.) *Harvester.*—Patented July 11, 1854, No. 11,249; extended seven years; reissued June 8, 1869.

Claim.—1. A main frame, mounted on two main carrying-wheels, in combination with a laterally-projecting finger-bar, arranged in rear of the axis of the drive-wheel, and propelled or drawn forward over the ground by a hinge-connection with the main frame at its inner or heel-end only.

2. In combination with the main frame of a two-wheel rear-cut machine, a laterally-projecting finger-bar, connected with the main frame, and drawn forward over the ground by hinges in front and rear of the main drive-wheel axle.

3. An inclined or oblique brace, W, to the hinged finger-bar, located between the main carrying-wheels.

4. A hinged finger-bar, in combination with a hinged brace, to assist in propelling said finger-bar, arranged underneath and crossing the main drive-wheel axle.

5. Varying the height of the inner end of the finger-bar, to adapt the machine to mowing or reaping, as desired, by the adjustment of the propelling-hinges.

3,494.—J. H. Myers, Philadelphia, Pa., assignee of Collins B. Brown.—(Division B.) *Harvester-Rake.*—Patented July 11, 1854, No. 11,249; extended seven years; reissued June 8, 1869.

Claim.—1. A grain-platform, connected with the main frame, and propelled over the ground through the medium of the hinged finger-bar only.

2. An automatic rake, in combination with a laterally-projecting hinged finger-bar and platform.

3. The combination of a main frame, two main supporting-wheels, a laterally-projecting hinged finger-bar and platform, and an automatic rake.

4. A laterally-projecting finger-bar and grain-platform, in combination with the supporting-arm of an automatic rake, which is connected to and operated by a horizontal driving-wheel, arranged below the top of the main ground or drive-wheel.

5. In a harvesting-machine, having two main carrying-wheels and a laterally-projecting cutting-apparatus and platform, an automatic rake for discharging the grain from said platform, operated from between the main carrying-wheels.

3,495.—Frederick Nishwitz, Brooklyn, N. Y.—(Division A.) *Harvester.*—Patented February 21, 1865, No. 46,488; reissued June 8, 1869.

Claim.—1. Connecting the finger-beam with the main frame by means of a joint, composed of semicircular grooves in the pendants, and semicircular projections on the socket of the finger-beam, substantially as described.

2. The combination of the rigid metallic shoe with the finger-beam, vibrating on a pivot behind the shoe, substantially as set forth.

3. The combination of the main frame, the finger-beam, and the pitman, with the supplementary guard-shoe, operating substantially as set forth.

4. The combination of a frame, vibrating about a gear-center, and a laterally-projecting cutting-apparatus, hinged to said frame at one end only, with a fixed shoe in advance of the finger-beam, substantially as set forth.

3,496.—Frederick Nishwitz, Brooklyn, N. Y.—(Division B.) *Harvester.*—Patented February 21, 1865, No. 46,488; reissued June 8, 1869.

Claim.—1. The combination of the main frame, vibrating on the main axle, the tongue, vibrating on the main frame, the finger-beam, hinged to the main frame, and the lifting-lever, mounted on the tongue, with the tilting-lever, interposed between the tongue and gear-frame, in the same vertical plane as the finger-beam, with which it is also connected by a chain, attached outside of the pivot of the finger-beam, the whole being constructed for joint operation, as set forth.

2. The combination of a vibrating gear-frame, and a vibrating draught-frame, with a driver's seat supported on the draught-frame, and connected with the gearing-frame by a pivoted link.

3. The combination of a vibrating gear-frame, a vibrating tongue or draught-frame, and a vibrating driver's seat, with a lifting-lever, L, the combination being and operating substantially as set forth.

4. The combination, substantially as set forth, of a vibrating tongue or draught-frame, and a vibrating gear-frame, with a driver's seat, mounted on the tongue or draught-frame, and connected with the gear-frame by an adjustable pivoted link, for the purposes specified.

3,497.—Frederick Nishwitz, Brooklyn, N. Y.

—(Division C.) *Harvester.*—Patented February 21, 1865, No. 46,488; reissued June 8, 1869.

Claim.—1. The combination of two driving-wheels, the fixed internally-geared spur-wheel on the frame, with spur-pinions on an arm revolving with the main axle, and with the interposed loose pinion on the axle, as set forth.

2. The combination of a fixed internally-geared spur-wheel D, pinions E′, and arm E, revolving with the main axle, an interposed pinion, E, turning loosely on the main axle, and a bevel-wheel, also turning loosely on the main axle, and driving the crank-shaft, the combination being and operating as set forth.

3. The combination, as described, with the fixed gear-wheel, of the disk or shield to inclose the gearing and protect the driver.

3,498.—George P. Reed, Boston, Mass.—*Regulator for Time-Pieces.*—Patented February 5, 1867, No. 61,867; reissued June 8, 1869.

Claim.—The adoption of a spring, suitably adapted to one side of the index-pointer of an ordinary watch or time-piece regulator, in combination with an adjusting-screw, or equivalent device, applied to the opposite side thereof, against which it is forced by the action of the spring, and which impels the lever in one direction against the power of the spring exerted to force it in a reverse direction, substantially as described.

3,499.—W. Edgar Simonds, Hartford, Conn.—*Telegraph-Insulator.*—Patented November 26, 1867, No. 71,418; reissued June 8, 1869.

Claim.—1. The shoulder *c*, or its equivalent, formed upon the body of an insulator, for the purpose of supporting the rubber band *o*, or its equivalent, in combination with the rubber band *o*, or its equivalent, attached to and supported by said shoulder, the whole arranged, constructed, and operating as described, for the purpose described.

2. The combination of the insulator proper A, the rubber band *o*, and the cup *s*, together with the standard or shank supporting it, the whole constructed, arranged, and operating as and for the purposes described.

3,500.—Lemuel T. Wells, Saint Louis, Mo.—*Printing-Press.*—Patented March 20, 1855, No. 12,568; reissued June 8, 1869.

Claim.—1. A turning or partially-rotating platen, upon a vibrating arm or arms, substantially as and for the purpose set forth.

2. The platen U, hinged or pivoted to vibrating arms V, in combination with the stationary pin or pins *n* and retracting-springs K, or equivalent devices, for the purposes explained.

3,501.—Jesse Hanford, Lexington, Mass.—*Machine for Granulating and Drying Sugar.*—Patented September 18, 1866, No. 58,098; reissued June 8, 1869.

Claim.—1. The employment of a revolving cylinder provided with the helical wings, or their equivalent devices, for elevating the sugar or other substance, and allowing it to be precipitated to the bottom of such cylinder, and also with a suitable means of drying said sugar or substances.

2. The combination of the hollow rotary drum or cylinder I, and the tubular heater, arranged and connected substantially as described.

3. The combination of the rotary or hollow cylinder I, the crushing-roller K, and the tubular heater, arranged and applied together, substantially in manner and so as to operate as and for the purpose described.

4. The combination of the journals *e e*, and their supporting-standards B B, of the tubular heater with such heater, and the rotary cylinder, or the same and the crushing-roller applied and arranged together, substantially as specified.

5. The combination and arrangement of the series of helical rings *i i*, with the cylinder and heater, applied in the manner, and so as to operate as specified.

3,502.—C. Aultman, Mansfield, Ohio, assignee, by mesne assignments, of Cyrus Roberts and John Cox.—*Grain-Separator.*—Patented March 25, 1856, No. 14,517; reissued June 15, 1869.

Claim.—1. The combination, with a separator which is made to widen as it recedes from the cylinder, of lifting or shaking rods, or fingers, for the purpose of carrying forward, agitating, and attenuating the straw.

2. The method of facilitating the separation of the grain from the straw, by means of diverging-bars and lifting-rods, or fingers, substantially as herein described.

3. Constructing the rear portion of the conveyer with a solid ridged bottom, in such manner as to form a series of diverging channels, to spread the grain preparatory to delivering it to the winnower, as herein set forth.

4. The combination, with a separating-platform, of lifting-rods, or fingers, adapted to be raised above and withdrawn below the surface of the said platform on which the straw rests.

5. The combination, with the separator, of two or more rock-shafts, provided with lifting-fingers, operating as set forth.

6. Two or more sets of lifting-fingers, or their equivalent, for raising the straw up from and dropping it again upon the separator-bottom for the purpose described.

7. The lifting-rods, or fingers, in combination with means for adjusting their throw, substantially as and for the purpose set forth.

8. The employment of lifting-rods, or fingers, arranged and operating in such manner that they will rise on the forward movement of the conveyer, and thus lift and shake the straw as it is thrown forward, in combination with the carrying-bars, whereby certain advantages are attained, as herein set forth.

9. The arrangement of lifting-rods, or fingers, in a recess, M, in the bottom of the conveyer, in such manner that they can be alternately protruded above and retracted below the carrying-bars, to shake the straw thoroughly, and at the same time not interfere with its conveyance, as herein described.

10. The adjustable turning tail-spout P, arranged substantially in the manner and for the purpose herein set forth.

3,503.—Harrison Ogborn, Richmond, Ind.—(Division A.) *Fanning-Mill, Grain and Seed Separator.*—Patented November 12, 1867, No. 70,885; reissued June 15, 1869.

Claim.—1. The trough I^3, situated under and at the lower end of the upper grain-board, with a removable side, i^3, substantially as and for the purposes described.

2. The combination of the adjustable trough I^3 with the upper grain-board I^1, forming the bottom of the front part of the shoe I, and the adjustable screen J, substantially as and for the purposes described.

3. A hopper, consisting of the side-boards E, with converging grooves *e*, the sliding board F, and adjustable swinging board H, substantially as and for the purposes described.

4. The combination of the swinging board H, lever E′, provided with a tooth or spur, *e′*, and the rack c^2, substantially as and for the purposes described.

5. The vertical circular rim R, secured to the fan-wings Q, substantially as and for the purposes described.

6. The knocker-rod *p*, with its bent part *p′*, and the lever *n*, substantially as and for the purposes described, of giving a jolting motion to the screen.

7. The rod *p*, in combination with the linked rods *m* and *m′*, wrist *v*, and wheel V, substantially as and for the purposes described.

8. The pins g^2, on the cleats of the sliding doors G′, substantially as and for the purposes described.

3,504.—Harrison Ogborn, Richmond, assignor to Ellis Michael, La Porte, Ind.—(Division B.) *Fanning-Mill.*—Patented November 12, 1867, No. 70,885; reissued June 15, 1869.

Claim.—The devices described, W, *k*, k^1, k^2, *l*, *x*, *p*, and V, for the purpose of imparting increased motion to the "shoe" of a fanning-mill, and which imparts four motions to the "shoe," to one revolution of the fan-shaft.

3,505.—J. B. Rand, Concord, N. H.—*Composi-*

tion for Welding Iron and Steel.—Patented March 16, 1869, No. 87,968; reissued June 15, 1869.

Claim.—A welding-composition, made of the ingredients and in the manner substantially as described and set forth in the specification.

3,506.—THE SHAW AND WILCOX COMPANY, Bridgeport, Conn., assignees, by mesne assignments, of JEHYLEMAN SHAW.—*Apparatus for Recovering Gold and Silver from Waste Solutions.*—Patented July 8, 1862, No. 35,842; reissued April 5, 1864, No. 1,652; again reissued June 15, 1869.

Claim.—An apparatus for recovering gold, silver, &c., from waste solutions, by means of suitable precipitating-ingredients, substantially as herein specified.

3,507.—THE AMERICAN RAILWAY GAS-LIGHT COMPANY, New York, N. Y., assignees, by mesne assignments, of JOHN B. TERRY.—*Gasoline Head-Light.*—Patented December 24, 1867, No. 72,697; reissued June 15, 1869.

Claim.—1. A head-light or lamp for locomotive-engines, produced by the vapor of a volatile hydrocarbon-liquid, generated by the heat of steam applied from the boiler of the locomotive, substantially as set forth.

2. The combination of a hydrocarbon-liquid-holding vessel, provided with a burner or burners, of an internal coil, for admitting steam from the locomotive-boiler to vaporize such liquid, for the production of an illuminating-gas, substantially as set forth.

3. The combination, with a hydrocarbon-liquid vessel, provided with a burner or burners, of a surrounding jacket, for admitting steam from the locomotive-boiler, for vaporizing such liquid, for the purpose of generating an illuminating-gas, substantially as set forth.

4. The combination of a burner or lamp, having its flame supplied by the vapor of a hydrocarbon-liquid generated by the application of steam from the locomotive-boiler, with the reflecting-box, known as a locomotive head-light, as set forth.

5. The combination, with the hydrocarbon-vessel, of an elastic diaphragm and valve or stopper, operating in connection with the steam-induction pipe, for the automatic regulation of the vapor generated, substantially as set forth.

6. The employment, for locomotive head-lights, of porous, fibrous, or other capillary material, for holding the hydrocarbon-liquid in the vaporizing-vessel, for the better volatilization by heat, substantially as set forth.

7. The use, in the liquid-holding vessel of locomotive-lamps or head-lights, of porous, fibrous, or capillary material, to prevent the swashing or agitation of the liquid under the motion of the locomotive, substantially as set forth.

3,508.—JAMES RADLEY, ALEXANDER MCALISTER, and ROBERT S. AIKMAN, New York, N. Y., assignees, by mesne assignments, of PETER BUDENBACH.—*Lamp for Locomotive Head-Lights.*—Patented March 24, 1863, No. 38,001; reissued June 15, 1869.

Claim.—The bridge in the oil-chamber A A, formed of the curved plate C and perforated sides *a a*, and provided with a perforated cylinder, D, inclosing the tube B which leads to the lamp, substantially as and for the purpose specified.

3,509.—AMERICAN CAR-HEATING COMPANY, New York, N. Y., assignee, by mesne assignments, of W. S. MCNEIL and O. S. CADWELL, JR.—*Railroad-Car Heater.*—Patented August 25, 1868, No. 81,392; reissued June 22, 1869.

Claim.—1. A railroad-car heating and ventilating apparatus, in which the following elements are combined, substantially as hereinbefore described, viz: 1. Pipes, or conduits for taking in air from the exterior of the moving car. 2. Means for distributing or both heating and distributing, through the car, the air received from such conduits. 3. Passages or openings for taking in air when the car is at rest, and conducting it to 4. A heating-chamber, or space, wherein such air is heated, and from which it is discharged into the body of the car, such chamber, or space, being distinct from that which receives and heats the air taken in when the car is in motion.

2. The combination, with the elements named in the preceding clause, of an air-purifying apparatus, for removing the impurities from the air taken in when the car is in motion, before such air is distributed through the car.

3. The arrangement, substantially as herein described, of two separate and non-communicating annular air-heating chambers around the radiator, or heater, the one receiving air from above the car, when in motion, by means of funnels and automatic valves, and discharging it into the car through perforated pipes, as specified; the other receiving air from the base of the radiator, or heater, or from below the car when at rest, and discharging it directly from the heater; the air in both cases being heated while ascending through the heater, substantially as and for the purposes set forth.

4. The construction of the air-purifying chamber, provided with absorbent material, as specified, and its arrangement with relation to the air-supply pipe and the heater, substantially in the manner shown and described.

3,510.—JOHN C. BYRAN, Titusville, Pa., assignee, by mesne assignments, of EDWARD GUILLOD.—*Construction of Drilling-Jar.*—Patented June 16, 1868, No. 78,958; reissued June 22, 1869.

Claim.—1. The manufacture of drilling-jars, of combined iron and steel, in which at least the part *a* in each half of the jars that receives the blow, and the inner faces *a'* of the link-bars *b*, shall be of steel, substantially as and for the purposes described.

2. The hereinbefore described drilling-jars, constructed of wrought iron and steel, combined substantially in the manner and for the purposes set forth.

3,511.—JOSEPH H. DENIGER, Bridgeport, Conn.—*Tempering Steel Springs.*—Patented March 23, 1869, No 88,142; reissued June 22, 1869.

Claim.—The mode, method, or process herein described, of tempering steel springs for railroad-cars, carriages, &c.

3,512.—PATRICK JOYCE, Rochester, N. Y.—*Coffin-Bier.*—Patented March 9, 1869, No. 87,570; reissued June 22, 1869.

Claim.—1. The employment, in connection with a coffin-bier or other coffin-holder, or support, of a wholly or partially revolving platform, or equivalent, for the purpose set forth.

2. In combination with a wholly or partially revolving platform, or equivalent, as described, so arranging the same that it may be elevated to any desired height, for the purpose specified.

3. In combination with a coffin-bier, or other coffin-holder, or support, provided with a wholly or partially revolving platform, or equivalent, the screws D, or equivalents, for elevating the same, for the purpose specified.

4. In combination with a bier or other coffin-holder, having a wholly or partially revolving platform, the hinged block to support and strengthen the platform, when said platform is revolved and elevated by means of a central screw-pivot.

3,513.—JOHN O'MAHONY, Savannah, Ga.—*Dray-Saddle.*—Patented April 28, 1868, No. 77,310; reissued June 22, 1869.

Claim.—1. In a dray-saddle, the beveled blocks C C, secured to the leather covering A, in combination with the pads D, and grooved bar B, said blocks C being secured to the pads at their centers, for the purpose of preventing such pads from flattening upon the back of the animal, under the weight of the dray, as herein shown and described.

2. In a dray-saddle, the bent and beveled blocks C, when constructed and arranged to operate substantially as and for the purposes specified.

3. A dray-saddle, having cover A, blocks C, and pads D, constructed and arranged to operate substantially as described.

3,514.—MATHEW G. SLEMMONS, Cadiz, Ohio.—*Plow.*—Patented October 9, 1860, No. 30,357; reissued June 22, 1869.

Claim.—1. Two converging beams A A, each one of which has a shovel-standard, A′, formed by bending its rear end, substantially as described.

2. the converging beams A A, connected together, and constructed with curved shovel-standards, A′ A′, upon them, substantially as described.

3. The union of the front ends of plow-beams, which have their rear ends bent to form shovel-standards, by means of a clevis, or device, by which the team are hitched to the implement, substantially as described.

4. The converging plow-beams A A, having shovel-standards A′ A′ formed on them, in combination with handles F F, and handle-supporting braces E E, substantially as described.

5. In combination with the foregoing, also, the manner, substantially as described, of adjusting the handles F F, and securing them to the beams at any desired angle.

6. Constructing, of one piece of metal, a plow-beam A and a curved shovel-standard, A′, with a shoulder *d*, formed on the latter, substantially as described.

3,515.—Mervin R. Smith, Armonk, N. Y.—*Sewing-Machine.*—Patented March 24, 1863, No. 37,985; reissued June 22, 1869.

Claim.—1. The combination of the cam G, having an eccentric slot, curved as shown and described, and arranged upon the needle-end of the main shaft F, with the reciprocating needle-bar D, provided with a pin projecting into said slot, substantially as and for the purposes set forth.

2. The combination of the needle-operating cam G, constructed as described, the shuttle-driving eccentric J, and the feed-lever H, having an elongated slot, *n*, fitted with a slide, *p*, and deriving a positive motion in both directions from a crank-wrist, *k*, the whole arranged and operating substantially as set forth, to cause the machine to operate with the driving-shaft or pulley rotating in either direction, and the feed to be reversed by reversing the direction of the said shaft or pulley.

3. The combination, with each other and with the isolated portion of the flat bed constituting a cylinder, or its equivalent, of the shuttle-driving eccentric J, rod M, rock-shaft L, arm N, rod P, and feed-operating crank-wrist *k*, the whole arranged and operating substantially as and for the purpose herein specified.

4. The slide *y*, guide-bar *w*, and spring *z*, combined with each other and the shuttle, substantially as and for the purpose herein specified.

3,516.—William A. Clark, Bethany, Conn.—*Expansive Bit.*—Patented May 11, 1858, No. 20,192; reissued June 22, 1869.

Claim.—1. The construction of the shank so as to form a seat, or bearing for the adjustable cutter, so that the said cutter will take its bearing above or back of the edge, the said cutter being held into its seat by the action of a set-screw brought to bear upon the cutter, substantially as described and for the purpose set forth.

2. The arrangement of the fixed and expansive cutters C B, on opposite sides of their axis, when constructed to operate as shown and described.

3,517.—Alpheus C. Gallahue, Riverdale, N. Y.—*Machine for Pegging Boots and Shoes.*—Patented March 29, 1859, No. 23,361; reissued June 22, 1869.

Claim.—1. The rack-bar E, constructed of two parts, *e* and *f*, arranged substantially as described, so as to adjust it for boots or shoes of various sizes.

2. Pivoting the plate, or frame G, that supports the last, at or near its center, and so arranging it that it may turn on said pivot during the operation of pegging, thereby so adjusting the boot or shoe as to present the various portions of the sole in the requisite position to the awl and peg, as the sole moves along, substantially as described.

3. The inclined planes *i*, or their equivalents, when arranged to operate in combination with the hinged plate G, for adjusting the boot or shoe, substantially as set forth.

4. The inclined peg-gauge *y′*, in combination with the feed, or peg-box S, so as to gauge the pegs from their lower ends, as described.

5. The vibrating socket *c′*, in connection with the plunger-rods *u v*, arranged in the same slide-bar *t*, to operate as set forth.

6. The bar R, provided with the shoulder, or bearings *s*, at its front end, and having the yoke *o′* hinged to its rear end, and arranged to be operated by the cam *p′*, as and for the purpose set forth.

7. The combination of the swinging bed-plate D and rack B, arranged to operate as described.

3,518.—Benjamin F. Morey, Clinton Ind.—*Tire for Wagons.*—Patented January 19, 1869, No. 86,029; reissued June 22, 1869.

Claim.—1. The grooved tire B, combined with the exterior flat surface of the felly A, substantially as herein shown and described, and for the purpose specified.

2. A tire, or band, having a grooved interior, as described, when designed for use as a receptacle of lubricating-matter upon the exterior surface of cylindrical bodies.

3,519.—Russell and Erwin Manufacturing Company, New Britain, Conn., assignees, by mesne assignments, of Marshall T. Lincoln.—*Door-Latch.*—Patented May 31, 1864, No. 42,954; reissued June 22, 1869.

Claim.—1. The combination of the latch B, and sliding or locking bolt D, constructed and arranged so that both are acted upon or operated by the closing of the door, and that the latter will, as the former moves back to fasten the door, lock or secure the latch, for the purposes set forth.

2. In combination with such latch B and locking-bolt D, the arrangement of the cam E, for moving or sliding back the bolt D, for the purposes set forth.

3. The combination and arrangement of the latch B, knob C′, lever C, and sliding bolt D, operating substantially as and for the purposes set forth.

4. In combination with the latch B, and sliding or locking bolt D, the arrangement of the key-bolt G, or its equivalent, for moving back such bolt, for the purposes specified.

5. The combination and arrangement of the tumblers H, key-bolt G, latch B and sliding-bolt D, for the purposes specified.

6. The combination of the latch B and cam E, pivoted to said latch, substantially as and for the purposes specified.

3,520.—Frances Lee Barnes, New York, N. Y., administratrix of the estate of Samuel H. Barnes, deceased.—*Corset-Spring.*—Patented July 17, 1866. No. 56,345; reissued May 12, 1868, No. 2,929; again reissued June 29, 1869.

Claim.—1. A corset-spring, consisting of two or more metallic plates placed one upon another, and fastened together at their centers, but so connected, at or near each end, that they can play or move upon each other in the direction of their length.

2. A corset-spring consisting of the parts B provided with pins *b*, and slotted springs B^2, riveted as shown, and having suitable clasps C, and headed rivets D, and of form corresponding to the body of the wearer, constructed and operating in the manner and for the purpose herein shown and described.

3,521.—Eldridge M. Fowler, Bay City, Mich., assignee of John W. Thompson.—(Division B.) *Mowing-Machine.*—Patented July 15, 1856, No. 15,354; reissued June 29, 1869.

Claim.—1. In a rear-cut harvester, a frame carrying a cutting-apparatus, arranged to vibrate about a center coinciding with the center of rotation of a bevel-wheel, which is mounted on an axis parallel with but independent of the main drive-wheel axle, the combination being and operating substantially as set forth.

2. The combination of the vibrating frame, carrying the shaft for driving the cutters, and a bevel-pinion, with a frame carrying a bevel-wheel mounted on an axis independent of the main drive-wheel axle, in such manner that the axis of rotation of said bevel-wheel and the axis of oscillation of the vibrating frame shall coincide, the combination being and operating substantially as set forth.

3,522.—Christian Garver, Middletown, Pa.—*Horse-Rake.*—Patented December 7, 1858, No. 22,232; reissued June 29, 1869.

Claim.—1. A cleaning-bar, A, lying across the rake-teeth, and so constructed and operating that the raising of the teeth causes it to scrape the hay from the rake-head towards the points of the teeth, while the lowering of the rake-teeth brings it back to its original position.

2. A cleaning-bar, A, constructed with arms B B, and swinging on a pivot, *o*, substantially as described.

3. The arrangement of the cross-piece A, staples *f*, parallel arms B, slots *i*, and pins O, with rake J, in the manner and for the purpose herein specified.

3,523.—JOSEPH C. HENDERSON, Albany, N. Y.—*Coal-Stove.*—Patented May 29, 1860, No. 28,482; reissued June 30, 1863, No. 1,506; again reissued January 15, 1867, No. 2,459; again reissued June 29, 1869.

Claim.—1. A hopper or reservoir for supplying coal suspended over a fire-pot, or grate, larger at the upper than at the lower end of the same, and detached from the fire-pot substantially in the manner and for the purpose above described.

2. An expanded combustion-chamber, directly over the surface of the incandescent coal in the fire-pot, and surrounding the mouth or lower end of the hopper, substantially in the manner and for the purpose above described.

3. The use of inclined plates *f*, in combination with a combustion-chamber, formed above the surface of the incandescent coal, and around the mouth of the hopper, to reflect and throw back the heat and gases upon the surface of the fire, substantially n the manner and for the purposes above described.

4. The contracted outlet *m*, in combination with said expanded chamber, so arranged that the escaping products of combustion shall pass out at or near the surface of the incandescent coal, substantially in the manner and for the purposes above described.

5. In combination with a hopper suspended over the fire, and separate from the fire-pot, a circulating current of air around the lower end of the hopper, substantially in the manner and for the purposes above described.

6. In combination with the above-described hopper, a chamber or its equivalent, in the lower end of the same, and immediately above the fire, for the purpose of preserving the mouth of the hopper and supplying air to the surface of the fire, substantially as above described.

7. The circulation of a current of air around the lower end or mouth of a supply-cylinder, and entering the combustion-chamber, substantially in the manner and for the purpose above described.

8. The use of fire-brick, soapstone, or other similar fire-proof substances, in protecting the mouth or lower end of the hopper, in combination with my expanded combustion-chamber *l*, and air-chamber *g*, substantially in the manner and for the purposes above described.

9. The admission of air to the surface of the burning fuel in the bottom of my combustion-chamber *l*, above described, in combination with the use of fire-brick, or other similar material, to protect the mouth of the hopper, substantially in the manner and for purpose above described.

10. The combination of the expanded chamber, at the base of the hopper, with draught from said chamber, substantially in the manner and for the purpose above described.

11. A current of air circulated around or in contact with the lower part of the said hopper, in combination with the expanded combustion-chamber at the base of the hopper, substantially in the manner and for the purpose above described.

3,524.—JOHN P. MANNY, Rockford, Ill.—(Division B. *Harvester.*—Patented July 14, 1857, No. 17,779; reissued June 29, 1869.

Claim.—1. The combination, substantially as set forth, in a rear-cut harvester, of two main wheels; a frame, vibrating about the main axle; a tongue, hinged within the periphery of the wheels; and a laterally-projecting finger-beam, vibrating with the frame.

2. The combination, substantially as set forth, in a rear-cut harvester, of two main wheels; a frame arranged between said wheels, and vibrating about he main axle; a finger-beam, projecting laterally from said frame; and a tongue hinged to said frame, near the axle.

3. The combination, substantially as set forth, of two main wheels; a vibrating frame, arranged between the wheels, and projecting beyond their periphery at the rear end only; a laterally-projecting finger-beam, secured to the rear of said frame; and a tongue, hinged to the forward end of said frame, near the axle.

3,525.—JOHN P. MANNY, Rockford, Ill.—(Division B.) *Harvester.*—Patented July 14, 1857, No. 17,779; reissued June 29, 1869.

Claim.—1. The combination, substantially as set forth, of a finger-beam, projecting laterally from a frame vibrating about the main axle, with a hinged supplementary frame supported behind said axle by a caster-wheel.

2. The combination, substantially as set forth, of two main wheels, a frame pivoted near the axle of said wheels in front, and supported by a caster-wheel in rear, and a vibrating frame carrying a laterally-projecting finger-beam suspended from the caster-frame by flexible connections.

3. The combination, substantially as set forth, of two main wheels, a main frame, vibrating about the main axle, and carrying a laterally-projecting finger-beam, with a frame pivoted near the axle, supported at its rear end by a caster-wheel, and carrying devices for raising and lowering the finger-beam.

4. The combination, substantially as set forth, of two main wheels, a vibrating main frame, and a laterally-projecting finger-beam, with lifting-devices, and a driver's seat mounted on a vibrating frame, behind the axle.

5. The combination of a laterally-projecting finger-beam, a frame, vibrating about the main axle, a supplementary frame supported by a caster-wheel, a tension-spring and lifting-cord, the combination being and operating substantially as set forth.

6. The combination, substantially as set forth, in a two-wheeled rear-cut harvester, of a tongue, a frame, carrying a laterally-projecting finger-beam, and a frame, carrying lifting-devices and a conductor's seat, the tongue and frames each being independently hinged near the main axle, and moving independently of each other.

3,526.—JOHN P. MANNY, Rockford, Ill.—(Division C.) *Harvester.*—Patented July 14, 1857, No. 17,779; reissued June 29, 1869.

Claim.—1. The combination, substantially as set forth, of two main wheels; a frame connected with the main axle in front, and supported by a caster-wheel in rear; a frame vibrating about the main axle; a laterally-projecting finger-beam, connected with the frame; and a platform vibrating with the finger-beam.

2. The combination, substantially as set forth, of a laterally-projecting finger-beam, vibrating about the main axle, with a platform, vibrating about the finger-beam, so as to raise the rear end of the platform as the finger-beam is lowered, and *vice versa*, to keep the platform horizontal.

3. The combination, substantially as set forth, in a two-wheeled harvester, of a laterally-projecting finger-beam, vibrating about the main axle, with reel-supports and a platform, both vibrating in unison with the finger-beam.

3,527.—ISAAC H. PALMER, Lodi, Wis.—*Device for Unloading Grain-Car.*—Patented June 18, 1867, No. 65,826; reissued June 29, 1869.

Claim.—1. A series of holes in the car-floor, in combination with sliding covers or gates *b b*, having holes *d* in them, and so arranged, with relation to the holes in the car-floor, that when in one position they will close said holes, but when in another will open them, substantially as and for the purpose set forth.

2. The slide-valves *b*, in combination with the racks *e*, pinions *i*, and shaft D, substantially as described.

3. The pivoted valve *c*, in combination with crank *i*, substantially as described.

3,528.—HERVEY D. SNOW, Bennington, Vt.—*Water-Wheel Regulator.*—Patented July 14, 1868, No. 79,870; reissued June 29, 1869.

Claim.—1. The pawls *r s*, in combination with the ratchet-wheel *f*, that operates to move the gate or regulator, and the connection to the governor, substantially as set forth.

2. The disk *h*, operated by a connection to the governor, in combination with a pawl and ratchet, for causing the pawl to be operative or inoperative, according to the speed of the governor.

3. The disk *h*, in combination with a pair of pawls, pointing towards each other, and acting in opposite directions, substantially as set forth, so that the disk determines which of the pawls shall be operative, or throws both out of action.

4. The stop *g* or *g'*, arranged substantially as set forth, whereby to relieve the pawl *r* or *s*, and prevent the same operating beyond a certain point, irrespective of the movement of the governor, substantially as set forth.

3,529.—James Watt, Charlestown, Mass., and Henry Childs, Buffalo, N. Y., assignees of James Watt. — *Utilizing Waste Heat of Puddling-Furnaces, &c., in Generating Steam.*—Patented May 12, 1863, No. 38,521; reissued June 29, 1869.

Claim.—1. The arrangement of the boiler at the end of the furnace, and on a horizontal plane therewith, so that the surplus heat and slag from the furnace may be directed into a fire-chamber, B', within the boiler, substantially as described.

2. The combination of the neck of the puddling or heating furnace with the water-jacket of the boiler, substantially as set forth.

3,530.—Thomas L. Baylies and Edwin Crawley, Richmond, Ind.—*Vise.*—Patented September 15, 1868, No. 82,073; reissued July 6, 1869.

Claim.—1. In combination with the jaws of a vise, the series of screws having threads of a different pitch, and the spring or brake arranged to operate automatically in changing the speed, substantially as and for the purpose set forth.

2. Coupling the adjusting-screw and the sleeve G, by means of projections and recesses, by which they are made to revolve conjointly, and the sleeve G is allowed to move endwise, independently of the adjusting-screw, substantially as shown and described, and for the purpose set forth.

3. A pawl or cam, J, for locking sleeve G, when so arranged as to be automatically released by the boss on the screw E, substantially in the manner described and for the purpose set forth.

3,531.—James S. Carew, Norwich, Conn., assignee of Caleb Swan, executor of Daniel Hayward, deceased.—*Manufacture of India Rubber.*—Patented August 29, 1854, No. 11,608; extended seven years; reissued July 6, 1869.

Claim.—1. The herein-described process of vulcanizing and molding rubber compounds, viz, by means of molds heated substantially as described, and so arranged that the compound, being placed in the mold, and therein softened by the heat, is then forced, by pressure, to fill the mold, and therein vulcanized, substantially as described.

2. The herein-described process of vulcanizing rubber compounds, viz, by applying heat to the compound to be vulcanized, by means of steam in steam-jackets, substantially as described.

3. The herein-described process of vulcanization of rubber goods, consisting in the application of heat, by means of steam-jackets, to the compound to be vulcanized while under pressure, substantially in the manner described.

3,532.—John Davis, Allegheny City, Pa.—*Railway Car-Brake.*—Patented May 29, 1866, No. 55,067; reissued July 6, 1869.

Claim. — 1. The described arrangement of the cranks *o* and *o'* on the spring-shaft 11, of the improved brake, substantially as herein described and set forth.

2. The combination of the pawl *m* and ratchet-wheel *n* with the shaft 11, cranks *o* and *o'*, and coil-spring, combined, arranged, and operating substantially as herein described, and for the purpose set forth.

3. The combination and arrangement of the coil-spring shaft 11, cranks *o* and *o'*, rods *j k j'*, and *k'*, levers 18 and 16, and shaft *x*, with the rods *i i' h h'*, brake-bars *e* and brakes *d*, constructed, combined, arranged, and operating as herein described.

4. The stirrups *g g'* constructed and arranged as herein described, to inclose and suspend the brake-bar.

3,533.—Alpheus C. Gallahue, Riverdale, N. Y.—*Machine for Pegging Boots and Shoes.*—Patented August 16, 1853, No. 9,947; antedated February 18, 1853; extended seven years; reissued July 6, 1869.

Claim.—1. The use, in a pegging-machine, of a gauge, arranged in relation to the part that supports the boot or shoe, to form a bearing for the edge of the sole, and thus insure the insertion of the pegs at a uniform distance from the edge of the sole, without the use of pattens, substantially as described.

2. Adjusting the tension of the spring that operates the awl-carrier or peg-driver, substantially as described, for the purpose of regulating the force of the blow, as may be desired.

3. The combination of the awl carrier and the peg-driver, each separately lifted by a cam and driven down by a spring, substantially as described.

4. The combination, in a pegging-machine, of a gauge for the edge of the sole to rest against, and an awl-carrier driven by a spring, substantially as herein described.

5. Making the gauge *a*, against which the edge of the sole bears, adjustable, for the purpose of enabling the shoe to be so adjusted as to have two or more rows of pegs inserted therein.

6. The combination, in a pegging-machine, of a gauge for the edge of the sole to bear against, and a rotating last-holder or support, substantially as described.

3,534.—William F. Sherman, Bucksport, Me.—*Process of Repairing Crucibles.*—Patented February 16, 1869, No. 87,075; reissued July 6, 1869.

Claim.—1. The process of coating new, or renewing old crucibles, by repeated applications of a thin coating of a mixture composed of plumbago and other refractory substance or substances, substantially in the manner and for the purposes described.

2. The mixture, in water, of plumbago with refractory clay, sand, or other similar refractory substances, as a wash for coating and renewing crucibles, in the manner substantially as hereinbefore described.

3,535.—Albert G. Buzby, Philadelphia, Pa.—*Safety-Valve.*—Patented April 21, 1868, No. 76,992; reissued July 6, 1869.

Claim.—1. The valve-chest A, having opening and seats on which rest two separate safety-valves, B B', substantially as herein described.

2. The two valves B and B', the former being connected to, but loaded independently of the valve B', when the said valves are arranged upon a single chest, A, substantially as and for the purpose specified.

3. The casing or cover A', in combination with the two valves B B', arranged on a single chest, A, substantially as described.

3,536.—John B. Mayer, Niagara Falls, and Tobias Witmer, Williamsville, N. Y., assignees of John B. Mayer.—*Striking-Mechanism for Clocks.*—Patented September 15, 1868, No. 82,267; reissued July 6, 1869.

Claim.—1. The sliding-shafts O and P, carrying the hammer-tails, and the operating lever *q*, combined and operating substantially as described.

2. The shifting-lever R, in combination with the locking-mechanism C, and sliding hammer-shaft P, for alternating the action of the hammers on the bells, substantially as set forth.

3. The combination of the locking-mechanism B C, and the locking-wheel A, for controlling the action of the hour and quarter-hour hammers on two or more separate bells, substantially as set forth.

4. The wheel D, pinion F', tumbler-wheel E, spur-wheel F, the pinion and fly wheel G, in combination with the hammer-tails, in order to effect the striking of quarters and hours on separate bells, substantially as set forth.

3,537.—C. H. McCormick, Chicago, Ill., assignee, by mesne assignments, of Hamilton A. Parkhurst.—(Division A.) *Harvester.*—Patented February 23, 1858, No. 19,442; reissued July 6, 1869.

Claim.—1. The combination of the main frame supported on wheels mounted on independent axles, which oscillate around a center coincident with that of one of the shafts which drives the cutters, substantially as set forth, with a laterally-projecting short finger-beam hinged to the main frame at one end only, and above the plane of the cutters.

2. The combination of a main frame, adjustable on a center coincident with that of a shaft parallel with but independent of the driving-wheel axles, substantially as set forth, with a laterally-projecting short finger-beam hinged to said frame by joints both in front and rear of the wheels, and above the plane of the cutters.

3. The combination of a main frame, movable around a center coincident with that of a shaft in front of the axis of the wheels, substantially as set forth, with a laterally-projecting short finger-beam connected with the main frame by a coupling-frame inclosing the inner wheel.

4. The combination of the main frame, radius-bars, and their connecting-frame, substantially as set forth.

5. The combination of the radius-bars, quadrant-racks, rock-shaft, and lifting-levers, with the driver's seat, substantially as set forth.

3,538.—C. H. McCormick, Chicago, Ill., assignee, by mesne assignments, of Hamilton A. Parkhurst. (Division B.)—*Harvester.*—Patented February 23, 1858, No. 19,442; reissued July 6, 1869.

Claim.—1. In a two-wheeled harvester, a frame carrying the cutting-apparatus, arranged to vibrate about a center coincident with the center of rotation of a bevel-wheel mounted on an axis parallel with, but independent of, the main drive-wheel axle, substantially as set forth.

2. The combination, in a two-wheeled harvester, substantially as set forth, of a frame, carrying a crank-shaft and pinion, and adjustable around a gear-center in front of the axles of the driving-wheels, with a laterally-projecting cutting-apparatus hinged in the line of the crank-shaft.

3. The combination, in a two-wheeled harvester, substantially as set forth, of a frame vibratable about a gear-center, independent of the axes of the wheels, with a laterally-projecting cutting-apparatus vibrating about a gear-center at right angles to the main axle.

4. The combination, with a two-wheeled harvester, of a laterally-projecting cutting-apparatus connected with the main frame at one end only, and movable around two gear-centers at right angles to each other, and both independent of the driving-wheel axle, substantially as set forth.

5. The combination of the internally-geared driving spur-wheel, the spur pinion, on the counter-shaft, and its bevel-wheel with the bevel-pinion on the line-shaft, crossing the axle of the driving-wheels, and its spur-gear driving the corresponding pinion on the crank-shaft, also crossing the axes of the bearing-wheels, the combination being and operating substantially as set forth.

3,539.—William S. Pratt, West Manchester, Pa.—(Division A.) *Plow.*—Patented September 5, 1865, No. 49,799; reissued July 6, 1869.

Claim.—Making a mold-board for steel plows, with a bed for the plowshare, said mold-board and share-bed being made in one or more parts, with the landside welded, bolted, or riveted to the share-bed, the whole being constructed and arranged substantially as herein described and for the purpose set forth.

3,540.—Claus Spreckels, San Francisco, Cal.—*Manufacture of Crushed Sugar.*—Patented March 17, 1868, No. 75,656; reissued July 6, 1869.

Claim.—The process of preparing for crushing sugar, taken from the centrifugal machine, by molding, pressing, and drying it, in the manner substantially as herein described.

3,541.—J. A. Woodward, S. S. Woodward, and Thomas Mason, Sandwich, Ill.—*Cultivator.*—Patented September 15, 1868, No. 82,191; reissued July 6, 1869.

Claim.—1. Broadly, the reversible arms K, hinged to the frame A B, and arranged to balance the same, substantially as set forth.

2. The combination of the above-described reversible arms K, with the frame A B and folding-seat L, as and for the purpose herein described.

3. The handles D D, pivoted to the standards E E, and made adjustable to or from each other, by means of the slotted plates F F and set-screws I I, as described and shown.

3,542.—Richard Montgomery, New York, N. Y.—(Division A.) *Iron Railway-Car.*—Patented August 7, 1860, No. 29,510; reissued July 22, 1862, No. 1,325; again reissued July 6, 1869.

Claim.—1. The use of the corrugated-iron beams, constructed as described when applied to railway-cars and other vehicles, in the manner and for the purposes herein set forth.

2. The combination of the curved top-pieces B with the side or base pieces A, and coupling-pieces H and G, operating substantially as described.

3. The corrugated covering F, arranged as described, in combination with the arched top-pieces B.

4. The coupling-pieces H G, or either of them, when constructed as described, and applied to the corrugated beams of a railway-car, substantially as herein set forth.

3,543.—Richard Montgomery, New York, N. Y.—(Division B.) *Floor for Cars and Buildings.*—Patented August 7, 1860, No. 29,510; reissued July 22, 1862, No. 1,325; again reissued July 6, 1869.

Claim.—A metallic support for a floor, whether the latter be formed of wood or other material, composed of arched metallic plates, corrugated in the direction of the curve of the arch, and metallic girders, on or against which said plates abut, substantially as herein described.

3,544.—David Howell, Louisville, Ky.—*Nut-Machine.*—Patented July 2, 1866, No. 66,238; reissued July 6, 1869.

Claim.—1. The supporting-matrix or die H, in combination with the cutting-plunger or punch F, operating substantially as described, to carry the nut-blank to a certain point within said matrix, suspend its movement therein, and then discharge the nut from the opposite side to the one of entrance.

2. The steel plate or cutter I, in combination with the gauge-block M, having an oblique flange *m*, and the die H, when arranged and constructed substantially as described.

3. The sleeve G, with its square head *g'*, and circular head *g''*, its slot K, and its feather, its concave head, and its longitudinal bore, constructed substantially as and for the purpose described.

4. The adjustable gauge-block J, having an overhanging lip *j*, and another overhanging lip on the opposite side of it, provided with the slot *j'*, when constructed substantially as and for the purpose described.

5. The elastic arm X, in combination with the jointed pitman Y and the head-block D, constructed substantially as described.

6. The pitman V, with its screw *v*, in combination with the rock-arm W, its shaft *w*, cam T, yoke U, when constructed and arranged substantially as described.

7. The combination of the sleeve or crown-punch G, the steel cutter I, guide-blocks E and E', matrix or die H, and sole-punch F, when constructed substantially as described.

8. The general construction and arrangement of the parts of the described machine, co-operating to produce the results designed, substantially as described and set forth.

3,545.—Israel Mosher, Mosherville, and Walden Eddy, Union Village, N. Y.—*Shovel-Plow.*—Patented March 31, 1863, No. 38,056; reissued July 6, 1869, and omitted in the list of claims of that date; again reissued July 13, 1869.

Claim.—1. The employment, arrangement, and combination of the right-angle triangle *d*, or its equivalent, with the beam-standard *a'*, or its equiva-

lent, having thereto attached the mold-board *b b*, in the manner and for the purposes substantially as herein described and set forth.

2. The curved extension and additional pieces, or wings *i i*, arranged upon and combined with the mold-board *b b*, substantially in the manner and for the purposes herein described and set forth.

3. The employment and combination of the removable shoe *e*, with the right-angle triangle *d*, or any equivalent therefor, in the manner and for the purposes substantially as herein described and set forth.

4. The arrangement and combination of the handles *f f* with the plow-beam or standard *a*, in the manner and by the means substantially as herein described and set forth.

5. The combination of the plowshare or point *c*, mold-board *b b*, and extension and additional curved pieces or wings *i i*, arranged and operating in the manner substantially as herein described and set forth.

6. A mold-board for shovel-plows, constructed with the ribs or raised flanches *s s*, upon the under side of the same, in such manner as to receive and hold the standard *a'*, in the manner substantially as herein described and set forth.

7. The arrangement of each of the aforesaid described curved extension and additional pieces or wings *i i*, upon the outward projections of the mold-board *b b*, and securing or fastening of the same thereto and thereupon, by the respective bolts *n* and nuts *n'*, in the manner and for the purposes substantially as herein described and set forth.

3,546.—JOHN F. BOYNTON, Syracuse, N. Y.—*Apparatus for Generating Carbonic Acid.*—Patented October 7, 1856, No. 15,838; reissued July 13, 1869.

Claim.—1. An apparatus for generating carbonic-acid or other gas, having the acid-chamber suspended within the generator, and operated from without, substantially as and for the purposes herein described.

2. An acid-chamber, so constructed within the generator that the acid may be delivered to the solution, or chemicals contained therein, in measured quantities and at desired intervals.

3. The method of operating the plunger E, or acid-chamber D, by means of a rod or tube B, as herein described.

4. The hollow tube B, carrying the acid-chamber D and plunger E, for filling the acid-chamber, as herein described.

5. The stirrer K, attached to said tube, substantially as herein described.

6. In combination with the generator, the hollow screw-plug with conical end, as and for the purpose therein described.

7. The drip-valve *b*, for the purpose herein described.

3,547.—A. T. DENISON and E. P. FURLONG, Mechanic's Falls, Me., assignees of JOHN E. COFFIN.—*Machine for Folding and Cording the Edge of Paper Strips.*—Patented November 17, 1868, No. 84,091; reissued July 13, 1869.

Claim.—1. The paste-roll *j*, having the pasting-disks, with grooved edges, to receive the cord to be inserted into the fold of the paper, substantially as shown.

2. The method of folding, pasting, and inserting a cord into the edge of paper goods, substantially as herein shown, to wit, by the described operation of rolls *c d*, paste-roll *j*, made as set forth, roll *m*, trough *k*, guards *z*, chutes *b'*, rolls *p q*, and winding-roll *v*, constructed and arranged as herein set forth.

3,548.—WILLIAM C. DODGE, Washington City, D. C.—*Metallic Cartridge-Case.*—Patented July 4, 1865, No. 48,536; reissued July 13, 1869.

Claim.—A cartridge-case for fire-arms, composed of ductile metal, and coated or plated internally or externally, or both internally and externally, with tin or other suitable metals or alloy of metals, substantially as and for the purposes herein set forth.

3,549.—HENRY GETTY, Brooklyn, N. Y.—(Division B.) *Tube-Cutter.*—Patented August 6, 1867, No. 67,530; reissued July 13, 1869.

Claim.—1. A tube-cutting instrument, formed with two rollers, for sustaining the pipe in the groove between them in a position parallel to the axis of said rollers, in combination with a cutter for cutting the tube, (an open jaw, in which the parts are mounted,) and a lever, or handle, whereby the instrument is capable of being revolved around a pipe or other cylindrical article for operating the same, substantially as set forth.

2. The slide C, with its slot *c'*, containing the block *d* of the head A, in combination with the screw D and rollers E, substantially as and for the purposes set forth.

3. The V-shaped cutter B, held in a head-block, in combination with a pair of cylindrical rollers E E, and mechanism substantially as specified, for operating on such parts in cutting tubes.

4. The V-shaped cutter B, in combination with a pair of cylindrical rollers E E, block *d*, slide C, and screw D, substantially as set forth.

3,550.—REUBEN HARDER and MINARD HARDER, Cobleskill, N. Y., assignees of MINARD HARDER, GEORGE W. DOUGLASS, HIRAM BECKER, and DAVID ANTHONY.—(Division A.) *Thrashing-Machine.*—Patented June 9, 1863, No. 38,862; reissued July 13, 1869.

Claim.—1. The concave, suspended upon the arms *b*, the rods *e*, and jam-nuts *g*, as and for the purposes herein set forth.

2. The hinged joint *o*, for connecting the pitman *l* to the separator *n*, as and for the purposes described.

3. The suspending-rods or hangers *p*, placed outside of the casing, and connected to the separator by the eyes *r*, and arms or hooks *s*, passing through the slots *t*, in combination with the strips *z'*, and side-boards *x'*, whereby the separator is moved and guided, as herein described.

4. The hooks *v*, eyes *w*, and bolts *x*, for connecting the bottom, *u*, of and underneath the separator to the separator, so that the bottom, *u*, may be easily and readily detached, as herein recited.

3,551.—REUBEN HARDER and MINARD HARDER, Cobleskill, N. Y., assignees of MINARD HARDER, GEORGE W. DOUGLASS, HIRAM BECKER, and DAVID ANTHONY.—(Division B.) *Thrashing-Machine.*—Patented June 9, 1863, No. 38,862; reissued July 13, 1869.

Claim.—1. In a thrashing-machine, a dust-flue or passage, leading from the front to the rear of the cylinder, and arranged so that the rotation of the cylinder will generate or produce a current of air through said flue, substantially as described.

2. The combination of the deflector *d* with the air-passage *h*, when arranged to operate substantially as described.

3,552.—WILLIAM E. LOCKWOOD, Philadelphia, Pa., assignee, by mesne assignments, of WALTER HUNT.—*Compound Fabrics for the Production of Shirt-Collars.*—Patented May 4, 1869, No. 89,768; reissued July 13, 1869.

Claim.—1. A fabric whereof to make shirt-collars, wristbands, bosoms, &c., the said fabric consisting of cotton or linen cloth as a facing, secured to a backing of the same material, or equivalent material or fabric, by cementing, sizing, pasting, starching, or otherwise, all prepared substantially as set forth.

2. As new articles of manufacture, shirt-collars, bosoms, wristbands, &c., made from the above-described compound fabric.

3,553.—DAVID STEWART, Kittanning, Pa.—*Manufacture of Iron.*—Patented December 17, 1867, No. 72,335; reissued July 13, 1869.

Claim.—Purifying pig-iron or blast-furnace metal and converting it into granules or partially-wrought iron by passing it in a stream through atmospheric air, or other oxygen-bearing gas or vapor, substantially as herein described and set forth.

3,554.—C. WILLIAMS, New York, N. Y.—*Wooden Pavement.*—Patented July 21, 1868, No. 80,261; reissued July 13, 1869.

Claim.—1. The dovetailed or wedge-shaped keys

a or *a**, in combination with the blocks A, substantially as and for the purpose described.

2. The intermediate elastic bed C and sub-bed B, in combination with the wooden blocks A, substantially as and for the purpose set forth.

3,555.—J. S. ATTERBURY and T. B. ATTERBURY, Pittsburgh, Pa., for themselves, and assignees of JAMES REDDICK.—(Division A.) *Manufacture of Hollow Glass-Ware.*—Patented June 3, 1862, No. 35,429; reissued July 20, 1869.

Claim.—A new manufacture, consisting of blown-glass ware, with illuminated pressed relief-work on its surface, substantially as described.

3,556.—J. S. ATTERBURY and T. B. ATTERBURY, Pittsburgh, Pa., for themselves, and assignees of JAMES REDDICK.—(Division B.) *Manufacture of Hollow Glass-Ware.*—Patented June 3, 1862, No. 35,429; reissued July 20, 1869.

Claim.—The combination of a cast or pressed base, A, a cast or pressed handle, B, and a blown bowl, C, substantially as described.

3,557.—JOHN BIRKENHEAD, Ilion, N. Y.—*Ring or Spinning.*—Patented May 24, 1864, No. 42,829; reissued July 20, 1869.

Claim.—1. A spinning-ring, having an eccentric bearing, substantially as and for the purpose set forth.

2. The combination of the gib *j* and bush *d*, substantially as and for the purpose herein set forth.

3,558.—COLUMBUS COLEMAN, Allegheny City, Pa.—*Rake-Tooth Bender.*—Patented February 20, 1866, No. 52,680; reissued July 20, 1869.

Claim.—1. The improved bending-apparatus herein described, consisting essentially of a table, A, a series of interchangeable curved formers, and a series of interchangeable curved levers, or their equivalents, as and for the purpose set forth.

2. In combination with the above, a header, for giving the spring-coil to rake-teeth, substantially as herein described.

3,559.—LEWIS T. HAWLEY, Salina, N. Y.—*Milk-Cooler.*—Patented March 30, 1869, No. 88,476; reissued July 20, 1869.

Claim.—1. The vessel C, having the air-chamber D, and cooling-tubes *a a*, formed within it, substantially as and for the purpose set forth.

2. The combination of the vessel C with a clothed or covered can or vessel, substantially as and for the purpose described.

3,560.—D. P. HENRY, Windsor, Ill.—*Pump.*—Patented May 4, 1869, No. 89,662; reissued July 20, 1869.

Claim.—The combination of the pump-tube E, which supports, at its upper end, the operating-shaft, and at its lower end the submerged pump-barrel A, with the solid plunger D, which is suspended from the jointed connecting-rod I, and the valves C F, all arranged and operating substantially as described, for the purpose specified.

3,561.—ADAM D. REESE, Phillipsburgh, N. J., assignee of THEODORE J. STEFFE.—*Horse-Rake.*—Patented September 20, 1859, No. 25,535; reissued July 20, 1869.

Claim.—1. Supporting metallic teeth in a horse hay-rake, against backward strain, by means of a device which will admit of the teeth being lengthened or shortened between the gathering-point and the point of attachment.

2. Supporting metallic teeth in a horse hay-rake, against backward strain, by means of a device through which pressure is applied to the teeth.

3. In combination with a device by which a metallic tooth in a horse hay-rake is supported against backward strain, a spring to hold the tooth to the ground.

4. The combination of the metallic teeth with metallic boxes and key, to support the teeth against their backward strain.

5. In combination with metallic teeth, a key to keep the tooth in its proper place.

6. Attaching the metallic teeth of a horse-rake to metallic boxes or heads supported upon the axle of the rake in such manner that they (the teeth) are free to vibrate vertically, and can be removed without taking the heads or boxes from the axles.

3,562.—B. S. ROBERTS, United States Army.—*Breech-Loading Fire-Arm.*—Patented June 11, 1867, No. 65,607; reissued July 20, 1869.

Claim.—1. In combination with a breech-plug, B, which swings about a curved abutment, *c*, a rocking shield *g*, so applied to said breech-plug as to allow the opening and closing of the breech of the barrel for the insertion and withdrawal of a cartridge, substantially as described.

2. The lever B′, formed on the rear curved end of a swinging breech-plug, B, and adapted to move about the solid abutment *c*, in combination with a rocking block, *g*, which will admit the opening and closing of the breech, substantially as described.

3. The lever-extractor *p*, arranged on one side of the barrel, and having one of its arms arranged in a recess in the recoil-shield, so as to be acted upon by the shoulder *n*, at the upper termination of said recess, substantially as described.

4. The curve *c c c*, at the rear of the cheeks containing the breech-plug B, when formed substantially as described, and so that the force of the gas, when the gun is fired, shall have no tendency to throw the breech-plug out of its place, as set forth.

5. A bodily swinging breech-plug, B, having a rear extension, B′, and a lever-latch, C, constructed substantially as described.

3,563.—E. C. THOMPSON, Rochester, N. Y., assignee of T. A. LONG.—*Soda-Fountain.*—Patented April 2, 1867, No. 63,537; reissued July 20, 1869.

Claim.—A portable soda-fountain, in which both the air-chamber and the pump are situated in the interior of the case, the pump being submerged in the liquid, and so arranged as to force the liquid to the air-chamber without carrying it out of the fountain, as herein set forth.

3,564.—R. B. VARDEN, Uniontown, Md.—*Coal-Stove.*—Patented June 8, 1869, No. 91,186; reissued July 20, 1869.

Claim.—1. The arrangement and construction of the air-heating chamber in such manner that while A acts as a fire-box and air-heater, B shall be enveloped by flame and products of combustion, through its axis and on its outer periphery, substantially in the manner and for the purpose set forth.

2. The air-heating cylinder B, when constructed and arranged to operate substantially as and for the purpose herein specified.

3,565.—THOMAS BOYD, Boston, Mass.—*Ventilating-Cap for Tents.*—Patented August 20, 1861, No. 33,068; reissued July 27, 1869.

Claim.—1. A cap or covering, so arranged as to be susceptible of motion in a vertical or up-and-down direction, and so operating that the tent can be ventilated in both stormy and pleasant weather, substantially as herein set forth.

2. A conical ventilating-cap, the apex of which is an acute angle, substantially as shown, when so arranged, with reference to the orifice or orifices through which the upward current of air passes, that said orifice or orifices shall be within the cap, or above the lower edge thereof, substantially as and for the purpose specified.

3,566.—EBEN MOODY BOYNTON, Grand Rapids, Mich., assignee of ALFRED BOYNTON.—*Saw.*—Patented November 27, 1866, No. 59,951; reissued July 23, 1867, No. 2,695; again reissued July 27, 1869.

Claim.—1. A saw provided with teeth A A′, having two cutting-points, *a a*, as shown, with cutting-edge on each face *b b′*, and their outer cutting-faces inclined inward from the point, substantially as shown and described.

2. The tooth A, with its two points dressed to cut on one side of the kerf, and the next succeeding cutting-tooth A′, with its two points dressed to cut on the other side of the kerf, as set forth.

3. The clearing-tooth B, constructed substantially as shown and described.

3,567.—Horace F. Evans, Beloit, Wis.—*Manufacture of Tarred Paper, Pasteboard, &c.*—Patented February 2, 1869, No. 86,380; reissued July 27, 1869.

Claim.—The process or method of saturating or partially saturating paper or straw-board, by passing the same from the paper-machine whereon it is made, directly from the driers or calenders, through the tar or other water-proof material, in the manner and for the purpose herein substantially described.

3,568.—Lewis P. Garner, Ashland, Pa.—*Device for Separating Coal from Slate.*—Patented August 7, 1860, No. 29,479; reissued July 27, 1869.

Claim.—1. The improved mode of separating the thin, flat pieces of slate from coal by the use of grate-bars, arranged to contract the spaces from the top downward, substantially as specified.

2. The employment of the screen within the screen, movable, so that the inside screen may be raised or depressed, at the will of the operator, thus increasing or diminishing the width of the spaces or openings between the bars, by reason of the peculiar shape of the bars, so that larger or smaller pieces of slate and other impurities may be separated from the coal and other materials that may be passed over said screens.

3,569.—Charles Kirchhof, Newark, N. J.—*Blast-Gun.*—Patented April 21, 1868, No. 76,925; reissued July 27, 1869.

Claim.—1. The combination, with an air-tube or other air-reservoir, of a device for holding paper or other fabric across the outlet of the tube or reservoir, substantially as and for the purpose described.

2. The employment, in combination with the outlet of the air-tube or reservoir, of a packing to prevent the escape of air between the paper or sheet and the outlet of the tube or reservoir, substantially as herein described.

3. The employment of the clamp E, or its equivalent, in combination with the packing *b* and the tube or reservoir of a blast-gun, substantially as and for the purposes described.

4. The latch F, when hinged to the clamp E, and constructed as shown, whereby it is adapted to catch in the rigid notched projection *b* of the collar B, as herein described, for the purpose specified.

5. The finger-piece G, in combination with the clamp E, substantially as and for the purpose described.

6. The employment of a device to hold the clamp in a partially-closed position, to prevent the falling or loss of the sheet, substantially as described.

7. The clamp E, of a blast-gun, adapted to receive either the mouth-piece H, or barrel I, substantially as described, for the purpose specified.

3,570.—P. H. Roots and F. M. Roots, Connersville, Ind.—*Case for Rotary Blower.*—Patented August 11, 1868, No. 81,010; reissued July 27, 1869.

Claim.—1. A rotary-blower case, the interior of which is rendered true and accurate by means of plaster of Paris, or its described equivalent, applied substantially as shown and described.

2. A rotary-blower case, the ends or heads of which are rendered true and accurate by means of plaster of Paris, or its described equivalent, applied substantially as described.

3. A rotary-blower case, the concaves, or arcs of circles of which are rendered true and accurate by the use of plaster of Paris, or its described equivalent, applied substantially as described.

4. A rotary-blower case, having concave arcs B B′, in combination with end-plates I I, arranged so as to admit of the abutments being introduced or removed, without requiring the case to be taken apart, substantially as set forth.

5. A rotary-blower case, the ends or heads of which are made true and accurate by the use of secondary or inside metal plates F′, substantially as and for the purpose described.

6. The guards *x x*, in combination with concaves B B, lined or finished interiorly, substantially as described.

3,571.—Moses Rubel, Chicago, Ill.—*Cutlery.*—Patented May 26, 1868, No. 78,328; reissued July 27, 1869.

Claim.—1. The tips C C and bolsters D D, provided with projections F, or their equivalents, to prevent the lateral displacement of the scales, cast on to and in combination with the tang E, passing through the handle so as to connect the bolsters and tips, and fasten the scales without rivets, substantially as specified.

2. The lugs F, when so located as to project beyond that part of the bolsters and tips which is in contact with the tang, in combination with the corresponding notches in the scales, substantially as and for the purposes specified.

3,572.—The Alden Type Setting and Distributing Machine Company, New York, N. Y., assignees, by mesne assignments, of Timothy Alden.—*Type Setting and Distributing Machine.*—Patented September 15, 1857, No. 18,175; reissued July 27, 1869.

Claim.—1. The method, substantially as described, for conveying the type to and from the type-cases, and the composing and setting tables, consisting of a type-carrier, in combination with a series of conveyers, which are capable of receiving any type indiscriminately, and also of receiving an indication representing the type so received or that required, whereby that type may be deposited into or taken from the type-cases, substantially as set forth.

2. The herein-described or any equivalent method of attaching the conveyers to the carrier-wheel, by which they are permitted to stop while delivering or receiving type, without arresting the motion of said carrier, substantially as set forth.

3. Giving to the gripping-end of the conveyer a motion from and toward the center of the carrier-wheel, whereby said gripping-end is made to closely approach the place at which the conveyer is to receive or deposit a type, for the purposes and in the manner substantially as described.

4. The cam u^5 and lever t^5, whereby the gripping-bolt *o* is withdrawn and made to release the type, substantially as described.

5. The latch v^5 and notch x^5, in the bolt *o*, to retain said bolt open, substantially as set forth.

6. The pin y^6, on the carrying-wheel, to throw back the latch and release the bolt *o*, substantially as described.

7. The cam d^6, on the carrier-wheel, in combination with the pusher b^6 on the conveyer, to discharge the type from the grippers, substantially as set forth.

8. The lever u^6, secured to a stationary fulcrum, to give motion to the pusher z^5 of the setting-conveyers, substantially as set forth.

9. The springs l^5, having the double function of thrusting the conveyers out and forcing them in, substantially as described.

10. The projecting piece g^6, on the conveyers, and the stationary hooks *x x*, for the purpose of arresting the conveyers at proper places, substantially as set forth.

11. The adjustable indicator-points o^5, on the conveyers, substantially as and for the purpose described.

12. The bar n^6, cams j^6, and spring o^6, for carrying the conveyers to the forward ends of their slots, substantially as set forth.

13. In combination with the devices or mechanism for receiving the types into and for delivering them from the type-cases, arranging the types edgewise in said cases, whereby, for all the types of a font, a uniform throw or action may be given to said mechanism.

14. In combination with the type-channels or cases, the mechanism for pushing out the type, consisting of the rack, pendulum, lever, and propelling-rod, and the pusher upon the conveyers, or any equivalent thereof, as described.

15. In combination with the type-channels, the mechanism for preventing the stopping of a setting-conveyer at a type-channel, when it is empty, or a distributing-conveyer at a channel, when full of type, consisting of the tilting-bar s^7, the pendulum-lever, and rack or equivalents, as described.

16. The rim r^7, to lift the pawl m^7 clear of the ratchet l^7, substantially as set forth.

17. The excavated ring m^5, in combination with

the conveyers and type-channels, substantially as and for the purpose described.

18. The stationary inclined pieces g^7, in combination with the grooves of the ring m^5, for restoring the indicating-points upon the conveyer to a zero or starting-point, as set forth.

19. The movable indicators e^7, in combination with the grooves in the ring m^5, and with the shifting-bars of the distributing-mechanism, substantially as described.

20. The channel of excess Q, in addition to the regular type-cases K, and in combination with the conveyers d, substantially as and for the purpose set forth.

21. The latch j^8, and pusher b^8, in combination with the channel Q, substantially as and for the purpose described.

22. The mechanism for feeding up the line of type, consisting of the cam w^2, spring x^2, arm u^2, and pawl q^2, substantially as set forth.

23. The mechanism for feeding up the column of type, and for elevating the successive lines thereof into the channel, substantially as described.

24. The method of engaging and disengaging the feeding-pawls, consisting of the hanging-lever a^3, in combination with the frame x, with the means for depressing the bolt d^3, and with the ratchet having the engaging and disengaging wedges, as described.

25. The movable plate d^2 in the channel a, to allow of raising the top line free of obstruction, substantially as set forth.

26. The arrangement of type-levers, to act on the nicked edges of the type, and produce the required set in the machine, substantially as and for the purpose described.

27. The combination of the type-levers z^3 with the distributing-conveyers, substantially as and for the purpose set forth.

28. The movable frame y^3, carrying the type-levers z^3, in combination with the graduated stop c^4, substantially as and for the purpose described.

29. The lever i^4 and apron g^4, to regulate the throw of the frame y^3, for the "thin space," substantially as set forth.

30. The hammer a^5 to keep the type down on the bottom of the channel a, and insure a correct operation of the levers z^3, substantially as described.

31. The bell-crank lever e^4, and pin l^4, for relieving the frame y^3, substantially as described.

32. The arrangement of mechanism for transmitting the movements produced upon the levers z^3, by the nicks in the type, and for effecting the proper combinations upon the indicators e^7, consisting of the detaining-levers n^4, the bars p^4, bar t^4, bars r^4, bar y^4, and the connecting-levers g^4, together with the operating-cams upon the shaft j^4, or any equivalent combination, whereby the same results will be produced, as described.

33. In combination with the keys, the arrangement of mechanism whereby the separate different signals represented by each of a great number of keys may be produced by a less number of indicators, as described.

34. The independent registering-apparatus, constructed as described, or its equivalent apparatus, which will effect the recording of the letters or signs as indicated by the keys, independently of the type-carrying apparatus, substantially as set forth.

35. The pins o^9 placed in the rings R of the register-wheel, substantially as and for the purpose described.

36. The stationary cam s^{10}, for returning the pins o^9, substantially as set forth.

37. The radiating revolving levers h^9, in combination with the register-wheel and with the keys, substantially as described.

38. The mechanism for transmitting the indications from the register, consisting of the detaining-levers k^0, in combination with the setting-indicators and with the register, substantially as described.

39. The springs g^0 j^0, and lever i^0, in combination with the indicator-bars f^0 and with the register and carrier-wheel, whereby the indicator-bars are caused to act on the setting-conveyers, and immediately thereafter made to retreat previous to the passage of a distributing-conveyer, substantially as set forth.

40. The toe c^0, in combination with the radiating revolving frame j^9, stop-pawl d^0, and register-wheel R, substantially as and for the purpose described.

3,573.—Robert Allison, Port Carbon, Pa.—*Steam Pumping-Engine.*—Patented September 29, 1868, No. 82,475; reissued August 3, 1869.

Claim.—1. The arrangement of the sliding bar L, cam-slot q, rods n n, and bell-crank R, whereby the supplementary valve k is operated, substantially as shown and described.

2. The valve-chambers J′, valves K′, and reversed stuffing-boxes h', arranged substantially as shown and described for the purposes set forth.

3. The arrangement of the piston w, graduating-cock y, and cylinder V, with reference to the rod E, pistons G G, and main valve C, as herein shown and described.

4. The combination and arrangement, with the slide-valve C of the direct-acting pumping-engine, of the regulating apparatus, consisting of the dash-pot or cylinder with the passage x leading from end to end, the solid piston, and the regulating-cock, the said cylinder containing a liquid substance, operating as the medium whereby to regulate the action of the piston in both directions, substantially as specified.

3,574.—Emory L. Bates, (assignee of George F. Rice,) Fiskedale, Mass.—*Boring-Machine.*—Patented December 21, 1858, No. 22,379; reissued August 3, 1869.

Claim.—1. The combination, with the hinged uprights of a boring-machine, of clamping and bracing mechanism, constructed substantially as described, whereby the lower ends of the uprights are clamped to a central brace or support, at the same time and by the same mechanism by which they are clamped to their curved ways or guides.

2. A hollow cross-brace or support, in combination with the uprights, substantially as and for the purposes set forth.

3. The combination, with the side-pieces, or uprights, semicircles, and center-brace, of a double-headed bolt, substantially as and for the purposes set forth.

3,575.—Devoe Manufacturing Company, Long Island City, N. Y., assignees, by mesne assignments, of Hermann Miller.—*Soldering Sheet-Metal Cans.*—Patented August 18, 1863, No. 39,616; reissued August 3, 1869.

Claim.—1. In an apparatus in which the joint of any vessel is to be soldered by dipping, a pan provided with a soldering-channel, of a form corresponding with that of the joint to be soldered, substantially as and for the purpose herein specified.

2. The soldering-pan, constructed or provided with a rest or resting-place for the can or vessel to be soldered, to regulate the depth to which the joint will enter the solder, and to protect adjacent parts from contact with the latter, substantially as herein described.

3. Providing the pan or apparatus with a vent, in communication with the atmosphere, so arranged as to admit of the expulsion and free admission of air from and below the can, within the space circumscribed by the rest, on which the can is made to bear in dipping the joint, essentially as herein set forth.

3,576.—Lewis Francis and Cyrus H. Loutrel, New York, N. Y., assignees of Lewis Francis.—*Composition of Matter.*—Patented March 8, 1864, No. 41,887; reissued September 27, 1864, No. 1,772; again reissued February 28, 1865, No. 1,886; again reissued August 3, 1869.

Claim.—Combining glue, glycerine, and sugar, or any other analogous saccharine matter, to form a new and useful composition of matter for various purposes.

3,577.—Elliott P. Gleason, Providence, R. I.—*Socket-Coupling.*—Patented October 16, 1860, No. 30,400; reissued August 3, 1869.

Claim.—1. A socket, provided with a recess, fitted with an elastic packing, substantially as and for the purposes specified.

2. A socket-coupling, having a hollow cylindrical cushion of caoutchouc, or other similar gum, adhering to the inner walls of the socket-shell, and having the surface of the opening through the same

molded in the desired form by compression, and made elastic by the action of heat applied thereto, in the manner and for the purpose substantially as herein specified.

3. In combination with such a cushion, a socket-piece, or nipple, having a bulb, or swelling ridge upon the end, which passes through the opening in said cushion, by the contraction of which opening the nipple is held securely within the socket, as set forth.

3,578.—M. Greenwood and Company, Cincinnati, Ohio, assignees of Henry M. Ritter.—*Reversible Knob-Latch.*—Patented May 7, 1867, No. 64,571; reissued August 3, 1869.

Claim.—The reversible latch A D, whose collar B occupies a suitable socket, C, and whose flat two-sided tail or shank G is tangential to one of the screw-holes in both positions of the latch, so as to render the latter irreversible, by the direct contact of the holding-screw, substantially as described.

3,579.—Nathaniel Jenkins, Boston, Mass.—*Manufacture of Elastic Packing.*—Patented May 8, 1866, No. 54,554; reissued August 3, 1869.

Claim.—1. An elastic packing, composed of at least four-tenths of finely-pulverized refractory, earthy, or stony material, intimately mingled with and held together by rubber prepared for vulcanizing, and then vulcanized, as and for the purpose described.

2. The composition of the ingredients, and within the proportions above set forth, substantially as and for the purpose described.

3. The employment of French chalk, or equivalent talcose mineral, substantially in the manner and for the purpose described.

3,580.—John P. Manny, Rockford, Ill.—(Division A.) *Harvester.*—Patented July 14, 1857, No. 17,798; reissued August 3, 1869.

Claim.—1. The platform, constructed with converging sides, operating to compress the gavel while being discharged, as set forth.

2. The combination, with a rake-head, of teeth, pivoted to vibrate in a vertical plane parallel with the rake-head, but rigidly supported against lateral strains, as set forth.

3. The combination, substantially as set forth, with a platform, gradually diminishing in width from front to rear, of a rake, having teeth pivoted to vibrate in a vertical plane parallel with the rake-head.

4. The combination, with a vertical rake-shaft, of a rake-head, oscillating in a vertical plane parallel to its length, and connected with the shaft by parallel bars, substantially as set forth.

5. The combination of a platform vibrating about the main axle, reel-supports vibrating with the platform, and an oscillating rake, also vibrating vertically in conformity with the movements of the platform, the combination being and operating substantially as set forth.

6. The cam-guide, pivoted between the shaft and the rake-head, substantially as set forth.

7. The combination of a rake, turning on a vertical axis, with a cam-guide, vibrating vertically in unison with the movements of the platform about the main axle, the combination being and operating substantially as set forth.

8. The combination, with a pivoted cam-guide, of a rake-arm, pivoted to and turning with a vertical shaft, the combination being and operating substantially as set forth.

9. The combination, in a two-wheeled harvester, of a rake, turning on a vertical axis between the plane of the wheels, with a cam-guide, also pivoted between the plane of the wheels, the combination being and operating substantially as set forth.

3,581.—John P. Manny, Rockford, Ill.—(Division B.) *Harvester.*—Patented July 14, 1857, No. 17,798; reissued August 3, 1869.

Claim.—1. The combination, with a platform vibrating about the main axle, of a rake, moving over the platform in the arc of a circle, the combination being and operating substantially as set forth.

2. The combination of a platform and reel-supports, vibrating about the main axle, with a rake, moving over the platform in the arc of a circle, the combination being and operating substantially as set forth.

3. The combination of a rake with a platform, suspended from a frame vibrating about the main axle, the combination being and operating substantially as set forth.

4. The combination of a frame, vibrating about the main axle, two driving-wheels, and a rake, moving in the arc of a circle over a platform suspended between the planes of the wheels, the combination being and operating substantially as set forth.

5. The combination of a vibrating frame, a platform, vibrating with the finger-beam around the main axle, and a rake, moving over the platform in a circular path, the combination being and operating substantially as set forth.

6. The combination of a platform, vibrating about the main axle, a rake, supported between the planes of the wheels, and a coupling-piece, interposed between the platform and raking-mechanism, which secures the conformity of the movements of the rake with those of the platform, in passing over uneven ground, the combination being and operating substantially as set forth.

7. The combination of a rake with mechanism for adjusting the rake, finger-beam, and platform, so arranged that the driver can operate the adjusting-mechanism, without stopping the machine, substantially as set forth.

3,582.—Alonzo P. Payson, San Francisco, Cal.—*Gymnastic Swing.*—Patented June 25, 1867, No. 66,038; reissued August 3, 1869.

Claim.—1. In combination with a swing, the motive-power levers E E, connected with the suspended bars C C, so that the person swinging may operate the swing thereby, substantially as described.

2. In combination with the seat of a swing, whether said seat is impelled by levers E E or not, the elastic hoop or band F, substantially as and for the purposes herein shown and described.

3. The combination of the bars C C, levers E E, seat D, and the protecting hoop F, with the supports A A, or their equivalents, when arranged substantially as and for the purposes decribed.

3,583.—Henry Seymour, New York, N. Y., assignee of Hermann Wendt and Henry Seymour.—*Manufacture of Sheep-Shears.*—Patented November 22, 1864, No. 45,198; reissued August 3, 1869.

Claim.—Sheep-shears, consisting of the shanks and spring formed of a single piece of metal, and the blade-plates made separately, and afterward connected to the shanks by welding or swaging, said blade-plates being of iron, and having cast-steel plates welded to them, all constructed substantially as set forth.

3,584.—George Westinghouse, Jr., Pitsburgh, Pa.—*Railway-Frog.*—Patented April 7, 1868, No. 76,365; reissued August 3, 1869.

Claim.—1. The arrangement of a chair, *c*, under one or both ends of the frog A, substantially as and for the purpose described.

2. The arrangement of dovetailed ends *a*, in the frog A, substantially as set forth.

3,585.—Elizabeth Hawks, Troy, N. Y.—*Auxiliary Air-Chamber for Stoves, Heaters, and Furnaces.*—Patented April 23, 1867, No. 64,102; August 10, 1869; reissued August 3, 1869, and omitted in the list of claims of that date; again reissued August 10, 1869.

Claim.—1. The shield A, or any equivalent therefor, containing a horizontal opening or slot *b* at or near the top or upper edge thereof, constructed and applied, or used in the manner and for the purposes substantially as herein described and set forth.

2. The employment of the auxiliary air-chamber H, constructed, arranged, and operated in combination with the fire-grate F, and fire-chamber or chamber of combustion E, in the manner substantially as hereinbefore described and set forth.

3. The arrangement and combination of the opening or elongated slot B, or any equivalent thereof, with the auxiliary air-chamber H, by means of

which atmospheric air is admitted to the fire in the combustion-chamber E, so as to promote and facilitate combustion and economy in the use of fuel, substantially as hereinbefore described and set forth.

3,586.—MARCUS P. NORTON, Troy, N. Y.—*Post-Office Post Marking and Canceling Hand-Stamp.*—Patented April 14, 1863, No. 38,175; reissued August 23, 1864, No. 1,748; again reissued August 3, 1869, and omitted in the list of claims of that date; again reissued August 10, 1869.

Claim.—1. The postage-stamp-canceling device cylinder, or tube C, containing a die, or type, G, made of cork, wood, or other suitable material, or any equivalent for said cylinder, or tube C, or for the said canceling-die, or type G, whereby to efface, cancel, or destroy the postage-stamp with indelible or other ink, in the manner and for the purposes substantially as herein described and set forth.

2. The canceling-device cylinder or tube C, with cork, or wood, or any substantial equivalent thereof, forming the die or type G therein, in combination with the cross-bar, or piece B, and with the post-marking device D, substantially as and for the purposes herein described and set forth.

3. The post-marking of letters, envelopes, and packets, and the cancellation of the postage-stamps thereon with ink, at one and the same blow or operation of the instrument, in the manner, and by the means, substantially as herein described and set forth.

4. The employment and combination of a post-marking device with a postage-stamp-canceling device, both being operated by one or the same handle, for the post-marking of letters, envelopes, or packets, and for the cancellation of the postage stamps thereon, with indelible or other ink, in the manner substantially as herein described and set forth.

3,587.—CALEB C. FOSTER, Odessa, Del.—*Fertilizer-Attachment.*—Patented April 28, 1868, No. 77,269; reissued August 3, 1869, and omitted in the list of claims of that date; again reissued August 10, 1869.

Claim.—1. The arrangement, upon a suitable shaft under the bottom of the hopper of a fertilizer-attachment, of one or a series of polygonal-shaped rollers, of any suitable material, said rollers being provided with small recesses and projecting edges on their peripheries, substantially as shown and described.

2. The arrangement, upon a cross-shaft in the hopper, a suitable distance above the movable or stationary bottom, of the wings W S and pins P P, or their equivalents, substantially as and for the purposes set forth.

3. In combination with the polygonal-shaped rollers R M, the springs S C P, substantially as and for the purposes specified.

4. Broadly, the saddles R V, whether cast with or connected to the hopper-bottom by screws, or otherwise, said bottom being provided with beveled openings, as described, in combination with the polygonal-shaped wheels R M, substantially as set forth.

5. In combination with the saddles R V, the beveled openings R H in the hopper-bottom, over which pass the vertical pins P on the shaft S′ H′, substantially as set forth.

3,588.—AMERICAN STANDARD TOOL COMPANY, Newark, N. J., assignees, by mesne assignments, of ANDREW R. ARNOLD.—*Machine for Making Twist-Drills.*—Patented August 30, 1864, No. 44,037; reissued August 10, 1869.

Claim.—1. The combination of the revolving cutter-arbor, revolving mandrel, advancing-mechanism, and stop-mechanism, substantially as before set forth.

2. The combination of two revolving cutter-arbors, revolving mandrel, advancing-mechanism, and stop-mechanism, substantially as before set forth.

3. The combination of the revolving cutter-arbor, revolving mandrel, advancing-mechanism, and variable stud, substantially as before set forth.

4. The combination of two revolving cutter-arbors, revolving mandrel, advancing-mechanism, and variable stud, substantially as before set forth.

5. The combination of the revolving cutter-arbor, revolving mandrel, advancing-mechanism, and tubular guide, substantially as before set forth.

6. The combination of two revolving cutter-arbors, revolving mandrel, advancing-mechanism, and tubular guide, substantially as before set forth.

7. The combination of the revolving cutter-arbor, revolving mandrel, advancing-mechanism, and poppet, substantially as before set forth.

8. The combination of the revolving mandrel and advancing-mechanism, with two revolving cutter-arbors, and two poppets, substantially as before set forth.

9. The combination of the revolving cutter-arbor, revolving mandrel, advancing-mechanism, poppet, lever *s′*, and variable fulcrum, substantially as before set forth.

10. The combination of the revolving mandrel and advancing-mechanism, with two revolving cutter-arbors, two poppets, two levers *s′*, and two variable fulcra, substantially as before set forth.

11. The combination of the revolving cutter-arbor, revolving mandrel, advancing-mechanism, variable stud, changeable cog-wheels, and stop-mechanism, substantially as before set forth.

12. The combination of the revolving cutter-arbor, revolving mandrel, advancing-mechanism, stop-mechanism, and tubular guide, substantially as before set forth.

13. The combination of the revolving cutter-arbor, revolving mandrel, advancing-mechanism, stop-mechanism, and poppet, substantially as before set forth.

3,589.—ESEK BUSSEY, Troy, N. Y.—*Cooking-Stove.*—Patented July 24, 1866, No. 56,525; reissued August 10, 1869.

Claim.—1. A diving-flue cooking-stove, with the exit-flue so constructed as to inclose, on the sides and bottom, the culinary boiler or hot-water reservoir B.

2. A diving-flue cooking-stove, with the exit-flue constructed across the bottom, and up the rear upright side of the culinary boiler or hot-water reservoir B.

3. A diving-flue cooking-stove, constructed with an exit-passage, F, below the top of the oven, and an exit-flue, E E′, in combination with an uncased reservoir, B, attached to the rear of the stove, and placed just above such exit-passage, and so arranged that the gases of combustion, on passing through such exit-flue, will impinge upon or come in direct contact with said reservoir, substantially as and for the purposes hereinbefore specified.

4. An exit-passage, F, constructed in the rear of a diving-flue cooking-stove, and below the top of the oven, in combination with an uncased reservoir, B, attached to the rear of the stove, and wholly or partly below the top plate thereof, and so arranged that the gases of combustion, in passing through said passage, will come in contact with and heat such reservoir by a direct draught from the fire-box to the smoke-pipe.

3,590.—JOHN CURTIS, Cincinnati, Ohio.—*Carriage.*—Patented March 26, 1867, No. 63,223; reissued August 10, 1869.

Claim.—1. The bent strip or strips B C D E of elastic timber, or its equivalent, forming the sills of the body proper, and to take the place of the spring-bar and body-loops, as and for the purpose set forth.

2. The bent and rebated strip or strips L *l* N N′, or their equivalents, discharging the functions of the double perch and the upper member of the fifth-wheel, as set forth.

3. The arrangement of strap P, screw Q, and gland R, or their mechanical equivalent, to enable the members of a fifth-wheel to be set up as they wear, in the manner explained.

4. In the described combination, with the elements of claim third, the pad or cushion S, for the purpose stated.

3,591.—EDGAR F. GRIFFIN, Chicago, Ill., administrator of the estate of ANSON D. GRIFFIN, deceased.—*Packing for Deep Wells.*—Patented August 13, 1867, No. 67,749; reissued August 10, 1869.

Claim.—1. The described arrangement and combination of the collars *d* and *e*, bag *c*, and casing or tubing *a*, the collar *e* being attached by a screw-thread, opposite to that connecting the several joints

of casing or tubing, and operating substantially as and for the purposes set forth.

2. The loose sliding-ring *f*, arranged with relatiou to the bag and tubing, substantially as and for the purposes set forth.

3. The springs *g g*, in combination with the bag *c* and loose ring *f*, as and for the purposes set forth.

4. The slotted easing *a'*, with its shoulder *h*, arranged in relation to the bag *c*, as and for the purposes set forth.

5. The apertures *i i* iu the tubing *a*, arranged with relation to the bag and collars *d* and *e*, substantially as and for the purposes set forth.

3,592.—August Kessberger, Springfield, Ill. —*Wagon-Brake.*—Patented April 6, 1869, No. 88,721; reissued August 10, 1869.

Claim.—1. The automatic brake G, provided with the projection *g* and curved tooth H, and pivoted or hinged to or upon the bolster F, substantially as herein shown and described.

2. The notched band H upon the inner end of the hub, in combinatiou with the brake G, substantially as and for the purpose specified.

3. The within-described wagon running-gear, consisting of the axle A, thimble-skein C, clip D, coupling-bar E, bolster F, brakes G G, (provided with the projections *g g* and curved teeth H H,) and the slotted band I, upon the inner end of the hub, all constructed and arranged substantially as and for the purpose shown.

3,593.—John D. King, Toronto, Canada West. —*Tobacco-Press.*—Patented July 25, 1865, No. 48,955; reissued August 10, 1869.

Claim.—1. The combination of a rotating pressing-roller, K, the traversing-bed, and the interposed removable trough, the combination being and operating substantially as set forth.

2. The combination of pressing-rollers of different widths, mounted on a common axle, with troughs of correspondingly different widths, mounted on a traversing-bed, the combination being and operating substantially as set forth.

3. The combination of yielding spring-pressure rollers, traversing-troughs, the traversing-bed, and its driving-drum D, the combination being and operating substantially as set forth.

4. The combination of the bed, the driving-drum D, the supporting-rollers, and the pressure-rollers, the combination being and operating substantially as set forth.

5. The combination of the pressure-rollers, the bed, its rack, the grooved driving-drum, and the grooved supporting-rollers, all constructed for joint operation, substantially as set forth.

3,594.—S. W. Kirk, Coatesville, Pa., and C. E. Stotsenburg, Wilmington, Del,, assignees of S. W. Kirk.—*Mode of Purifying Cast Iron.*—Patented March 24, 1863, No. 38,003; reissued August 10, 1869.

Claim.—The use of the binoxide of manganese, or any other oxide or oxides of the same which may be substituted in lieu thereof, with or without the sesquioxide of iron, or any other oxide or oxides of the same which will effect substantially the same result, introduced to iron when the same is perfectly fluid, for the purpose of washing out the impurities of the said iron, substantially in the manner and for the purpose set forth.

3,595.—Holmes, Booth and Haydens, Waterbury, Conn., assignees, by mesne assignments, of Joseph Ridge.—*Coal-Oil Lamp.*—Patented April 15, 1862, No. 34,984; reissued February 4, 1868, No. 2,855; again reissued August 10, 1869.

Claim.—A lamp for kerosene and other oils, formed of a draught plate or deflector, with a flame-slot, in combination with a perforated air-distributer, the parts being so constructed that the light can shine through the transparent medium surrounding the flame and the wick-tube, substantially as set forth.

3,596.—George Ambrose, for himself, and Edward Hagan, assignee of George Ambrose, New York, N. Y.—*Hoisting-Apparatus.*—Patented May 23, 1865, No. 47,782; reissued August 17, 1869.

Claim.—1. The upper catches, in combination with the hod-racks and frame, all arranged with respect to each other as and for the purpose specified.

2. Spring-latches *m m*, and levers *n n*, in combination with the guides A A, and elevator or hod-rack C, substantially as described.

3,597.—D. R. Averill, New Centreville, for himself, and The Averill Chemical Paint Company, New York, N. Y., assignees of D. R. Averill.—(Division A.) *Paint.*—Patented July 16, 1867, No. 66,773; reissued July 28, 1868, No. 3,051; again reissued August 17, 1869.

Claim.—A paint composed of the ingredients herein named, or their equivalents, and prepared and compounded substantially in the manner specified.

3,598.—D. R. Averill, New Centreville, for himself, and The Averill Chemical Paint Company, New York, N. Y., assignees of D. R. Averill.—(Division B.) *Paint.*—Patented July 16, 1867, No. 66,773; reissued July 28, 1868, No. 3,051; again reissued August 17, 1869.

Claim.—A liquid paint, prepared and mixed ready for use during its manufacture, and which will be preserved in such condition, substantially as and for the purpose described.

3,599.—D. R. Averill, New Centreville, for himself, and The Averill Chemical Paint Company, New York, N. Y., assignees of D. R. Averill.—(Division C.) *Paint.*—Patented July 16, 1867, No. 66,773; reissued July 28, 1868, No. 3,051; again reissued August 17, 1869.

Claim.—A new article of manufacture, a liquid oleaginous paint, prepared ready for use, and which will retain its fluid condition when not applied

3,600.—D. R. Averill, New Centreville, for himself, and The Chemical Paint Company, New York, N. Y., assignees of D. R. Averill.—(Division D.) *Paint.*—Patented July 16, 1867, No. 66,773; reissued July 28, 1868, No. 3,051; again reissued August 17, 1869.

Claim.—The combination of soluble silica, in any of its forms, with a liquid oleaginous paint, for the purpose set forth.

3,601.—D. R. Averill, New Centreville, for himself, and The Averill Chemical Paint Company, New York, N. Y., assignees of D. R. Averill.—(Division E.) *Manufacture of Paints.*—Patented July 16, 1867, No. 66,773; reissued July 28, 1868, No. 3,051; again reissued August 17, 1869.

Claim.—The combination of the solution, in water, of the salts of lead and zinc, or either of these, with linseed-oil, or other drying-oil, for the purpose of preparing paints.

3,602.—Charles Buffum, Lynn, Mass., assignee of Joseph B. Johnson.—(Case A.) *Shoe.*—Patented February 7, 1865, No. 46,299; reissued August 17, 1869.

Claim.—1. The above-explained improvement in lasting a shoe, the same consisting in the employment of a "false inuer sole," B, in connection with the last E and upper A, and drawing the upper on the said last and sole, by means of thread *a*, sewing *f*, or the equivalent thereof, extended across the false sole, but without going into or through it, so as to prevent it from being easily detached from such thread, so as to be removed from the shoe after the outer sole may have been sewed to the upper.

2. The combination of centering-devices with the false inner sole and the upper, or with such and the outer sole; such centering devices, as represented, being the pins *a b c*, and for the purpose of effecting, by means of the holes in the outer sole, the ready centering or proper arrangement of the outer with the "false inner sole" and the overlaps of the upper.

3. The combination of the false inner sole, and its centering-pins or devices, with mechanism for clamping or holding the outer sole in place on the false inner sole after being centered or properly adjusted thereon, such clamping-devices as described and represented consisting of the annuli *d*, and their screws *e*.

4. The combination of the spurs *g g*, or their equivalents, with the "false sole" B and the upper A, when lasted as specified; such spurs being for the purpose of maintaining the said outer sole and the upper in their proper relation at or near the ball of the foot.

5. The combination of one or more pins *a c*, or their equivalents, with the false sole B, and the sewing *f*, extended across such sole, and about the said pin or pins, substantially in manner as hereinbefore explained.

6. The improved manufacture or shoe, substantially as described, viz, as made with the outer sole and the upper sewed together, and the overlaps of the upper connected by a lacing, or its equivalent, crossing from one to the other of them, and applied in lasting the upper, by the use of a false inner sole or support-plate, as specified.

7. In constructing a boot or shoe, as connecting the side overlaps of its upper by a lacing, extended transversely across the shoe from one of them to its opposite, and holding in place the heel and toe-overlaps by such lacing extended through them.

8. In combination with the upper and the lasting-plate applied to the last, as described, a lasting-thread, carried across such lasting-plate, and passing through the laps of the upper.

3,603.—ORLO CADY, Morristown, Vt., and WILLIAM W. W. WOOD, Brooklyn, N. Y., assignees, by mesne assignments, of THOMAS ADAMS and GEORGE JOHN PARSON. — *Slide-Valve.*—Patented September 17, 1867, No. 68,932; patented in England, February 15, 1866; reissued August 17, 1869.

Claim.—A slide-valve, having a ring, H, provided with a fillet, N, and recess O, so that the pressure of steam on the different surfaces will balance the valve, substantially as described.

3,604.—H. T. CUSHMAN, North Bennington, Vt. —*Composition Paper-Polisher.* — Patented June 1, 1869, No. 90,733; reissued August 17, 1869.

Claim. — 1. The herein-described compound of matter, composed of the ingredients, mixed as specified, and adapted for polishing paper, as set forth.

2. A paper-polishing implement, composed of a handle, A, of ivory, or other substance, and a mass, B, of the compound herein specified.

3,605. — DANIEL FISHER, Oil City, Pa.—*Clamp for Elevating Well-Tubes.* — Patented February 23, 1869, No. 87,097; reissued August 17, 1869.

Claim.—1. A tubing-drawer, with jaws adapted to catch under a collar or thimble on the well-tube, all substantially as set forth.

2. The hinged jaws A A′ and suspending-links B B′, adapted to operate substantially as herein described.

3. In combination with the aforesaid jaws A A′ and links B B′, the clamping-screw C, employed substantially as and for the purpose set forth.

4. The pintle D *d*, in combination with the jaws A A′ and link B′, substantially as set forth.

3,606.—JOHN B. MAYER, Niagara, Falls, N. Y. —*Clock.*—Patented September 15, 1868, No. 82,266; reissued August 17, 1869.

Claim.—1. The combination and arrangement of the wheel A, pinion E, and escapement-wheel D, the parts having the characteristics and operating together in the manner described, and for the purpose set forth.

2. The combination and arrangement of wheel A, pinion E, and escapement-wheel D, with the hour and minute hands upon the axis of said escapement-wheel, substantially as set forth.

3. The combination, with wheel A, pinion E, and escapement-wheel D, of the ratchet-wheels *k l*, revolving tooth *i′*, pin *i*, and wheel G, substantially as and for the purpose described.

4. The shaft B, carrying the loose wheel F, friction-spring *s*, wheel A, and winding-drum, in connection with pawl *h*, arranged and combined to prevent the carrying back of the hands during the winding of the clock, as set forth.

3,607.—JAMES D. SMITH, Greig, N. Y., assignee of WILLARD H. SMITH. — *Vapor-Burner.*—Patented June 30, 1868, No. 79,404; reissued August 17, 1869.

Claim.—1. Providing the air-tube E, between the air-passages F F and the base of the flame, with perforated heaters, consisting of the heat-conducting flange or flanges K K, substantially as and for the purpose herein stated.

2. Bringing sides of the perforated heater K downwardly upon the tube A, substantially in the manner as and for the purposes set forth.

3,608.—DAVID STUART and RICHARD PETERSON, Philadelphia, Pa., assignees of DAVID STUART and LEWIS BRIDGE. — (Division A.) *Base-Burning Fire-Place Stove.* — Patented June 23, 1868, No. 79,275; reissued August 17, 1869.

Claim.—1. The base of the stove inclosing the passages E, F, and G, arranged and communicating with the pipes P and P′, substantially as described.

2. Two or more pipes P and P′, arranged within the outer casing of a fire-place stove, for conveying the products of combustion to the chimney, and for heating the air admitted to the space within the said outer casing, all substantially as and for the purpose herein set forth.

3. The pipes P and P′, in combination with the compartments *k* and *k′*, and the valved partition between the same.

4. The double cover, consisting of plates 2 and 3, one for fitting to the top of the stove, and the other to the top of the feeder, and so arranged that the products of combustion can pass between them.

3,609.—GEORGE WATT, Richmond, Va.—*Plow.* —Patented November 26, 1867, No. 71,560; reissued August 17, 1869.

Claim.—1. A plow-frame or casting, A, having a flange for the support of the mold-board, constructed as represented and described, for the purpose of adapting it to support any desired form of mold-board, as set forth.

2. A plow-frame or casting, A, having a neck or breast *a*, constructed substantially as herein described, and serving to prevent the accumulation of trash, &c., between the cutting-edge and the beam.

3. A plow, having its landside constructed as herein represented and described, for the purposes set forth.

4. The combination, with the mold-board B, of the colter or cutter E, forming a part of the same as described, for the purpose set forth.

5. The brace-rod J, reflexed at both ends, as described, and employed, in conjunction with the staples *j′*, b^1, and key b^2, to connect the frame A and mold-board B, substantially as set forth.

6. The combination, with the slide or landside-bar D, of the hook-shaped projection *d*, staple d^1, key d^2, and notches a^5, for adjustably securing said slide to the frame A, as set forth.

7. The handles G G′, both attached to the landside side of the plow, as represented and described, for the purposes set forth.

8. The removable extension-piece F, applied substantially as and for the purpose set forth.

9. The mold-board B, Fig. 10, formed for the purposes set forth.

10. The mold-board B, Fig. 11, adapted for support on the frame A, and to be removed and reversed, as represented and described.

3,610.—MILTON D. WHIPPLE, Cambridge, Mass., assignee, by mesne assignments, of himself.—*Machine for Combing Cotton.* — Patented October 26, 1858, No. 21,932; reissued August 17, 1869.

Claim.—1. The vibrating elastic feed-roll and permanent knife-edge, for holding the staple, substantially as described.

2. The combination of a feed, for introducing the material into the machine, the vibrating card and nippers, and the stationary cards, operating together in the manner substantially as described.

3. In combination with the nippers for receiving and carrying the cotton in tufts past or to the cards to be carded and straightened, the doffer for receiving said carded or combed tufts preparatory to their being formed into a continuous sliver, substantially as described.

4. In combination with the nippers for carrying, and the doffer for receiving the cotton in tufts, the rolls, for stripping the doffer and taking off the cotton in a continuous sliver, substantially as described.

3,611. — JAMES P. WOOD and JOSEPH WOOD, Philadelphia, Pa., and WILLIAM E. WOOD and CHARLES J. WOOD, Baltimore, Md., assignees of G. ADOLPH REIDEL. — *Steam-Generator.* — Patented February 23, 1869, No. 87,294; antedated February 12, 1869; reissued August 17, 1869.

Claim.—1. The construction and arrangement of the hollow rims B, with the openings forming the drum D, hollow spokes C, and flexible pipes E, substantially as herein set forth.

2. The construction of the annular ribs *k*, when arranged with the rims B, for the purpose of forming return-flues for the products of combustion, substantially as described.

3. The arrangement of the man-hole plates *b*, and rods *c*, with the rims B, and hollow spokes C, substantially as and for the purpose above described.

3,612.—BARTON P. VAN MARTER, Lyons, N. Y. —*Tub for Distilling Essential Oils.*—Patented January 19, 1869, No. 85,115; reissued August 17, 1869.

Claim.—1. The employment of the convex-shaped perforated metal plate D, when arranged to operate substantially as and for the purpose herein described.

2. The cover E, when provided with the rubber ring G, substantially as described, and for the purpose set forth.

3. The employment of a rubber ring, between the cover and the upper end of the staves, for the purpose herein specified.

4. The devices used for pressing down and securing the cover E in place, consisting of the beam B, rods H H, and bar I, constructed and arranged substantially as herein specified.

5. The still, consisting of the tub A, beam B, bottom C, disk D, cover E, rubber ring G, rods H H, and bar I, all constructed and arranged substantially as and for the purpose specified.

3,613.—T. BAILEY and VIRGIL W. BLANCHARD Bridport, Vt.—*Washing-Machine.*—Patented March 9, 1869, No. 87,617; reissued August 24, 1869.

Claim.—1. The perforated diaphragm E, constructed and arranged substantially as described, in combination with the spring-pounder D, said pounder being provided with pumps or pistons, substantially as set forth.

2. In combination with the shaft F, ratchet G, pawl *g*, and lever C, the perforated diaphragm E and pounder D, substantially in the manner specified.

3,614. — JOSEPH F. CALHOUN, Wolcottville, Conn., assignee, by mesne assignment, of P. J. CLARK.—*Skate.* — Patented February 5, 1861, No. 31,348; reissued August 24, 1869.

Claim. — 1. The arrangement, below the metal plate, of the clamping-slides and operating-screw G *d*, with right and left-hand threads, substantially as and for the purposes set forth.

2. The strap K and connecting-clamps H, in combination with the blocks E and screw G, substantially as and for the purposes set forth.

3,615. — ALEXANDER WIMBISH HARRIS, New York, N. Y.—*Suspenders.*—Patented June 16, 1868, No. 78,872; reissued August 24, 1869.

Claim. — 1. A suspender or brace, substantially such as described, consisting of a single piece of webbing, leather, cloth, or other equivalent material, passed through and sliding freely in two button-strap loops, and the two ends connected by a buckle, or equivalent means, by which the length can be adjusted at pleasure, as and for the purpose described.

2. As a new article of manufacture, a suspender or brace, consisting of a single piece of webbing, or other equivalent material, constructed substantially as described, in combination with a slide to secure an adjustable crossing of the webbing, or other material, substantially as described.

3. So combining an adjustable slide with a suspender crossing on the back of the wearer, that the strap or straps shall cross in said slide, and so make the point of crossing adjustable, substantially as described.

3,616.—JAMES W. MURFEE, Havanna, Ala.—*Subsoil-Plow.*—Patented June 22, 1869, No. 91,657; reissued August 24, 1869.

Claim. — 1. The wedge-shaped concavo-convex share, hoe, or point herein described, the upper (convex) side being composed of inclined triangular surfaces, the under (concave) side in all cases being arched and beveled, so as to form, as nearly as the kind of metal used will allow, feather-edges upon the sides and point, reducing the friction to a minimum, thus allowing the plow to pass through the earth as easily as possible, and by these means making the plow a self-sharpener, substantially as specified.

2. The reversed truncated wedge-shaped heel, elevated toward the rear, substantially as specified.

3. The arrangement and set of the colter-shank in rear of the greatest transverse diameter of the wedge, and as acutely as practicable thereto, substantially as described.

4. The arrangement of the standard of the frame as near in a line with the colter-shank as practicable, and the handles parallel to a line, which, in direction, is a mean between the line of the shank and point, or nearly so, substantially as specified.

5. The herein-described share or point, either separately, or in combination with an elevated heel, as specified.

6. The peculiar set and arrangement of the colter-shank, standard of frame, handles, and beam, substantially as herein specified.

3,617.—CHARLES PARKER, Meriden, Conn., assignee of GEORGE FOWLER and the administrators of the estate of DE GRASSE FOWLER, deceased, viz, MALTBY and SOPHRONIA FOWLER.—*Machine for Punching Metal.* — Patented April 17, 1855, No. 12,723; extended seven years; reissued August 24, 1869.

Claim.—1. Combining with the slide and shaft of a power-press, and the wheel, by means of which the said shaft is caused to revolve, a mechanism which operates automatically to disconnect the said wheel from the shaft at a certain point after one revolution.

2. In a power-press, combining, substantially as described, with the rotating shaft and the slide or tool-stock, an eccentric wrist-pin and an eccentric circle or ring, placed upon and around said wrist-pin for the purpose of varying the play of said slide or stock.

3. In combination with the wrist-pin B, the slide D, and block *c*, the adjusting-plates *e*, more or less in number, substantially as and for the purpose set forth.

3,618.—EDWIN R. STILWELL, Dayton, Ohio.—*Feed-Water Heater and Filterer.*—Patented October 4, 1864, No. 44,561; reissued January 23, 1866, No. 2,159; again reissued August 24, 1869.

Claim.—1. Filtering material F between a series of shelves, and an outlet, *r*, substantially as described.

2. The arrangement of steam-inlet *n*, shelves *a a*, filtering-material F, and outlet *r*, in a vessel, A, substantially as described.

3. The depositing-plates *a a a*, constructed and arranged substantially as described.

4. The arrangement of the steam-pipes *m* and *n*, with reference to the plates *a a a*, substantially as specified.

5. The combination of the vessel A, the plates *a a a*, the plate *d*, the steam-pipes *m*, *n*, and E, and water-pipes *f'* and *r*, substantially as described.

3,619.—C. H. EMERSON and JOHN F. EMERSON, New York, N. Y.—*Machine for Heading Bolts.*—Patented April 20, 1869, No. 89,211; reissued August 24, 1869.

Claim.—1. The combination of roughing and finishing-headers J and J', with grippers H H and sliding-dies attached to carriers I I, arranged and operating, first, to roughly form the head of the bolt upon the bar, and then to finish it, substantially as specified.

2. In combination with the above, the inclined faces or bearings *f f*, on the forward end of the head-stock L, and the inclined faces or bearings *g g*, attached to the carriers I I of the sliding-dies, for re-

tracting the said carriers by the action of the heading-stock L, substantially as specified.

3,620.—DANIEL R. PRINDLE, East Bethany, New York.—*Process of Preserving Wood and Timber.*—Patented March 26, 1867, No. 63,300; reissued August 24, 1869.

Claim.—1. The process of first charging or saturating wood or other porous material with any substance or substances, of preservative qualities, and subsequently coating or covering the same with any suitable substance or substances, of proper consistency, in the manner and for the purpose herein specified.

2. In combination with the above, also seasoning the wood or material, by heat applied prior to or during the process, as specified.

3,621.—P. H. ROOTS, Connersville, Ind., assignor to himself and F. M. ROOTS, same place.—*Water-Wheel*—Patented March 15, 1859, No. 23,267; reissued February 28, 1860, No. 918; reissued August 24, 1869.

Claim.—1. The wheel A and rotary breast or abutment E, moving with different degrees of velocity, in combination with the apron or concave D, arranged to operate substantially as and for the purpose set forth.

2. The wheel A and rotary breast or abutment E, in combination with the apron or concave D, having its interior surface lined and rendered true with soft metal, substantially as and for the purpose set forth.

3. The wheel A and rotary breast or abutment E, having its recesses *g g'* lined with soft metal, in combination with the concave or apron D, arranged to operate substantially as and for the purpose described.

3,622.—JOEL F. KEELER, Pittsburgh, Pa.—*Railroad-Car for Transporting Petroleum.*—Patented January 10, 1865, No. 45,834; reissued July 18, 1865, No. 2,031; again reissued August 31, 1869.

Claim.—1. The construction of a fire-proof railway tank freight-car, substantially as described.

2. The construction of a railway-tank freight car in such a manner that the tank constitutes, substantially, the frame-work of the car.

3. The construction of tank freight-cars in such a manner that their tanks, or some parts thereof, are carried as low as the tops of the car-wheels, substantially as described.

4. A metallic inverted-arch truss or bottom in the construction of railway-cars, substantially as described.

5. The construction of railway-cars having two inclosed stories, substantially as described.

6. The construction of railway tank-cars, with tanks having a depression in their bottom, through which their contents are drawn off, substantially as described.

3,623.—LANE AND BODLEY, Cincinnati, Ohio, assignees of PHILANDER P. LANE, same place.—*Self-Lubricating Journal-Box.*—Patented November 26, 1867, No. 71,313; reissued August 31, 1869.

Claim.—1. The oil-chamber E, placed below the bottom of the journal, and communicating therewith by one or more apertures, F, in a protuberance projecting downward into the said oil-chamber, substantially as represented.

2. The self-lubricating journal-box, having the oil-chamber E below the bottom of the journal, and communicating with the journal at or near its mid-length, by one or more apertures, F, and at or near the ends thereof, by ducts G *g* G' *g'*, to which the overplus of oil is conveyed by channels H H', substantially as set forth.

3,624.—FRANCES LEE BARNES, New York, N. Y., executrix of the estate of SAMUEL H. BARNES, deceased.—*Corset-Spring.*—Patented July 17, 1866, No. 56,345; reissued May 12, 1868, No. 2,929; again reissued June 29, 1869, No. 3,520; again reissued August 31, 1869.

Claim.—1. A pair or set of corset-springs, each spring consisting of two or more metallic plates, placed one upon another, and fastened together at their centers, but so connected, at or near each end, that they can play or move upon each other in the direction of their length, and be prevented from sliding off each other laterally.

2. A pair or set of corset-springs, each spring composed of two or more metallic plates, placed one above another, and fastened together at their centers, and so connected at or near each end that they can move or play upon each other in the direction of their length.

3. A pair or set of corset-springs, each spring consisting of two or more metallic plates, placed one upon another, and fastened together at their centers, but so connected at or near each end that they can play or move upon each other in the direction of their length, and be prevented from sliding off each other laterally—the clasps by which the springs are combined, except the center one, being attached to only one of the plates.

3,625.—GEORGE DOOLITTLE and GEORGE H. DIMOND, Bridgeport, and THOMAS WALLACE, Jr., Ansonia, Conn., assignees, by mesne assignments, of T. B. DOOLITTLE.—*Lamp-Shade.*—Patented March 10, 1868, No. 75,390; reissued August 31, 1869.

Claim.—1. As an article of manufacture, a corrugated metallic shade for lamps, combined with a spring or springs, at or near the upper edge, to be self-adapting to the chimney, substantially as described.

2. The employment, in combination with a shade or reflector of a spiral or coil spring or springs, arranged in the upper edge of the shade, so as to roll over or spring back, substantially as described, for the purpose set forth.

3. Forming a corrugated or crimped metallic shade, so as to be yielding at its upper edge, and providing it with projecting teats or lips, *s s*, substantially as described and for the purpose set forth.

3,626.—JAMES F. HARCOURT, Moscow, Ind.—*Wheat-Drill.*—Patented November 13, 1866, No. 59,595; reissued August 31, 1869.

Claim.—1. The concave bottom *l* in hopper E, provided with the holes or openings *m*, in combination with the toothed wheels *n*, fitted in inclosures *t* underneath the bottom *l*, the yielding plates *u*, and arms *v*, attached to shaft *w*, for adjusting the plates *u*, substantially as and for the purpose set forth.

2. The pivoted standard *c*, in combination with the slotted arm *i*, bearing the shaft C, substantially as described, for the purpose specified.

3. The adjustable yielding plate *u*, in combination with arms *v*, shaft *w*, and index-arm *a'*, substantially as described, for the purpose specified.

4. The arrangement of the adjusting wheel B, in line with and in rear of the central standard *f*, as and for the purpose stated.

5. The seed-conductors S, attached at their respective ends to the frame A, and standards *c*, in the manner described, so as to form braces or supports for said standards, as set forth.

6. In combination with the wheel B, and the seed-shaft and its accessories *n o p t u v*, the gears *r*, communicating motion from the wheel B to the said shaft, as described.

3,627.—ÆTNA MANUFACTURING COMPANY, Salem, Ohio, assignees of AMOS RANK.—*Harvester.*—Patented February 12, 1867, No. 61,953; reissued August 31, 1869.

Claim.—1. The combination, in a harvester, of a bearing projecting from the main frame, a swiveling eye-bolt working in the bearing, and a gauge-collar fitting on the eye-bolt and changeable from one side of the socket to the other, the combination being and operating substantially as set forth.

2. The combination, in a harvester, of a fixed bearing or socket, a changeable gauge-collar, a longitudinally-adjustable eye-bolt, and a vibrating drag-bar, with a hinged cutting-apparatus, the combination being and operating substantially as set forth.

3,628.—JOHN THRASHER, Albion, Mich.—*Wagon-Wheel.*—Patented January 30, 1866, No. 52,341; reissued August 31, 1869.

Claim.—In combination with a wooden hub, formed with mortises to receive the tenons of the

spokes, a metallic band encircling the hub, and formed with sockets to receive and support the spokes, substantially as and for the purpose set forth.

3,629.—KATE LOWE and WILLIAM MCTEER, Baltimore, Md., assignees, by mesne assignments, of BENJAMIN A. LAVENDER and HENRY LOWE.—*Fiber from Cane for Paper, and for other Purposes.*—Patented April 4, 1854, No. 10,722; extended seven years; reissued June 9, 1868, No. 2,983; again reissued August 31, 1869.

Claim.—1. Obtaining the fiber from the cane or reed *Arundinaria macrosperma* of Michaux, for the purpose specified.

2. Cane-cotton or hemp, as a new article of commerce and manufacture, for the purpose specified.

3. Breaking down woody fiber of cane and other like plants, and dissolving the gummy and other foreign matters therefrom, by means of muriatic or sulphuric acid of the strength of 16° Baumé, or thereabout, preparatory to making hemp or cotton for bagging, rope, paper-pulp, &c., in the manner substantially as set forth.

3,630.—JAMES ARMSTRONG, Jr., Elmira, Ill.—*Corn-Planter.*—Patented July 22, 1862, No. 35,914; reissued September 7, 1869.

Claim.—1. A treadle-frame, J, pivoted in front of the axles C C, and extending in rear of the same, in combination with the main wheel-frame A, and with a secondary frame D, which is hung from the main frame, and provided with furrow-openers and seed-dropping devices, substantially as described.

2. The combination of the main frame A, pivoted secondary furrowing and seed-dropping frame D, treadle J, and the rigid draught-pole L, substantially in the manner and for the purpose described.

3. The oscillating valve H′, applied to the seed-tube G substantially as described.

4. The stationary shelf *n*, in combination with valve H′, substantially as described.

5. The construction of the seed-tube G′, with channels *m*, terminating in a recess adapted to receive a valve H′, and shelf *n*, substantially as described.

6. The transversely-adjustable drop-plate *i*, constructed substantially as described.

7. Double slides on each end of the seed-slide, in combination with a perforated intermediate drop-plate *i*, substantially as described.

8. The adjustable runners H, arranged in front of colters I, substantially as described.

9. The arrangement of the oscillating valve H′ and shelf *n*, in combination with the two channels *m* of the seed-tube G′, and with seed-distributing mechanism, constructed to operate substantially as described.

10. The arrangement of hinged adjustable runners H, secondary frame D, and lever J, in combination with the colters I and shoes I′, constructed and operating substantially as described.

11. The arrangement of the seed-hoppers, the operator's seat, and the seed-tubes, in the relation shown, so that the operator, when on his seat, can see the seed as it falls from the shelves of the tubes upon the ground, substantially as described.

3,631.—GEORGE DUNHAM, Unionville, Conn., assignee, by mesne assignments, of EDWARD PAYE and SAMUEL HALL.—*Machine for Forging Nuts.*—Patented September 8, 1857, No. 18,156; reissued September 7, 1869.

Claim.—1. The combination and arrangement of the cutters, perforating-punch, and edging-hammers, so that the punch enters the nut-blank at the crowning face thereof, and that the nut is hammered edgewise, substantially as before set forth.

2. The combination of the adjustable cutter, transferring-instrument, and edging-hammers, in such manner that the nut-blank, after being cut from the bar, is transferred to the place between the edging-hammers so as to be forged edgewise.

3. The combination of the perforating-punch with edging-hammers, arranged and constructed to hammer all sides of the blank without the necessity of turning the blank.

4. The combination of the cutters, the die for the crowning face of the nut-blank, and edging-hammers, substantially as set forth.

5. The combination of the adjustable cutter, the die for the crowning face of the nut, the edging-hammers, and the flatter, substantially as before set forth.

6. The combination of the die and edging-hammers with a flatter, so constructed and arranged, relatively to said die and hammers, that it operates both as a flatter to compress the nut-blank faceewise against the die, and as a transferring instrument to move the blank to the place where the edging-hammers act upon it, substantially as before set forth.

7. The combination of the edging-hammers with cutters, one of which is constructed with a perforation in its face to admit the perforating-punch, and with a lateral opening to permit the escape of the piece punched out of the blank, substantially as before set forth.

8. The combination and arrangement of the punch, edging-hammers, die, and flatter, in such manner that the blank is punched in the space between the edging-hammers before it is forged by them, substantially as before set forth.

9. The combination of the adjustable cutter, punch, die, flatter, and edging-hammers, substantially as before set forth.

10. The combination and arrangement of the flatter and edging-hammers, in such manner that the former operates upon the nut-blank while it is not griped or held by the latter, substantially as before set forth.

3,632.—B. A. EARL, Philadelphia, Pa., assignee of B. A. EARL and HENRY HOLCROFT.—*Apparatus for Oiling Wool.*—Patented May 30, 1865, No. 47,938; reissued September 7, 1869.

Claim.—The mechanism for oiling wood, substantially as described, said mechanism consisting of an oil-reservoir and a sprinkler, having such a movement imparted to it that it will enter the oil in the reservoir, and then discharge the adhering oil on to the wool in the form of drops or spray.

3,633.—JAMES W. RUTTER, Saint Louis, Mo.—*Ore-Crusher.*—Patented March 23, 1869, No. 88,216; reissued September 7, 1869.

Claim.—1. The cone B on the arbor D, when sustained and operated in such manner as to swing in a conical orbit around the axis of its surrounding cylinder, without rotating around said arbor, substantially as set forth.

2. The gauge-ring C, arranged and operating in combination with the cylinder A, and crusher or grinder B, substantially as and for the purposes herein set forth.

3. The combination, with the gauge-ring C, and cylinder A, of the stripper or clearer *j*, substantially as and for the purpose herein set forth.

3,634.—HERBERT L. ANDREWS, Chicago, Ill.—*Inkstand.*—Patented March 31, 1868, No. 76,138; reissued September 7, 1869.

Claim.—1. The rim D, surrounding the flange of the reservoir, and having the inner beveled side, and the laterally-swinging cover C, and either with or without the recesses or indentations *n*, in combination with the reservoir B, either with or without the lateral projections *a*, substantially as herein described, for the purpose specified.

2. The cover C of an ink-well, made concave or recessed upon its upper surface, to form a receptacle for pens, wafers, &c., substantially as herein shown and described.

3. The combination of the rearward extension *d*, formed upon the cover C, with the lug *g* formed upon the inner end *e* of the guard D, arranged as herein shown and described, for the purpose specified.

4. The laterally-swinging cover of an ink-well, provided upon its upper surface with a pen-rack, substantially as described, for the purpose specified.

3,635.— CHARLES GOODYEAR, Jr., FRANCIS DU BOIS, FREDERICK RENAUD, and HENRY T. CLOSE, New York, N. Y., assignees of AUGUSTUS DESTOUY.—*Sewing-Machine for Boot and Shoe Sewing.*—Patented February 18, 1862, No. 34,413; reissued September 7, 1869.

Claim.—1. The combination, in a sewing-mechanism, of a needle, or equivalent instrument, carrying thread through the material to be sewed, with an independent piercing-instrument, when both have

motion upon a common center of oscillation or revolution, substantially as set forth.

2. The combination of a needle and an awl or piercing-instrument, both operating on a common axis of revolution or oscillation, with a support, holding in the path of both the work to be sewed, substantially as set forth.

3. The oscillatory needle or awl-stock, driven by the direct and positive action of the driving-mechanism, so that the needle may describe an arc of a circle not less than thirty degrees, substantially as and for the purposes described.

4. A sewing-mechanism, adapted to unite, by machinery, the upper, welt, and sole, substantially as described, so as to produce a machine-made welted boot or shoe.

5. The combination of a sewing-mechanism and a support for the work to be sewed, arranged, in relation to each other, substantially as described, so that the seam uniting the upper and the sole may be made through part of the thickness of the sole.

6. The support, arranged substantially as herein shown and described, so as to serve as a rest upon which the work will slide, a sewing-gauge to regulate the distance of the stitches from the upper or from the edge of the sole, and also as a guard or shield, to prevent the awl and needle from marking or injuring the surface of the uppers, substantially as set forth.

7. The combination, in a sewing-mechanism, of a circularly-curved awl with a circularly-curved needle, substantially as and for the purposes described.

3,636.—ANDREW CHRISTIAN, New York, N. Y. —*Children's Carriage.*—Patented April 24, 1866, No. 54,111; reissued August 11, 1868, No. 3,074; again reissued September 14, 1869.

Claim.—The new article of manufacture of a child's carriage, or perambulator, constructed substantially as herein specified, that is to say, the combination, in order to produce such carriage, of the following parts, to wit: a body, provided with a permanent seat and a handle, two rear wheels, which are placed one at each side of the body, and two forward wheels, which are arranged within parallel lines drawn forward from either side of the carriage-body, substantially as and for the purposes herein specified.

3,637.—HENRY H. COLLINS, BENJAMIN F. COLLINS, and HOMER WRIGHT, Pittsburgh, Pa., assignees of EDWARD M. DAVIS.—*Fruit-Jar.*—Patented October 27, 1868, No. 83,367; reissued September 14, 1869.

Claim.—1. A preserve jar or can, having a series of names of articles thereon, one or the other of which is intended to be sealed therein, and used, in connection with an indicator, to designate the particular fruit or article of said series, when sealed in said jar or can, substantially as described.

2. As a new article of manufacture, a preserve jar or can top, having a series of names thereon, to designate the articles intended to be sealed or preserved, substantially as described.

3,638.—TIMOTHY J. POWERS, New York, N. Y. —*Metallic Cartridge.*—Patented October 17, 1865, No. 50,536; reissued September 14, 1869.

Claim.—A shot-cartridge, consisting of the case, Fig. 2, formed of strips *e* of metal or other suitable material, longitudinally arranged in a cylindrical form, loaded with shot, constructed and arranged substantially as specified.

3,639.—ALMON ROFF, Southport, Conn.—*Lock-Nut.*—Patented April 13, 1869, No. 88,908; reissued September 14, 1869.

Claim.—1. The shaft C, with double threads, *a* and *b*, crossing each other, as shown in Fig. 1, to allow a right-hand nut to pass over a thread adapted to a left-hand nut, and *vice versa*, as specified.

2. The combination of the screws *c* with the nuts A B and screw-shaft C, substantially as described, for the purpose specified.

3. The combination, with a screw-bolt, C^2, and nut A^2, of a locking-screw, B^2, operating substantially as described.

3,640.—JAMES OSWALD SWINNEY, Glasgow, Mo., and A. H. POLLOCK, Germantown, Ky., assignees, by mesne assignments, of JOSEPH BENOHUE HARRIS.—*Composition for Rendering Paints Fire-Proof.*—Patented July 3, 1866, No. 56,044; reissued September 14, 1869.

Claim.—1. The herein-described composition or material for mixing with paints, to render them fire-proof, substantially as described.

2. The combination of calcined schist, shale, or mineral coal, prepared as above described, with any kind of oil-paint, to render the same uninflammable, or fire-proof, substantially as above set forth.

3,641.—MICHAEL THORNTON, Philadelphia, Pa. —*Sole of a Boot or Shoe.*—Design No. 3,530, dated June 1, 1869; reissued September 14, 1869.

3,642.—CLEMENT OLHABER, Cincinnati, Ohio.—*Cooking-Stove.*—Patented February 2, 1869, No. 85,578; reissued September 21, 1869.

Claim.—1. The long-center, composed of two pieces, A *a*, A′ *a*′, supported by the post C, in the manner set forth.

2. A sliding oven-door, provided with wedge-formed surfaces, substantially as and for the purpose set forth.

3. The slide F′, secured to the jamb by one or more hooks L, and one or more bolts K, as explained.

4. The provision of one or more extensions G, upon the jamb G, substantially as set forth.

5. In combination with the elements of claim second, the strips *e*′ and groove *e*, serving to steady the movement of the doors, as described.

3,643.—WILLIAM E. PRALL, Washington, D. C., and A. C. RAND, New York, N. Y., assignees of WILLIAM E. PRALL.—*Steam Water-Elevator.*—Patented July 6, 1869, No. 92,357; reissued September 21, 1869.

Claim.—1. A water-elevating engine, combining in its construction a steam-generator, so arranged that it is supplied with hot water from the hot-water cylinder or pipe, a condenser, which receives its steam from the generator, a hot-water cylinder or pipe, in which the water acts as a piston for the steam to press against in expelling the cold water therefrom, and curved or siphon pipes, in which the water which they contain acts as a valve to cut off the communication between the generator and the condenser, substantially as shown and described.

2. So arranging the condenser and siphon, or curved pipes of a water-elevating machine, that the steam which is used to expel the water from the generator or hot-water cylinder, shall afterward be used in the condenser to take the place of the receding water, as the generator is being refilled, and afterward be condensed for the purpose of forming a vacuum in such condenser, in order that water may flow in and refill such condenser, substantially as shown and described.

3. The combination of the reservoir A, the generator A^2, and connecting-pipe A^1, constructed and arranged substantially as set forth.

4. The arrangement of the reservoir A, the pipe D, and the cylinder or pipe A^1, substantially as shown and described.

5. The combination of pipe D, generator A^2, and the pipe E, substantially as shown and described.

6. The combination and arrangement of the discharge pipe C, jet-pipe F, and pipe D, substantially as shown and described.

3,644.—GEORGE L. SMITH, Brooklyn, N. Y.—*Grate.*—Patented March 29, 1864, No. 42,118; reissued September 21, 1869.

Claim.—1. Arranging the air-passages or openings in furnace-grates diagonal or oblique to the length or width of the grate, as shown and described, and for the purpose set forth.

2. The arrangement of the air-passages or openings within furnace-grates oblique to the length or width of the grate, in combination with the constructing of the said grate of a series of sections, substantially as shown and for the purpose described.

3,645.—JULES STREHLER, New York, N. Y., as

signee of EUGENE BOURSON.—*Steam-Engine.*—Patented November 19, 1867, No. 70,948; reissued September 21, 1869.

Claim.—1. The method of retarding or stopping the motion of the piston in a steam-cylinder, substantially as herein specified.

2. The combination, with the two ends of a steam-cylinder, of a pipe, C, provided with one or more stop-cocks, substantially as herein described.

3. The combination, with the pipe C, and its stop-cocks *a a*, of the blow-off pipes or orifices *c c*, substantially as herein specified.

4. The connection of the two cylinders of a locomotive-engine by means of a pipe, F, whereby steam or water, or both together, can be conducted into the ends of the cylinders, substantially as and for the purposes herein specified.

3,646.—D. A. KENNEDY, WILLIAM WADSWORTH, and E. D. MURRAY, Darien, Wis., assignees of D. A. KENNEDY. — *Rotary Oven.*—Patented July 20, 1869, No. 92,840; reissued September 21, 1869.

Claim.—1. The fire-chambers M and flues P of a rotary oven, arranged as described, or in any equivalent manner, to discharge the heat and products of combustion equally throughout the oven, both above and below the rotary table, substantially as herein set forth, for the purpose specified.

2. The combination of the rotary table or oven bottom with the stationary vertical shaft C, rotary collar E, fixed collar D, and friction-balls F, substantially as herein shown and described, for the purpose specified.

3. The friction-wheels or rollers B, in combination with the rotary oven-table and the track a^1, substantially as herein shown and described, for the purpose specified.

4. The rotary table, constructed substantially as described, of the collar E, radial arms G, rollers B, and sectional plates I, and either with or without the rim H, for the purpose specified.

3,647.—AMERICAN PRINT-WORKS, Fall River, Mass., assignees of JOHN LIGHTFOOT. — *Printing Certain Textile Fabrics and Yarns.*—Patented October 20, 1868, No. 83,182; reissued September 28, 1869.

Claim.—The improvement in the process of printing textile fabrics, which consists in modifying the indigo-preparation as herein set forth, and in connection with such modified preparation, the use of carbonate of potash, alkaline silicates, or the chemical equivalents of them, in simultaneously fixing indigo blue or green, or both, in juxtaposition with ordinary madder mordants, substantially as described.

3,648.—CHARLES EDWARD BLAKE, San Francisco, Cal.—*Pump-Device for Steam and other Engines.*—Patented January 26, 1869, No. 86,273; reissued September 28, 1869.

Claim.—1. The arrangement of the cylinder A, escape-valve C, spring D, adjusting-screw F, waste-way E, with an indicator, all constructed substantially as set forth.

2. In combination with the subject-matter of the first clause of claim, the joint B, for the attachment of the main or leading hose, substantially as set forth.

3. In combination with the subject-matter of the first clause of claim, the waste-cock I, as specified.

3,649.—ESEK BUSSEY, Troy, N. Y.—*Cooking-Stove.*—Patented July 24, 1866, No. 56,525; reissued September 28, 1869.

Claim.—1. A diving-flue cooking-stove, with the exit-flue so constructed as to inclose, on the sides and bottom, the culinary boiler or hot-water reservoir B.

2. A diving-flue cooking-stove, with the exit-flue constructed across the bottom, and up the rear upright side of the culinary boiler or hot-water reservoir B.

3. A diving-flue cooking-stove, constructed with an exit-passage, F, below the top of the oven, and an exit-flue, E E′, in combination with an incased reservoir, B, attached to the rear of the stove, and placed just above such exit-passage, and so arranged that the gases of combustion, in passing through such exit-flue, will impinge upon or come in direct contact with said reservoir, substantially as and for the purposes hereinbefore specified.

4. An exit-passage, F, constructed in the rear of a diving-flue cooking-stove, and below the top of the oven, in combination with an incased reservoir, B, attached to the rear of the stove, the bottom of which reservoir is also below the top of the oven, and so arranged that the gases of combustion will come in contact with and heat such reservoir by a direct draught from the fire-box to the smoke-pipe.

3,650. — BENJAMIN COLLINS, New York, N. Y., assignee, by mesne assignment, of RICHARD B. LOCKE and WILLIAM B. ULRICH. —*Gas-Burner.*—Patented April 16, 1867, No. 63,802; reissued September 28, 1869.

Claim.—1. The divisional piece *d*, or its equivalent, applied to the orifice *a* of the grooved cock D, and constructed with gas-escapes *e e*, in combination with a self-lighting burner, substantially as described.

2. The hood or shell G, for supplying oxygen to the burner, and for the concealment and protection of the small flame, substantially as described.

3,651.—HENRY DISSTON and HAMILTON DISSTON, Philadelphia, Pa., assignees, by mesne assignments, of JOSEPH W. STRANGE.—*Detachable Saw-Teeth.*—Patented August 13, 1867, No. 67,682; reissued September 28, 1869.

Claim. — A detachable saw-tooth, with a base adapted to a recess in the blade, when the said base and recess are made with corresponding curves of such character that pressure against the point of the tooth will tighten the base in its recess, all substantially as shown and described.

3,652.—D. ELLIOT and E. SEELY, New York, N. Y.— *Washer for Lock-Nuts.*—Patented February 4, 1868, No. 74,060; reissued September 28, 1869.

Claim.—1. A nut formed with ratchet-teeth at its inner end, in combination with a sheet-metal washer, having a pawl made of the sheet-metal of the said washer, substantially as set forth.

2. The washer formed out of sheet-metal, substantially as set forth.

3,653. —ALFRED B. ELY, Newton, Mass., assignee of FRANCIS J. VITTUM and EDGAR M. STEVENS.—*Breech-Loading Fire-Arm.*—Patented October 22, 1861, No. 33,560; reissued September 28, 1869.

Claim.—1. The charge-holder, materially larger than the bore of the barrel, substantially as described.

2. The devices for exploding the charge, constructed, arranged, and operating substantially as described.

3. The devices for moving and locking the movable chambers, constructed, arranged, and operating substantially as described.

3,654. — CHARLES F. HALL, for himself, and CHARLES S. HALL, assignee of CHARLES F. HALL, Brooklyn, N. Y.—*Machine for Refitting Valves.*—Patented December 10, 1867, No. 72,031; reissued September 28, 1869.

Claim.—1. A tool, whether composed of two or more arms or longitudinal sections of a hollow cone, or a hollow cone and a stock, A, provided with one or more cutters, adjustable or movable toward or from the valve to be operated on, and otherwise adapted for refitting the faces of conical valves, substantially as specified.

2. In combination therewith, the yielding center C, substantially as described.

3,655.—DAVID MANUEL, for himself, DEDHAM, and FREDERICK K. BALLOU, assignees, by mesne assignments, of DAVID MANUEL, Foxborough, Mass.—*Bedstead.*—Patented April 14, 1863, No. 38,202; antedated October 14, 1862; reissued September 28, 1869.

Claim. — 1. The combination of conically-coiled spring D, having its apex *d* inserted in the bar B, with bar B, box C, and slat F, arranged substantially as herein described.

2. The combination of conically-coiled spring D, for the support of the bearing E, having additional spring-rod and hinge G, shouldered for the loops or bracelets *f*, on slats F, and supporting and wedging cross-bars B and boxes C, all arranged and applied in the manner specified.

3. The slotted and tongued bed-rail fasteners H K, constructed and applied substantially as specified.

3,656.—O. B. Olmsted, Beloit, Wis.—*Adjustable Stove-Pipe Shelf.*—Patented August 20, 1867, No. 67,900; reissued September 28, 1869.

Claim.—1. A stove-pipe shelf encircling the stove-pipe, made or cast of metal in open work of any design, substantially as described.

2. An improved stove-pipe shelf, constructed in two parts, substantially as described.

3. In combination with the foregoing, the collar K, with the projections D D, as and for the purpose specified.

4. The ribs C C, when the whole is constructed substantially as herein set forth, for the purpose specified.

3,657.—H. W. Shepard, Mannsville, N. Y., assignee of George A. Huggins. — *Milk-Can.*—Patented July 14, 1868, No. 79,907; reissued September 28, 1869.

Claim.—A can, consisting of the sheet-metal cylinder A and metal bottom B, the latter being provided with a recess, *c*, groove *c'*, and inclined sides *b b'*, as set forth.

3,658.—Henry Callahan, John Reese, and R. S. Hoglen, Dayton, Ohio, assignees, by mesne assignments, of Henry Callahan.—*Bucket-Ear.*—Patented May 7, 1867, No. 64,484; reissued October 5, 1869.

Claim.—A wire bucket-ear, constructed separate from the vessel to which it is to be attached, substantially as described.

3,659.—Edmund J. Cridge, Troy, N. Y.—*Cooking-Stove.*—Patented May 6, 1862, No. 35,141; reissued October 5, 1869.

Claim.—1. The combination of the continuous air-space I J, the oven D, fire-chamber A, draught-chamber C, and fire-flues E E' E'', the latter provided with a damper, W, substantially as set forth.

2. The air flue or flues *t t* and *u*, having communication with the open air, fire-chamber A, and air space or flue I J, substantially as set forth.

3. The arrangement of the defleeting-plates *d d* in the upright portion of the continuous air-space I J, in combination with the oven D, fire-chamber A, and fire-flues E E' E''; and with the air-passages *r o p* and *q*, or their equivalents, substantially as set forth.

4. The arrangement of the apertures or air-passages *r o p* and *q*, in combination with the continuous air-space I J, oven D, fire-chamber A, draught-chamber C, and fire-flues E E' E'', provided with a valve or damper, W, substantially as set forth.

3,660.—Martin Martins, New York, N. Y.—*Metal Frame for Pianos.*—Patented September 4, 1866, No. 57,743; reissued October 5, 1869.

Claim.—1. The east-metal frame A, constructed as described, with the strengthening-ribs *a*, double-shouldered bracket *b*, supporting the wrest-plank *c*, the plate *d*, the lips *e f*, and L-shaped plank *i*, and provided with the tension-rods *h*, as herein set forth, for the purpose specified.

2. The L-shaped plank *i*, in combination with the lips *e f* of the frame A, and with the tension screw-rods *h*, constructed and operating substantially as and for the purpose described.

3,661.—Isaac V. Holmes, New York, N. Y.—*Metallic Lathing.*—Patented January 26, 1869, No. 86,305; reissued October 5, 1869.

Claim.—1. A metallic stud or support, when formed with suitable projections and recesses or slits for holding metallic lathing, substantially as herein described and set forth.

2. The mode of fastening metallic laths, of any suitable form, upon metallic studs or supports, when formed with projections and recesses or slits, by riveting the corners of the projection down over the edge of the lath, substantially as described.

3,662.—John Reist, Philadelphia, Pa.—*Wash-Boiler.*—Patented November 29, 1864, No. 45,272; reissued October 5, 1869.

Claim.—1. The combination of a loose-fitting solid or unperforated false bottom, B, having an upright tube, D, or equivalent, attached thereto, with a boiler, for the purposes hereinbefore described.

2. The combination of the cap E, or an equivalent therefor, with the upright tube D and loosely-fitting unperforated false bottom B, for the purposes hereinbefore described.

3,663.—Arthur Wadsworth, Newark, N. J., for himself, and Robert Schell, New York, N. Y., assignee of Arthur Wadsworth.—*Attachment of Mainsprings to Watch-Barrels, &c.*—Patented June 15, 1869, No. 91,388; antedated December 15, 1868; reissued October 5, 1869.

Claim.—1. The pivoted segment *d*, fitted in the periphery or side *b* of the barrel A, with the pivots, which are at one end of the segment, working in fixed bearings in the barrel, and the opposite or free end of the segment attached to the outer end of the spring C, all arranged substantially as and for the purpose herein set forth.

2. The manner of attaching mainsprings to watches, so that the end of the spring may turn on pivots fitted into fixed bearings in the upper and lower sides of the barrel.

3,664.—John L. Whipple, Detroit, Mich.—*Spring Seat.*—Patented June 9, 1868, No. 78,705; reissued October 5, 1869.

Claim.—In combination with any suitable frame, A, the series of coil springs D, with loops or bights pointing inwardly, and connected by interlaced webbing or straps, substantially as and for the purposes set forth.

3,665.—Alonzo Hitchcock, George G. Saxe, and James H. Robertson, New York, N. Y., assignees of Riley W. Carpenter.—*Tremolo-Attachment.*—Patented June 27, 1865, No. 48,366; reissued May 18, 1869, No. 3,444; again reissued October 5, 1869.

Claim.—1. The application of means to the instrument, by which the air may be agitated to produce a tremulous note, as described.

2. The arrangement of a fan or agitator in the instrument, at right angles to the keys, and parallel to the line of reeds or pipe-mouths, at any convenient distance from them, as described.

3,666.—Hosea Ball, New York, N. Y.—*Oven.*—Patented September 23, 1856, No. 15,753; reissued October 12, 1869.

Claim.—1. One or more swinging bread-holders, suspended from the arms or end plates of a rotating reel, in combination with a furnace, so arranged and connected that the products of combustion will pass into or through the chamber within which the bread-holders move.

2. In combination with a rotating reel and swinging bread-holders, a flue around the chamber in which the reel rotates, and communicating with said chamber through perforations in the wall between them.

3. In combination with a swinging bread-holder, revolving in an oven, a discharging-chute and tripping-device, by which the bread is delivered from its platform, and into the chute, substantially as and for the purposes described.

3,667.—Edwin D. Brainard, Albany, N. Y.—*Method of Preserving the Aromatic Principle of Hops.*—Patented July 27, 1869, No. 92,934; reissued October 12, 1869.

Claim.—The improved mode of preserving the aromatic principle of hops, by keeping them stored in a dry atmosphere, at a low temperature, as herein described.

3,668.—W. T. Bush, Union City, Tenn.—*Manufacture of Soap.* — Patented August 24, 1869, No. 94,073; reissued October 12, 1869.

Claim.—The combination of the said ingredients, when the same are manufactured into soap, substantially as set forth.

3,669.—Gustavus A. Davison, San Leandro, Cal. — *Gang-Plow.* — Patented July 7, 1868, No. 79,639; reissued October 12, 1869.

Claim.—1. Regulating the level of the machine by

the device O O′, and set-screw P, or their equivalents, substantially as set forth.

2. The rigid arms H, H′, and G, attached to the axle, and connecting the lever or sweep J, either directly to the arm G, or by the link I, substantially as and for the purpose specified.

3,670. — A. S. DINSMORE, New York, N. Y.— *Needle-Sharpener.* — Patented May 25, 1869, No. 90,433; reissued October 12, 1869.

Claim.—A needle-sharpener, constructed, as described, of plates A and B, having approximate beveled and roughened edges, and secured together, substantially as specified.

3,671.—OSCAR T. EARLE, Norwalk, Conn., assignee of NORMAN W. WHEELER.—*Method of Operating Steam-Valves.* — Patented July 31, 1855, No. 13,369; antedated March 1, 1855; extended seven years; reissued October 12, 1869.

Claim.—1. Connections or passages leading from a main cylinder to a cylinder inclosing valve-moving pistons, whereby steam is admitted from the main cylinder, so as to act upon valve-moving pistons, substantially as described.

2. In combination with passages leading from a main cylinder to a cylinder containing valve-moving pistons, a main piston, acting, substantially as described, as a valve to open and close such passages, the construction being as described.

3. Combining valve-moving pistons and valves, substantially as described, so that no stuffing-boxes intervene between the valves and the pistons, which operate them.

4. Mounting valves and valve-moving pistons upon the same spindle or stem, as described.

5. Piston-valves, in combination with valve-working pistons, and a cylindrical chamber containing them, substantially as set forth.

6. A pocket or recess, closed by a piston, so as to arrest the movement of a valve and valve-spindle, the pocket communicating directly with the valve-chest in which the valve slides, and there being no stuffing-box between the valve and the pocket.

3,672.—JAMES ORR, Hampden Township, Pa., assignee of P. DANIELS.—*Tire-Tightener.*—Patented April 17, 1866, No. 53,957; reissued October 12, 1869.

Claim.—1. The right-and-left threaded screw H, in combination with the lugs F and G, and nuts I and J, or their equivalents, and the tire of a wheel, arranged and operating substantially in the manner and for the purpose herein shown and specified.

2. The plates K and L, in combination with the right-and-left threaded screw H, arranged and combined substantially as and for the purpose herein shown and described.

3. The caps O and P, or their equivalent, in combination with the right-and-left threaded screw H, arranged, with relation to each other and the rim of a wheel, substantially as and for the purpose specified.

4. The combination and arrangement of the right-and-left threaded screw H, and lugs F and G, and nuts I J, or their equivalents, plates K L, and caps O and P, or their equivalent, and the tire of a wheel, substantially as and for the purpose herein shown and set forth.

3,673.—R. B. PARKS and J. R. PARKS, Neponset, Ill.—*Stalk-Cutter.*—Patented January 12, 1869, No. 85,847; reissued October 12, 1869.

Claim.—1. The heads I I, constructed each of two parts *b b*, provided with arms *c*, and connected by bolts *d*, for the purpose of firmly securing the knives J in position, substantially as herein shown and described.

2. The combination of the heads I, supporting-knives J, frame G, chains L, lever N, and hooks K, all constructed and arranged as described.

3,674.—EDWARD WESTERMAYR, Chicago, Ill.— *Composition for Artificial Stone.*—Patented January 5, 1869, No. 85,713; reissued October 12, 1869.

Claim.— Artificial stone, of any desired form or color, composed of the ingredients, substantially as herein described.

3,675.—FREDERICK W. DEAN, Tremont, Ill.— *Door-Latch.*—Patented August 17, 1869, No. 93,685; reissued October 19, 1869.

Claim.—1. The combination of weighted latch *b*, levers *e* and D, and spindles *g f*, when constructed and arranged substantially as specified.

2. The spindles *g f*, in combination with the covers B and E, when arranged to hold said spindles in place, substantially as described.

3,676.—FLORENCE MANUFACTURING COMPANY, Florence, Mass., assignee, by mesne assignments, of ALANSON C. ESTABROOK.—*Brush.*—Patented June 19, 1866, No. 55,764; reissued October 19, 1869.

Claim.—1. A back, composed of an interior strip or plate of metal, or other suitable material, to give it requisite strength, and embedded in a composition or cement, that forms, in whole or in part, the exterior of the back, substantially as described.

2. In a back composed of an interior strengthening-piece, and a composition or cement exterior, the giving of its shape, form, and ornamentation to it, at the same time and by the same means that presses the plastic material around the strengthener, substantially as described.

3,677.—WILLIAM A. FLECK, Philadelphia, Pa., assignee of HUGO FLECK.—*Manufacture of Glue.*— Patented May 18, 1869, No. 90,160; reissued October 19, 1869.

Claim.—The herein-described use of salts, either dry or in solution, in the process of drying glue.

3,678.—CHARLES E. L. HOLMES, New York, N. Y.—*Machine for Drying and Scouring Sheet-Metal* —Patented July 21, 1868, No. 80,179; reissued October 19, 1869.

Claim.—1. A series of moving rollers, arranged to act successively upon the surface of a sheet of metal, and scour or wipe the surface of the same while being passed through the machine, substantially as set forth.

2. A series of moving rollers, arranged to act upon the surface of a sheet of metal, and scour or wipe the surface of the same, in combination with an inclosing-box or case for retaining sawdust or other fine particles of material for operating on the sheet-metal, substantially as set forth.

3. In a machine for scouring or drying sheet-metal, arranging the rollers or parts that operate upon the sheet-metal, in substantially the manner specified, so that the sheet-metal shall be in a curved position while being acted upon, substantially as and for the purposes specified.

4. A winding-up roller, in combination with the scouring or drying mechanism, substantially as specified, whereby the sheet-metal can be drawn through the apparatus, wound up, and then removed with facility, substantially as set forth.

3,679.—ISAAC KEITH, HIRAM T. KEITH, and ISAAC N. KEITH, West Sandwich, Mass., assignees of ISAAC KEITH.—*Dumping-Car.*—Patented July 13, 1869, No. 92,457; reissued October 19, 1869.

Claim.—1. The combination and arrangement of the rails *c* and wheels *d*, and the middle and lateral stops *k r r*, or their equivalents, with a tip-cart body, B, and a railway-carriage, A.

2. The combination and arrangement of the chains *m*, or their equivalents, with a railway-carriage, A, and a tip-cart body, B, the supporting-wheels *d*, and rails *e*, and middle and lateral stops *k r r*, or the equivalents thereof, the whole being substantially as set forth.

3. The combination and arrangement of the guide-rails *l*, or their equivalents, with a railway-carriage, A, a tip-cart body, B, and the supporting-wheels *d*, and rails *e*, and stops *k r r*, of such tip-cart body, the whole being substantially as explained.

4. A long ear or platform, *a*, and two or more trucks *b b*, and one or more tip-cart bodies B, and supporting-wheels *d*, rails *e*, and middle and lateral stops *k r r*, or their equivalents, arranged in combination, essentially as described.

3,680.—J. D. S. NEWELL, Tensas Parish, and A. G. BRICE, E. TOMATIS, and THOMAS PICKLES, New Orleans, La., assignees of J. D. S. NEWELL.—*Breech-*

Loading Fire-Arm.—Patented April 6, 1869, No. 88,730; reissued October 19, 1869.

Claim.—1. The combination of the slotted or hooked link *c*, and hammer or lever B, when said lever is located in a plane centrally with the axis of the bore of the barrel, whereby the reciprocating breech-closer is operated both ways, as herein described.

2. The centrally-located hammer or lever B, in combination with the reciprocating breech-closer, for the purpose of locking said closer against the recoil or force of the explosion, as set forth.

3. The combination of the mainspring, central vibratiug hammer, and breech-closer, whereby the breech is closed and locked, and the charge ignited at the one operation of pulling the trigger, as specified.

4. The combination of the mechanism herein described, whereby the cartridge or case is withdrawn and expelled, the breech opened, and piece cocked, as set forth.

3,681.—NICOLAS PETRÉ, New York, N. Y.—*Lock.*—Patented July 30, 1867, No. 67,213; reissued October 19, 1869.

Claim.—In a lock, the combined use of a single cam turned by a pin-key, and a bolt, when a spring is so interposed betwcen the cam and the bolt as to draw the latter within the case when unlocked, and to hold the cam and bolt together by frictional contact when locked, substantially in the manner herein described and represented.

3,682.—LUKE TAYLOR, Springfield, Vt.—*Mop-Head.*—Patented February 15, 1859, No. 22,990; reissued November 10, 1868, No. 3,192; again reissued November 24, 1868, No. 3,215; again reissued October 19, 1869.

Claim.—1. In a mop-head, in which the cross-head or stationary jaw is attached permanently and immovably to the handle, operating the movable jaw or binder by means of a tubular screw or socket fitted on the haudle, and having its screw-thread on its exterior, in combination with a nut encompassing the screw, and connected with the movable jaw, so as to operate substantially as shown and described.

2. In a mop-head, in which the movable jaw or binder is operated through the medium of a screw-nut or collar, by means of thumb-ears attached to or formed with the said screw-nut or collar, placing the said ears outside the yoke or bow of the movable jaw or binder aforesaid, as herein described, for the purpose set forth.

3,683.—WILLIAM C. VOSBURGH and WILLIAM A. LUDDEN, Brooklyn, N. Y., assiguors to JOHN J. MERRITT, same place, assignor to RUBBER-TIP PENCIL COMPANY, New York City.—*Means of Attaching Rubber to Pencils.*—Pateuted May 20, 1862, No. 35,355; reissued Oetober 19, 1869.

Claim.—1. The combination, with a pencil of ordinary construction, of an India-rubber eraser and a metallic sleeve, or casing, holding the eraser and fitting the end of the pencil, substantially as and for the purposes herein specified.

2. The within-described construction of the said sleeve, or casing, to wit, the two semi-cylindrical clamps, *b b*, formed as specified, and the ring or rings *d*, in combination with the section of India rubber, *c*, and the pencil or peu-handle *a*, as and for the purposes herein set forth.

3,684.—THE AMERICAN BROILER COMPANY, Elmira, N. Y., assignee of SYLVESTER BOWERS.—*Broiler.*—Patented July 21, 1868, No. 80,125; reissued October 19, 1869.

Claim.—1. A culinary utensil, combining in its construction a converging flange or plate, B, and a grate, D, substantially as described, and for the purposes set forth.

2. The combination of the rim A, internal converging flange B, grate D, and cover C, constructed and arranged, iu relation to oue another, substantially as described, and for the purposes set forth.

3. The combination of the rim A, internal converging flange B, grate D, cover C, and reflector E, constructed and arranged, in relation to one another, substantially as described, and for the purposes set forth.

3,685.—A. T. BARNES, Tiffin, Ohio, assignor to "THE TIFFIN AGRICULTURAL WORKS," same place.—*Horse Hay-Rake.*—Patented March 24, 1868, No. 75,836; reissued Oetober 26, 1869.

Claim.—1. The adjusting-braces, having their front ends secured to the lower sides of the draw-bars D, and their rear ends extending through the standards C, with screw-nuts upon these rear ends, for tightening up the parts at will, substantially as described.

2. An improved stop, provided with a flange, and having a broad face, and au oblique adjustment, substantially as described.

3,686.—THOMAS J. CLOSE, Philadelphia, Pa.—*Settee-Frame.*—Patented February 9, 1869, No. 86,644; reissued October 26, 1869.

Claim.—1. The combination of the slope-sided or inclined studs *a'*, on the frames A, and the slope-sided or under-cut holes 5, in the slats B, substantially as and for the purpose hereinbefore set forth.

2. The combination of the abutting-plate E, wedge 10, frame A, and slat B, substantially as and for the purpose hereiubefore set forth.

3. The combination of the curved draw-bolt C and nut *c'*, with the frame A and slat B, as a modification of the wedge 10 and abutting-plate E, as and for the purpose described.

3,687.—CHARLES A. DURGIN, New York, N. Y., assignee of CHAUNCEY O. CROSBY.—*Machine for Folding Paper.*—Patented December 23, 1856, No. 16,266; reissued October 26, 1869.

Claim.—1. The combination, with a vibrating fly, of a folding-blade, which shall form a bight or double in the sheet, for the first fold, as it is received from the press, and deliver the same to mechanism to complete the folds, whereby the sheets of paper may be folded direct from a printing-press, substantially as described and specified.

2. The combination, with a vibrating fly and folding-blade, of griping-bars, constructed, arranged, and operating substantially as described and specified.

3. The folding-blades, in combination with the fingers, arranged and operating substantially as described and specified.

4. The employment and use of jaws, one of which in each set is cut away, in combiuation with a folding-blade having portions cut away, so that the sheets of paper can be griped at the points where the blade is cut away, and firmly held during the retraction of the folding-blade from the jaws, substantially as described and specified.

3,688.—HENRY HANNEN, THOMAS WOODS, and BENJAMIN F. PINE, Philadelphia, Pa., assignees of HENRY HANNEN.—*Process of Utilizing the Waste Products of Combustion for the Manufacture of White-Lead, and for other Purposes.*—Pateuted February 9, 1869, No. 86,835; antedated February 1, 1869; reissued October 26, 1869.

Claim.—1. The production of carbonic-acid gas from the waste gaseous produets of combustiou, and gathering the same under pressure produced by hydrostatic column, in the manner and by the apparatus described.

2. Purifying carbonic-acid gas arising from the combustion of fuel, by passing the same through water impregnated with chloriue, or its equivalent, for the purposes specified.

3,689.—CHARLES PARKER, Meriden, Conn., assignee of GEORGE FOWLER and the administrators of the estate of DE GRASSE FOWLER, deceased, viz, MALTBY and SOPHRONIA FOWLER.—*Machine for Punching Metals.*—Patented April 17, 1855, No. 12,723; extended seven years; reissued August 24, 1869, No. 3,617; agaiu reissued October 26, 1869.

Claim.—1. Combining, with the slide and shaft of a power-press, and the wheel, by means of which the said shaft is caused to revolve, a mechanism which operates automatically to disconnect the said wheel from the shaft at a certain point after one revolution.

2. In a power-press, combining, substantially as described, with the rotating shaft and the slide or tool-stock, an eccentric wrist-pin and an eccentric circle or ring, placed upon and around said wrist-

pin, for the purpose of varying the play of said slide or stock.

3. In combination with the wrist-pin B, the slide D and block *c*, the adjusting-plates *e*, more or less in number, substantially as and for the purpose set forth.

3,690.—ASAHEL J. SEVERANCE, Middlebury, Vt., assignee, by mesne assignments, of RUDOLPH LESCHOT.—*Rock-Drill.*—Patented July 14, 1863, No. 39,235; reissued February 16, 1869, No. 3,304; again reissued October 26, 1869.

Claim.—1. A continuously-revolving and progressing boring-head, having projecting diamond points, in combination with a tubular boring-bar, substantially as and for the purposes specified.

2. The row of cutting-edges a^1, when attached to a revolving boring-head, so as to project beyond the circumference thereof, for the purposes specified.

3. In combination with a revolving and progressing boring-head, having cutting-points projecting beyond the periphery thereof, a hollow central drill-rod, through which water is forced or passed.

4. A series of cutting-edges, a a^1 a^2, arranged in the face and upon the outer and inner peripheries respectively, of a tubular or annular bit or boring-head, A, substantially as and for the purposes specified.

3,691.—JOSEPH H. STEELE, New Haven, Conn., assignee of WALLACE A. MILES. — (Division A.) *Spice-Box.*—Patented October 2, 1866, No. 58,455; reissued October 26, 1869.

Claim.—In spice-boxes, the combination, in one end, of two plates, the one constructed so as to turn and register with the openings or perforations in the other plate, or close the same, as the case may be, in the manner substantially as herein set forth.

3,692.—JOSEPH H. STEELE, New Haven, Conn., assignee of WALLACE A. MILES. (Division B.)—*Spice-Box.*—Patented October 2, 1866, No. 58,455; reissued October 26, 1869.

Claim.—A sheet-metal spice-box, provided with covers B and D, and combined with the perforated plate C, so as to operate as specified.

3,693.—MARCUS BROWN WESTHEAD, Manchester, England.—*Tape-Roll Clip-Fastening.*—Patented July 28, 1868, No. 80,375; reissued October 26, 1869.

Claim.—A ribbon or tape-roll clip or slide, made and applied substantially as herein described.

3,694.—WILLIAM H. AKINS, and JOSEPH C. BURRITT, Ithaca, N. Y.—*Calendar-Clock.*—Patented September 19, 1854, No. 11,711; extended seven years; reissued November 2, 1869.

Claim.—1. The combination, in a calendar-clock, of a cam or disk, which revolves but once in forty-eight months, with a thirty-one-day wheel, which revolves once in each month, when said parts are constructed and operated in such manner as to effect the desired changes in the number of days of the months, (including those of bissextile or leap-year,) as described.

2. The construction of a calendar-clock, in such manner that the rod or lever which is operated by the twenty-four-hour wheel, shall move the day-of-the-week wheel forward one day at each revolution of the twenty-four-hour wheel, and shall also move variably the single click or ratchet which operates the thirty one-day wheel, over one, two, three, or four days or teeth, as the length of the month shall require.

3. The construction of the day-of-the-month wheel of a calendar-clock, with four rows of teeth, numbering from twenty-eight to thirty-one, for the purpose set forth.

4. The combination, in a calendar-clock, of the following elements, namely, a dial, provided with a circle of numbers representing the days of the month, apertures, arranged within the circle, for the days of the week and names of the month, and a calendar-movement, operated by the time-movement of the clock.

5. The combination, in the dial of a calendar-clock, of a circle of figures from one to thirty-one, inclusive, representing the days of the month, with a time-dial, an aperture through which to display the day of the week, and an aperture for the names of the month, all arranged within the day-of-the-month circle, substantially as set forth.

6. The combination, in a calendar-clock, of one or more cylinders, adapted to show the days of the week, the month, or the year, any or all of them, with the time-movement of the clock, when the cylinders are connected with said time-movement in such manner as to be operated by it, substantially as and for the purpose set forth.

7. The combination of cylinders F G, clicks or ratchets 39 and 41, oscillating about centers coincident with the centers of said cylinders, twenty-four-hour wheel K, and connecting-devices, for the purpose set forth.

8. A dial, exhibiting the name of the month, inclosed within a circle of figures representing the days of the month, in combination with a calendar-movement, operated by the time-movement of the clock.

9. The construction of a calendar-clock, in such manner that the click or ratchet which actuates the thirty-one-day wheel may move variably over one or more teeth of said wheel, for the purpose set forth.

3,695.—JAMES ARMSTRONG, Jr., Elmira, Ill.—*Corn-Planter.*—Patented September 20, 1864, No. 44,273; reissued November 2, 1869.

Claim.—1. The secondary frame C, hinged or pivoted at points in front of its seed-hoppers, to extensions *a a* of the main draught-frame A, and having rigidly secured to it the draught-pole D, in combination with a lifting-frame, E, substantially as and for the purpose described.

2. The arrangement, with reference to the main frame A, of the draught-pole D, rigidly secured to the pivoted frame C, substantially as and for the purpose herein set forth.

3. The anti-friction rollers *d d*, applied to loops F, in combination with treadle-frame E, as and for the purposes specified.

4. Stirrers P, when hung so as to be operated by slide K, substantially as set forth.

3,696.—THOMAS BAKEWELL, Pittsburgh, Pa.—*Trade-Mark.*—Design No. 2,792, dated October 1, 1867; reissued November 2, 1869.

3,697.—JAMES BLAKE and GEORGE BLAKE, Scranton, Pa., assignees of JAMES BLAKE.—*Auxiliary Table.*—Patented March 22, 1869, No. 88,121; reissued November 2, 1869.

Claim.—The point or points of attachment and suspension of an auxiliary table or other support, in a plane or planes within the perpendicular plane of the edge of the main table or other like convenience, for the purpose specified.

3,698.—ABNER H. BRYANT, Philadelphia, Pa.—*Egg-Carrier.*—Patented March 17, 1868, No. 75,623; reissued November 2, 1869.

Claim.—1. An egg-carrier, constructed with compartments, in removable trays or shelves, in which eggs may be suspended by cords or their equivalents.

2. In an egg-carrier, provided with pockets or compartments, in removable trays or shelves, for the reception of single eggs, the use of suspending-cords in the construction of such pockets or compartments.

3. A suspension egg-carrier, composed of cloth pouches, for holding single eggs suspended between meshes of cord and twine, laced through the sides of the wooden trays, set in a wooden holder, constructed and arranged as set forth by the drawings.

3,699.—BETHEL BURTON, Brooklyn, and WILLIAM G. WARD, New York, N. Y., assignees of BETHEL BURTON.—*Breech-Loading Fire-Arm.*—Patented August 11, 1868, No. 81,059; reissued November 2, 1869.

Claim.—1. A slide or cover, with a recess in the under side of the rear end, in combination with a breech-pin, provided with sectional screws or cams, substantially as shown and described.

2. A breech-piece or receiver, formed with a ring or enlargement at its rear end, and with a recess to allow the slide or cover to pass under said ring, substantially as shown and described.

3. An opening in the top of the breech-piece, with vertical walls or sides, in combination with a slide or cover, formed in one piece with a recoil-block, substantially as shown and described.

4. A recoil-block, formed in one piece with the slide, and having a steady-pin attached, substantially as shown and described.

5. A groove or recess in the slide or cover, for olding the cartridge-extractor in place, without the id of screws or other fastenings, substantially as hown and described.

6. A hammer and firing-pin, formed in one piece, with a beveled shoulder on the front portion, and with a hollow open rear end, to receive a spiral spring, substantially as shown and described.

7. The arrangement of the firing pin, with relation to the extractor, and the recoil-block and steady-pin, so as to eject the cartridge from the breech-piece during the backward movement of the slide or cover, substantially as shown and described.

8. The combination of a hook on the trigger-bolt with a projection in the L-shaped slot of the breech-pin, as shown and described, for the purpose specified.

9. The safety-bolt R, constructed and arranged as shown and described, for the purpose specified.

10. The combination of the slide or cover C, recoil-block D, steady-pin E, breech-pin F, and sectional screw or cam, entering the recess *c*, coupling the parts without the use of a screw or other fastening, and forming a broken-jointed breech-pin, substantially as shown and described.

3,700.—Elliot P. Gleason, New York, N. Y., assignee of Benjamin F. Gladding.—*Horse-Hay Fork.*—Patented February 9, 1869, No. 86,661; reissued November 2, 1869.

Claim.—The combination, with fingers *a* and *c* provided with handles *b* and *d*, of the ring *f*, slot *g*, pivoted lever *h*, ring *j*, and ropes *l l l* and *n*, when the same shall be constructed and operate substantially as and for the purposes fully described.

3,701.—Robert K. Kille, Mount Holly, N. J.—*Roofing.*—Patented September 7, 1869, No. 94,689; reissued November 2, 1869.

Claim.—The strips D, arranged with the coating or cement E, and the slate or other equivalent outer covering, so as to break joints thereunder, substantially in the manner set forth.

3,702.—Joseph H. Littlefield, Cambridge, Mass.—*Press and Strainer.*—Patented June 16, 1868, No. 79,981; reissued November 2, 1869.

Claim.—1. A combined press and strainer, having a substantial rim or base, A, provided with a strong open grating, *a a*, for the support of the sieve or strainer O, when all these parts are constructed and arranged substantially as described.

2. The grated base A, provided with a flange and ears, for the attachment of the can C, and with radial arms, for the purpose of spanning a large vessel, as set forth.

3. The frame A, with grates *a a* and arms B B, in combination with the strainer O and bottomless can C, stay D, lever E, standard G, and follower F, constructed, arranged, and operating substantially as and for the purposes specified.

3,703.—John Lough, Buckingham Village, Quebec.—*Dressing Saw-Teeth.*—Patented November 24, 1868, No. 94,365; reissued November 2, 1869.

Claim.—1. Widening saw-teeth on their under or cutting face by pressure, substantially as and for the purpose set forth.

2. Widening the saw-tooth at its under side in such a manner that the expanded cutting-face thereby produced is parallel-sided, or in the form substantially as shown in Fig. 10, and as hereinabove described, for the purpose set forth.

3. The plates *c c*, when united by the bolts *d d*, and provided with the projections *e e* and the arm h^2, and having between them the space *f* and the space for the compression-bar, substantially as described.

4. In combination with said plates *c c*, constructed as above described, the lever *h*, pivoted at h^1, the strap h^3, the compression-bar *i*, and the die *k*, all operating together in the manner and for the purpose set forth.

5. In combination with said plates *c c*, constructed as above described, the wedge g^1, lever g^2, strap g^3, key, or equivalent g^4, eccentric g^5, and pivots g^6 g^7 g^8, all operating together substantially as and for the purpose set forth.

6. The improved saw-dressing machine herein described, consisting of the bed-plate *o*, top-plate *p*, clamp *q*, plane *r*, iron strap or file-holder *s*, adjustable screws *t*, file *u*, adjustable strip *v*, and adjusting-screws *v'*, all arranged and working together, substantially in the manner and for the purpose described.

3,704.—H. B. Morrison, for himself and Caroline Morrison, assignee, by mesne assignments, of H. B. Morrison, Le Roy, N. Y.—*Stove-Pipe Elbow.*—Patented October 27, 1868, No. 83,401; reissued November 2, 1869.

Claim.—1. A pipe-elbow, made with a suitable connecting and disconnecting joint, substantially as set forth.

2. A pipe-elbow, having the central enlargement *a a*, and its joint so formed and connected that the arms or ends of said elbow may be turned in any position from right angle to a straight length, as herein described.

3. A pipe-elbow, having a suitable connecting and disconnecting joint, in which the central space *a a* is made enlarged to form a chamber, substantially as described.

4. The connecting and disconnecting joint formed by the overlapping tongue and groove *c d*, and located obliquely from the angle of the elbow centrally around the chamber, substantially as described.

5. The combination and arrangement of the lugs *f*, notches *g*, groove *h*, and tongue and groove *c d*, the whole constituting the joint, as herein described.

3,705.—George Owen, Jacksonville, Ill.—*Plow-Coupling.*—Patented February 4, 1862, No. 34,316; reissued January 5, 1864, No. 1,598; again reissued November 2, 1869.

Claim.—1. Coupling two or more plows, with rigid couplings made of wood or iron, or partly of wood and partly of iron, and connected with the plows by loose or hinge-joints, substantially as and for the purpose herein specified.

2. The combination of the curved or bent piece or pieces *t t*, and the sliding joints of the bars C and D, in the manner and for the purpose herein specified.

3. Connecting the compound curved or bent coupling-bar C with the upper coupling-bar D, substantially in the manner and for the purpose herein set forth.

4. The combination of the front curved or bent stretcher-bar B', and curved or bent coupling-bar C, for connecting two plows, substantially in the manner and for the purpose herein set forth.

3,706.—Samuel B. Pierce, Samuel S. Johnson, Robert Andrews, and Robert N. Austin, Milwaukee, Wis., assignees of Robert Andrews.—(Division 1.) *Composition for Stuffing Leather.*—Patented May 25, 1869, No. 90,333; reissued November 2, 1869.

Claim.—1. Tar so treated in connection with tallow, oil, fat, grease, and fatty or greasy matter, or one or more of said substances, that it becomes completely absorbable, and no longer sensitive to changes of temperature.

2. The compound of tar and tallow, oil, fat, grease, and fatty or greasy matter, or one or more of them, acting as one substance, described in the specification, as a new article of manufacture, all substantially as and for the purposes set forth.

3,707.—Samuel B. Pierce, Samuel S. Johnson, Robert Andrews, and Robert N. Austin, Milwaukee, Wis., assignees of Robert Andrews.—(Division 2.) *Process of Treating Tar for the Manufacture of Stuffing for Leather.*—Patented May 25, 1869, No. 90,333; reissued November 2, 1869.

Claim.—1. The so treating tar, in connection with tallow, oil, fat, grease, and fatty or greasy matter, or one or more of said substances, that it becomes completely absorbable, and is no longer sensitive to changes of temperature.

2. The process of preparing a compound of tar

and tallow, oil, fat, grease, and fatty or greasy matter, or one or more of said substances, by the application of heat with agitation.

3. The causing tar to unite with tallow, oil, fat, grease, and fatty or greasy matter, or one or more of them, producing one substance, by the application of heat with agitation.

4. The purifying of the above-described compound, by means of boiling, all substantially as and for the purposes described.

3,708.— FREEMAN F. REYNOLDS, Bethany, for himself, and JOSEPH H. HINES, Davisborough, Ga., assignee of FREEMAN F. REYNOLDS.—*Plow.*— Patented January 1, 1867, No. 60,938; reissued November 2, 1869.

Claim.—1. Attaching the landside or guide-bar to the side of the standard, by means of one or more bolts, *a a*, substantially as and for the purposes specified.

2. In connection with the standard E and beam A, the brace F, arranged as described, and connected to the share by bolts *w w*, and to the beam by a single bolt, *m*, substantially as and for the purpose set forth.

3. The combination of the parts E H I F, when bolted together and fastened to the beam, substantially in the manner described and shown, and for the purposes indicated.

3,709.—GOTTLIEB SCHREYER, Columbus, Ohio.—*Mode of Making the Skeins of Axle-Arms for Carriages.*—Patented May 7, 1861, No. 32,255; reissued November 2, 1869.

Claim.—1. An axle-skein, with its under wearing-part *a a a*, and its end *c d d*, of a uniform thickness, as represented in the drawings, and its upper part *f f*, of a gradually-decreasing thickness, as hereinbefore set forth, and illustrated in the drawings.

2. An axle-skein, made of one plate, with its under part back of shoulder, to extend back far enough to give the wood axle any desired support, constructed as and for the purposes hereinbefore set forth.

3,710.—CHESTER STONE, Ravenna, Ohio.—*Fruit-Frame.*—Patented February 11, 1868, No. 74,252; reissued November 2, 1869.

Claim.—1. The braces C D, in combination with the standards A and slats B, when arranged and pivoted together as described, substantially as and for the purpose set forth.

2. The extension in each direction of the slats B beyond the standards A, as shown and described.

3. The herein-described fruit-frame as a whole, when the several parts thereof are constructed, combined, and arranged as and for the purpose specified.

3,711.—GEORGE B. TURRELL, New York, N. Y., assignee, by mesne assignments, of JEAN LOUIS BAUDELOT.—*Apparatus for Cooling Beer and other Liquids.*—Patented November 1, 1859, No. 25,992; antedated April 13, 1856; reissued January 28, 1862, No. 1,267; again reissued November 2, 1869.

Claim.—1. A vertical range of horizontal tubes, in which the cooling-liquid is passed from the lower to the upper tubes, in combination with downward projections from said tubes, and an apparatus for supplying the liquid to be cooled with uniformity along the upper tube, substantially as and for the purposes set forth.

2. A vertical range of horizontal tubes, provided with downward projections, and sustained by the end-pieces or their equivalents, and an apparatus for distributing the liquid to be cooled, in combination with the caps *l*, made removable, as and for the purposes specified.

3,712.—G. A. WATKINS, Proctorsville, Vt.—*Device for Weaving Chair-Seats.*—Patented March 10, 1868, No. 75,500; reissued November 2, 1869.

Claim.—1. A hand-needle or shuttle, for weaving splint chair-seats, provided with devices, herein shown and described, to hold the splints at their one end in such a manner that the splint may be readily detached therefrom, after it has been passed through the warp, substantially as specified.

2. A needle or shuttle, constructed as described, to hold the splints at their one end in such a manner that the splint may be readily detached therefrom after it has been passed through the warp, and shaped to form a batten, for beating up the filling, substantially as specified.

3,713.—ANDREW B. CLEMONS, Ansonia, Conn.—*Friction-Clutch Pulley.*—Patented December 8, 1868, No. 84,681; reissued November 9, 1869.

Claim.—1. The two parts A and D of a friction-clutch, combined with one or more threaded levers E, hung in one part, and a corresponding threaded hub on the other part, so that by the revolution of one of the parts, the two may be drawn together, substantially in the manner set forth.

2. In combination with the subject-matter of the first clause of claim, the slide F, arranged so that, by its axial movement on the shaft, the levers may be operated, to cause the two parts of the clutch to run together, substantially as set forth.

3,714.— GEORGE DRAPER and WILLIAM F. DRAPER, Hopedale, Mass., assignees of WILLIAM T. CARROLL.— *Ring for Spinning-Machines.* — Patented June 2, 1868, No. 78,427; reissued November 9, 1869.

Claim. — 1. The combination of the flange *c*, or the posts *f*, and the adjusting-screws *e*, with the annulus A, and the supporter B thereof, to be placed on and within the ring-rail, as specified.

2. The new or improved arrangement of a ring and its holder, the same being so that the former shall extend entirely above the ring-rail, and in or on the holder, and the latter, separate from the former, be extended above the rail, and within a socket made therein.

3. The flange *c*, when provided with the open space *d*, and the screws *e e e*, and combined with or forming part of the supporter B, and for use with the ring A, as set forth.

3,715.—MAURICE FITZGIBBONS, New York, N. Y., for himself and R. S. JENNINGS, assignee of MAURICE FITZGIBBONS. — *Drawer or Tray.* — Patented August 24, 1869, No. 94,096; reissued November 9, 1869.

Claim. — The drawer or tray herein specified, lined with cedar, and having a cover, *v*, lid *s*, and gummed strips, as described, when constructed and arranged as and for the purposes specified.

3,716.— THOMAS J. HALL, Bryan, Texas. — *Gang Plow.*—Patented May 1, 1855, No. 12,791; extended seven years; reissued November 9, 1869.

Claim. — 1. The arrangement of the plows and pivoted beams with the adjustable cross-beams, so that the plows may have a convenient permanent adjustment, in connection with their self-adjusting property in the plow-beam, as set forth and described.

2. Limiting the lateral vibration of the revolving cutter or colter, that it may not, when out of the ground, vibrate so far that it would not recover its true position when again in contact with the ground, substantially as described.

3. The bent brace *k*, when constructed in the form as described, and attached to the frame of the plow in the manner and for the purpose substantially as described.

3,717.—JULIUS HORNIG, Chicago, Ill.—*Mechanism for Converting Rotary Motion into Oscillating Motion.* — Patented February 7, 1865, No. 46,437; reissued November 9, 1869.

Claim.—1. The combination of mechanism, applicable to the conversion of rotary into oscillating motion, consisting of the shaft C, carrying the eccentric D, of the strap I, ear K, pivot L, and lever F, all arranged to operate substantially as herein shown and described.

2. The combination of the curved edge *d*, and lever F, with the eccentric strap and ear, substantially as herein shown and described.

3,718.—EDWIN J. HOWLETT, Philadelphia, Pa., assignee of himself and SUSAN KIRK. — *Tool for Manufacturing Paper Bags.* — Patented February 26, 1867, No. 62,342; reissued November 9, 1869.

Claim. — 1. The construction of the board A, blade B, and adjustable strip D, the whole being arrange substantially in the manner described.

2. The combination of the board A, the permanent strip *a*, and blade B.

3. The combination of the board A, the guide-plate E, and adjustable strip D.

3,719.—E. F. KEELING, Amwell, Ohio.— *Harvester-Cutter Grinder.*—Patented August 13, 1861, No. 33,043; reissued November 9, 1869.

Claim. — 1. The combination of the yielding adjustable support for the harvester-cutters, with a revolving grinder, substantially as set forth, so that the position of the cutters and cutter-bar to the axis of the grinder and the plane of its rotation may be adjusted for grinding the cutting-edges with uniformity, and at the desired angle, substantially as specified.

2. The adjustable yielding supports for the cutter-bar and cutters, arranged on each side of the plane of rotation of the grinder, substantially as specified, so that the cutters may be presented to the grinder and sharpened on opposite sides, substantially as set forth.

3,720.—EMERY PARKER, New Britain, Conn.— *Attaching Knobs to their Spindles.*—Patented May 5, 1863, No. 38,406; reissued June 21, 1864, No. 1,707; reissued November 9, 1869.

Claim. — The combination of a screw-threaded knob and spindle, with the saddle-key, let into the end of the knob-shank, and held in place by the escutcheon-plate, substantially as shown and described.

3,721. — THOMAS PARSONS, Brookline, Mass., assignee of GERARD SICKELS.—*Water-Meter.*—Patented May 5, 1868, No. 77,542; reissued November 9, 1869.

Claim.—1. The combination of the main cylinder *a*, its ports *n n'*, valve *m*, and piston *c c d*, with the auxiliary piston *k* and cylinder *l*, and a mechanism, substantially as described, (viz, the lever *o*, its rollers *p*, and supporter *q*, provided with abutments *q'*,) for operating the latter piston by the main piston, while in movement in its cylinder, as set forth.

2. The peculiar mechanism or combination shown in Figs. 1, 2, and 3, and substantially as described, by which the auxiliary piston and the main valve are put in operation, through the action of the main piston within its cylinder, such mechanism consisting of the lever *o*, its rollers *p*, and supporter *q*, provided with the projections or abutments *q'*, as described.

3. The arrangement, shown in Figs. 1 and 2, of the auxiliary piston and cylinder with the main valve, the main cylinder, and its valve-chest.

4. The combination of the auxiliary piston and cylinder with the main valve, and mechanism, as described, for effecting the movements of the auxiliary piston, through the action of the main piston, as specified.

5. The arrangement and combination of the lever *o* with the auxiliary and main pistons, so as to be operated by the latter, and be caused to operate the auxiliary piston, in manner as explained.

3,722.—B. S. ROBERTS, United States Army.— *Breech-Loading Fire-Arm.* — Patented June 11, 1867, No. 65,607; reissued July 20, 1869, No. 3,562; again reissued November 9, 1869.

Claim.—1. In combination with a breech-plug, P, which swings about a curved abutment, *c*, a rocking shield, *g*, so applied to said breech-plug as to allow the opening and closing of the breech of the barrel for the insertion and withdrawal of a cartridge, substantially as described.

2. The breech-plug B, when adapted to fit and swing about the solid curved convex abutment *c c c*, and when it has formed, on its rear end, the extension B', that constitutes a lever, by which the same may be conveniently manipulated, as described.

3. The lever B', formed on the rear end of the swinging breech-plug B, and adapted to move about its solid abutment *c*, in combination with a rocking-block, *g*, which will admit the opening and closing of the breech, substantially as described.

4. The lever extractor *p*, arranged on one side of the barrel, and having one of its arms arranged in a recess in the recoil-shield, so as to be acted upon by the shoulder *n*, at the upper termination of said recess, substantially as described.

5. The curve *c c c*, at the rear of the checks containing the breech-plug B, when formed substantially as set forth, and so that the force of the gas, when the gun is fired, shall have no tendency to throw the breech-plug out of its place, as described.

6. A bodily swinging breech-plug, B, having a rear extension B', and a lever-latch, C, constructed substantially as described.

3,723. — SARGENT AND COMPANY, New Haven, Conn., assignees of PURMORT BRADFORD.—*Lifting-Handle for Coffins, &c.*—Patented March 12, 1867, No. 62,729; reissued November 9, 1869.

Claim.—1. The socket A, formed with a vertical slot, *d*, provided midway with a seat to receive the trunnion *a*, constructed and arranged to operate as herein described, as an article of manufacture.

2. The combination of the hollow cylinder or handle C with the swinging levers B B, and rod *n* passing through the cylinders and levers, so as to bind the handle and swinging levers together, when constructed substantially as described, so that the handle will be retained in its fixed position between the two levers.

3,724.—EMIL T. HERTLE and RICHARD THOMPSON, New York, N. Y.—*Machinery for Making Wire Heddles.*— Patented July 14, 1868, No. 79,905; reissued November 9, 1869.

Claim.—1. In machines for making wire heddles, the arrangement of mechanism, substantially as described, whereby the distance between the twisting-mechanism and the eye-forming die or pincers is shortened, during the operation of twisting the wire.

2. Arranging the head-stocks *b' b'*, which support the inner or adjacent ends of the cylinders *a* a^1, substantially in the manner described, and for the purpose set forth.

3. The arrangement of a cam or cams, *g*, in combination with the movable cylinder or cylinders *a*, substantially as described.

4. The combination of the movable cylinders *a* a^1, the rods *i i'*, bars *h h'*, and cams *g g*, substantially as set forth.

5. The combination of a spring, *t*, with the sliding tooth-carrying pinion a^2, substantially as described.

3,725.—ALBERT LORSCH, Memphis, Tenn., assignee of THEODORE NOEL. — *Spectacle-Frame.* — Patented January 11, 1859, No. 22,572; reissued November 9, 1869.

Claim.—1. The combination, with an eye-piece of a pair of spectacles or eye-glasses, of a spring, so arranged upon the eye-piece, over the point where its continuity is broken, that it will permit of the expansion of the said eye-piece sufficiently to allow of the insertion and withdrawal of the glass, and thereafter cause the said eye-piece to resume its normal position, substantially as and for the purpose herein specified.

2. The combination of the spring *b* with the opening *a* and temple *c*, substantially as herein specified.

3,726. — EDMUND WRIGHT, JOHN WRIGHT, JOSEPH WRIGHT, and JOHN NOBLE, Philadelphia, Pa., and JACOB H. FILSON, New York, N. Y., assignees of JOHN A. LIEB and E. W. CRANE. — *Safety-Attachment for Umbrellas.* — Patented February 18, 1868, No. 74,555; reissued November 9, 1869.

Claim.—1. The combination, with the runner and stick of an umbrella, of a permutation locking-device, or equivalent mechanism, whereby the control of the runner is made dependent upon the proper adjustment of movable parts of the locking-mechanism, and such proper adjustment is determined by letters or other characters on the said movable parts.

2. The combination of the stick, with its projections *e e*, slotted runner B, and rings *c*, with the notched flanges.

3. The scalloped edges of the rings, in combination with the spring *h'*, or its equivalent.

3,727. — E. H. ASHCROFT, Boston, Mass., assignee of WILLIAM NAYLOR.—*Steam Safety-Valve.*—

Patented October 16, 1866, No. 58,962; patented in England, January 21, 1864; reissued November 9, 1869.

Claim. 1. The combination and arrangement, with the hereinbefore-described safety-valve, of bent levers of the first order, and the spring or springs, in the manner substantially as hereinbefore set forth.

2. The safety-valve C, with its overhanging downward-curved lip or periphery, and annular recess D, substantially as herein shown and described, and for the purpose set forth.

3. The annular recess D, surrounding the valve-seat, substantially as herein set forth.

4. The combination of the valve C and the annular recess D, as herein set forth, and for the purpose described.

3,728.—JOHN AHERN, Baltimore, Md., assignee of BENJAMIN BEST. — *Composition for Destroying Insects on Fruit-Trees.*—Patented June 2, 1868, No. 78,569; reissued November 16, 1869.

Claim.—1. A composition, compounded of the above-named ingredients, with or without the coal-tar, substantially as set forth.

2. The mode of protecting trees, by the application of the hereinbefore-described composition to bands of fibrous material surrounding the tree, substantially as described.

3,729.—JOSEPH COLTON, New York, N. Y.—*Safety-Pocket.* — Patented December 3, 1867, No. 71,706; reissued November 16, 1869.

Claim. — 1. The open shield C, in combination with the clasp and fastening-devices, as described.

2. The clasp-plates A B, constructed as described, with the slot or openings *a'*, between their adjacent edges, substantially as described.

3. The combination of the plates A B, shield C, and spring-slide *b* or *d*, (either or both,) with the pocket, substantially as and for the purpose set forth.

4. The combination of plates A B, shield C, stop *a*, spring-slides *b d*, springs *e f g*, and pin *h*, all arranged and operating substantially as described.

3,730. — MARKS FISHEL, ADOLPH OPPER, and LEO POPPER, New York, N. Y., assignees of MARKS FISHEL.—(Division A.) *Skeleton-Skirt.*— Patented January 14, 1862, No. 34,182; reissued November 16, 1869.

Claim. — 1. A supporting fabric for hoop-skirts, provided with holes C C, through which the hoops may be passed and be thereby sustained, passing inward and outward through the holes, substantially as and for the purposes herein set forth and described.

2. In connection with the above, the hard lining of the holes C C, to defend the fabric against destruction by the movement of the hoops therein, substantially as shown.

3. A hoop-skirt, having the hoops supported in holes formed and arranged in the supporting-material, substantially as herein set forth.

3,731. — MARKS FISHEL, ADOLPH OPPER, and LEO POPPER, New York, N. Y., assignees of MARKS FISHEL.—(Division B.) *Skeleton-Skirt.* — Patented January 14, 1862, No. 34,182; reissued November 16, 1869.

Claim.—Securing the hoops A A to the tapes B B, by means of fastenings D, or their equivalents, passing through the eyelets C C, and across a portion of the tape between them, substantially as and for the purposes herein set forth.

3,732.—LIBERTY LITCHFIELD, FESTUS C. LITCHFIELD, and LIBYA M. LITCHFIELD, Southbridge, Mass., assignees of LYDIA W. LITCHFIELD, administratrix of the estate of LAROY LITCHFIELD, deceased.—*Shuttle for Looms.*—Patented May 1, 1855, No. 12,780; reissued March 30, 1869, No. 3,355; extended seven years; again reissued November 16, 1869.

Claim.—1. The combination and arrangement of the spring *d* with the shuttle A, the spindle *a*, the joint pin *b*, the arm *c*, and the abutment or stop *h*.

2. The combination and arrangement of the pin *e* and its head *f*, with the shuttle A, the spring *d*, the spindle *a*, the joint-pin *b*, the arm *c*, and the abutment, or stop *h*.

3. The combination of means of adjusting the stop *h*, in manner as described, with such stop, the arm *c*, the spindle *a*, the pin *b*, and the spring *d*, arranged with the heel and the joint-pin of the spindle, and in the shuttle, as set forth.

4. The arrangement of the spring *d*, so as to rest on a bearing at or near its rear end, and to press toward the head of the spindle, in or about in the direction of the axis or length of the spindle.

5. A loom-shuttle, provided with a spring, substantially as described, to act on the head of the spindle, and hold it in either or each of its extreme positions, and having, also mechanism, substantially as described, to act on the bobbin-head catch, to liberate it from the bobbin-head, while the spindle is being raised in the shuttle, and admit of it catching upon the said head while the spindle is in the act of being depressed into the shuttle.

3,733.—WILLIAM A. CLARK, Woodbridge, Conn. —*Expansive Bit.* — Patented May 11, 1858, No. 20,192; reissued June 22, 1869, No. 3,516; again reissued November 16, 1869.

Claim.—1. The formation of a V-ledge in the recessed shank, and a correspondingly-shaped recess in the adjustable cutter, back of or above its cutting-edge, to fit the ledge in the shank, substantially as and for the purposes set forth.

2. The combination, with the recessed shank and adjustable cutter in which a V-ledge and correspondingly-shaped recess are respectively formed, as specified, of the follower and screw for driving home the cutter against the said V-ledge, which forms its lower bearing, and binds it to the shank, substantially as shown and set forth.

3,734. — ORIGIN HALL, Willimantic, Conn., and TIMOTHY MERRICK, Holyoke, Mass. — *Machine for Dressing and Finishing Thread.*—Patented August 21, 1860, No. 29,690; reissued November 16, 1869.

Claim.—1. In combination with a brush-cylinder, the heated and rapidly-revolving metallic cylinder I, substantially as shown and described, for the purpose specified.

2. In combination with the hot polishing-cylinde the rollers J and J', and the adjustable roller Q, or their equivalents, by means of which the passing threads may be forced or actuated into a greater or lesser degree of contact with the surface of said cylinder, substantially as shown and described, for the purposes specified.

3. In combination with the roller J, the vibrating roller J', when arranged to operate in combination with a hot polishing-cylinder, in a brush-cylinder machine, substantially as shown and described.

4. A heated metallic cylinder, having in its peripherical surface, grooves of a proper size, and well polished, in combination with a brush-cylinder, as and for the purposes specified.

3,735. — RICHARD M. HOE and STEPHEN D. TUCKER, New York, N. Y.—*Printing-Press.*—Patented June 29, 1869, No. 92,050; reissued November 16, 1869.

Claim.—1. The combination and arrangement, in a printing-machine, of two series of rollers, consisting of two printing-cylinders and one impression-cylinder, with two impression-cylinders and one printing-cylinder, with the requisite inking-machinery, arranged and operating substantially as and for the purposes set forth and specified.

2. Arranging the endless blankets for the impression-cylinders, as shown, whereby the same are made to perform the twofold duty of blankets and sheet-conveyers, thereby dispensing entirely with the use of tapes, for conveying the sheets, substantially as described and specified.

3. The mechanism for sustaining the cylinder, for changing the form or blanket, consisting of the rod *o* and bar *k*, substantially as described and specified.

3,736. — ALEXANDER KING and GEORGE H. KING, Painesville, Ohio.—*Washing-Machine.*—Patented August 24, 1869, No. 94,005; reissued November 16, 1869.

Claim.—1. The revolving disk D D, located near

the bottom of the tub, and supported at the upper end of a vertical shaft which passes through the bottom of the tub.

2. The revolving disk, vertical shaft passing through the bottom of the tub, and the stuffing-box, as shown.

3. The arrangement of the support for the step of the vertical shaft on brackets attached to the bottom of the tub, as shown.

4. The stay-rods or braces V, passing from the central bolt or step to each leg of the washing-machine, for stiffening the legs.

5. The arrangement of the revolving disk D D, located at the bottom of the tub, and supported on a vertical shaft which passes through the bottom of the tub, and the direct vertical driving-shaft, and beveled gearing G H, arranged below the tub.

6. The arrangement of the crank-wheels M K, the crank O, the connecting-bar L, the pin P, and slotted bar Q, as described and shown.

3,737.—ANSON C. MCMAHAN, Lincoln, Ill.—*Compound for Curing Cholera in Hogs and Chickens.*—Patented August 31, 1869, No. 94,428; reissued November 16, 1869.

Claim.—The medical compound herein described, compounded in the proportions and in the manner substantially as specified.

3,738.—O. W. STOW, Plantsville, Conn.—*Machine for Folding Tinned Plates.*—Patented December 24, 1867, No. 72,561; reissued November 16, 1869.

Claim.—In a machine, substantially as herein described, the combination of the folding-plate F, folding-bar D, and adjustable bearings, the whole combined and arranged substantially as described, whereby the distance between the adjacent edges of the folding-plate and folding-bar can be increased or diminished, by means of the adjustable bearings for the journals of the folding-bar.

3,739.—ARTHUR M. ALLEN, New York, N. Y.—*Mechanical Velocipede.*—Patented August 24, 1869, No. 94,058; reissued November 23, 1869.

Claim.—The friction-joint in the connection between the front and hind wheels of a toy-velocipede, substantially as set forth.

3,740.—EDWARD T. COVELL, Brooklyn, N. Y.—*Soldering-Machine.*—Patented March 26, 1867, No. 63,220; reissued November 23, 1869.

Claim.—1. A movable adjustable support, so constructed and combined with a receptacle for molten solder as to properly sustain the vessel to be soldered, and allow its joints or seams to be dipped in the solder, and removed therefrom, substantially as herein set forth.

2. The supporting-plate B, when secured in a fixed position, and so combined with a pan or vessel, A, to contain molten solder, as that the plate B shall extend over and partially cover the solder-space in the pan, substantially as herein set forth.

3. The combination of a suitable non-conducting material, *x*, with the supporting-plate or base-piece B of a soldering-apparatus, constructed and arranged substantially as herein set forth.

4. The stay-bars or arms E E, in combination with a movable support, B, solder-pan A, and fixed supports F, to guide and retain the support in a proper position over or within the solder-pan A, substantially as herein set forth.

5. In combination with the movable support B, guides F F, and a solder-pan, A, springs, so placed and arranged as to facilitate the elevation of the support after its depression, substantially as herein set forth.

3,741.—GEORGE C. HOWARD, Philadelphia, Pa—*Machine for Pressing and Molding Pliable Materials.*—Patented June 19, 1866, No. 55,658; reissued November 23, 1869.

Claim.—1. Constructing the frame of the machine of the two housings, A A^1, each in one piece, the bolt E and the table B, or its equivalent, interposed between and secured to said housings, substantially as set forth.

2. In the construction of said housings, casting in one piece with them, respectively, and at the points thereon described and shown, the bosses for the pressure-rods and for the treadle-shaft, all as set forth.

3. In the construction of said housings, casting in one piece with them, respectively, and at the points thereon described and shown, the bosses R^1, V, and *m*, as and for the purposes set forth.

4. The combination of the stand for the lower mold and the table of the press-frame, by means of cross-slots and bolts, as before set forth, so as to permit of the horizontal adjustment of the stand upon the table in every direction.

5. In the construction of said housings, casting in one piece with them, respectively, and at the points thereon described and shown, all the bosses severally described herein; that is to say, for the pressure-rods, for the rods which confine the table, for the rod E, for the rock-shaft O, and for the treadle-shaft W, in the manner and for the purposes set forth.

6. In combination with the frame of the press, the shaft W, treadle I, two or more bosses I′ I″, on said treadle I, and two or more bosses, A′ A″, on said frame, all of said bosses being provided with holes for the reception of said shaft W, as set forth.

3,742.—GUSTAVUS A. JASPER, Charlestown, Mass.—*Apparatus for Drying Sugar and other like Articles.*—Patented May 25, 1869, No. 90,549; reissued November 23, 1869.

Claim.—1. The rotary cylinder A, provided with means for heating air, substantially as described, and means for carrying the heated air through the cylinder, substantially as described, for the purpose of drying the sugar and like articles by the action of the heated air.

2. The combination of the rotary cutter L and rollers M M with a tunnel, substantially as described, for the purpose described.

3,743.—WILLIAM J. LEWIS, Pittsburgh, Pa.—*Bolt-Making Machine.*—Patented March 5, 1864, No. 41,929; reissued January 5, 1869, No. 3,251; reissued November 23, 1869.

Claim.—1. As a new and improved method of forming bolt-heads, upsetting, by means of a reciprocating heading-tool, the end of the bolt-blank against the faces of the griping-dies, and into a cavity formed therein, of a breadth in one direction equal to the breadth of the finished head, but open on one or both the other sides, to permit the exudation of the metal, and, after each impact of the heading-tool, turning the blank one-fourth of a revolution, in order that the metal forced beyond the line of finish by the operation of the header may be forced back into the body of the head by the next succeeding operation of the dies, substantially as described.

2. The combination of a heading or upsetting tool, the working-face of which is longer than it is broad, with a pair of griping-dies, which, when closed, form a working cavity of the same width as the bolt-head to be formed therein, and of a length at least equal to the length of the working-face of the heading-tool, the combination being substantially such as and operating conjointly in the manner described, and for the purposes set forth.

3. The construction and arrangement, in a bolt-heading machine, of three dies, substantially in the manner and for the purposes set forth.

3,744.—PETER NAYLOR, New York, N. Y., assignee of WILLIAM ANTHONY SHAW.—*Manufacture of Tin-Lined Lead Pipe.*—Patented February 18, 1868, No. 74,613; antedated February 6, 1868; reissued November 23, 1869.

Claim.—1. The manufacture of lead-incased tin pipe from ingots, or a charge of metal, made substantially as herein described, of three parts, whether the same be united before or after they are put into the cylinder.

2. The manufacture of lead-incased tin pipe from a compound ingot, composed of concentric parts of lead and tin, when the central ingot is made of tin, in the form of superposed inverted frusta of cones, or their equivalent.

3. In the manufacture of the compound ingot for lead-incased tin pipe, the employment of an intermediate cone or cones, whereby a large portion of

the lead ingot may be cast without contact with the tin, thus reducing the alloying of the two metals.

4. In the manufacture of the compound ingot, as herein described, the formation of the tin ingot of superposed inverted frusta of cones, the upper one being of larger diameter but proportionally shorter than the lower.

3,745.—HERMANN SCHMIDT, New York, N. Y.—*Hand-Screw Clamp.*—Patented August 14, 1866, No. 57,195; reissued November 23, 1869.

Claim.—A hand-screw clamp, the nut or nuts of which are capable of being thrown in or out of gear with the clamping screw or screws, substantially in the manner and for the purpose herein set forth

3,746.—THE WOVEN-WIRE MATTRESS COMPANY, Hartford, Conn., assignees, by mesne assignments, of FRANZ RUDOLPH WEGMAN.—*Wire-Spring Mattress.*—Patented June 16, 1868, No. 79,040; patented in Saxony, March 6, 1865; reissued November 23, 1869.

Claim.—A fabric, formed of double-woven spiral springs, coiled and intertwined, in the manner described.

3,747.—WILLIAM WESTLAKE, JAMES F. DANE, and JOHN P. COVERT, Chicago, Ill., assignees of WILLIAM WESTLAKE.—*Lantern.*—Patented April 26, 1864, No. 42,520; reissued November 23, 1869.

Claim.—1. The lantern-guard *a*, constructed entire, without hinge or joints, so that, as a whole, it can be readily attached to or removed from the lantern, as set forth.

2. The disk *g*, in combination with the ring or band *b* of the guard, and fastenings *e*, substantially as and for the purposes specified.

3. The guard *a*, in combination with the disk *g*, fastenings *e*, and removable globe *d*, substantially as specified.

3,748.—CLEAVELAND F. DUNDERDALE, New York, N. Y.—*Apparatus for Generating and Carbureting Gas.*—Patented June 1, 1869, No. 90,644; reissued November 30, 1869.

Claim.—1. The manufacture of carbureted-hydrogen gas, by placing the hydrocarbon-liquid and the diluted acid in different vessels or compartments, not in contact with each other, but in the same machine, and under the same cover, and near each other, for the purposes described.

2. The combination and arrangement of the cover B, containing the funnel-shaped cylinder D and annular chamber E, with pipes F and outlets M; the chamber D, as a regulator, conductor for the hydrogen-gas, and supporter for the hydrocarbon-chamber E, the tank A, water-chamber C, and feed-pipe H, the whole being combined in the manner and for the purpose substantially as herein set forth and described.

3,749.—JOHN F. FISHER, Greencastle, Pa., and DANIEL BREED, Washington, D. C., assignees of JOHN F. FISHER.—*Guano-Attachment for Seed-Drills.*—Patented June 1, 1869, No. 90,653; reissued November 30, 1869.

Claim.—1. The above-described screw bevel-gear, or its equivalent, for operating the stirrers of a guano-attachment to wheat-drills, or other fertilizer-machines, substantially as set forth.

2. The quarter pinion F and reciprocating rack-bar E, placed under the hopper, in combination with the swinging fingers, or stirrers, inside of the hopper, substantially as set forth.

3. In combination with the stirrers and quarter pinion, the reciprocating bar E, the rod D, crank C, pinion B, and gear-wheel A, substantially as set forth.

3,750.—THOMAS J. HALL, Bryan, Texas.—*Gang-Plow.*—Patented April 20, 1869, No. 89,144; reissued November 30, 1869.

Claim.—1. The combination of the up-and-down adjustable slotted cross-bar D, having the perforated plate *f*, with the plow-beams E, pins *e*, and pivoted levers G, all arranged and operating substantially as and for the purpose herein shown and described.

2. The levers G, pivoted to the up-and-down adjustable cross-bar D, connected at their front ends with the plow-beams, and adjusted with their rear ends on a cross-bar, *k*, all arranged and operating substantially as described, for the purpose of oscillating the plow-beams, as specified.

3. The brace or bridle P, when constructed and arranged with relation to the plow-beam and revolving cutter I, to support and strengthen the stock O, in the manner substantially as described.

3,751.—RICHMOND A. LEEDS, Stamford, Conn.—*Gate-Latch.*—Patented September 25, 1866, No. 58,268; reissued November 30, 1869.

Claim.—1. The arrangement, horizontally across the face of the front stile of a gate, of one or more eccentrically-hung dogs or plates, provided with a handle or handles, when used in combination with a stationary lug or projecting piece, secured to the fence-post, substantially as herein specified.

2. A latch for gates, consisting of two eccentrically-hung bolts or plates, D, provided with handles or arms, E, and arranged within an inclosing case, F, in combination with a lug or projecting piece, H, substantially as herein specified.

3,752.—IRA WOOD, Woodstock, Vt.—*Composition of Liquids for Tanning.*—Patented September 14, 1869, No. 94,805; reissued November 30, 1869.

Claim.—1. A tanning-liquid, made of the leaves of the trees of the different varieties of alder, sycamore, elm, basswood, chestnut, walnut, hickory, apple, peach, poplar, and birch, hereinbefore described, used separately, or combined one with another, or two or more, or all, in equal or any proportions, for the purpose and in the manner above set forth.

2. A tanning-liquid made of the leaves of the different varieties of alder, sycamore, elm, basswood, chestnut, walnut, hickory, apple, peach, poplar, and birch trees, used separately, or two, or more, or all together, in combination with the leaves of the different varieties of oak, maple, willow, and beech trees, the leaves of the four last-mentioned varieties of trees being used separately, or two, or more, or all, in making the liquid, all the said varieties of leaves being mixed in equal or any proportions, for the purpose and in the manner above set forth,

3. A tanning-liquid, made of the different varieties of the alder, sycamore, elm, basswood, chestnut, walnut, hickory, apple, peach, poplar, and birch trees, used separately, or two, or more, or all of them together, in combination with alum, Glauber's salts, and nitric or sulphuric acid, in about the proportions above specified, and for the purpose and in the manner above set forth.

4. A tanning-liquid, made of the leaves of the different varieties of the alder, sycamore, elm, basswood, chestnut, walnut, hickory, apple, peach, poplar, birch, oak, maple, willow, and beech trees, in combination with alum, Glauber's salts, and nitric or sulphuric acid, in about the proportions above specified, and for the purpose and in the manner above set forth.

5. A tanning-liquid, made of the leaves of the different varieties of the oak, maple, willow, beech, alder, sycamore, elm, basswood, chestnut, walnut, hickory, apple, peach, poplar, and birch trees, used separately, or two, or more, or all of them together, in combination with a liquid made of hemlock bark, or oak bark, or cutch, or other tanning-liquid used in the manufacture of leather, in equal or any proportions, for the purpose and in the manner above set forth.

6. The employment of my improved tanning-liquids, made of the leaves of the different varieties of the oak, maple, willow, beech, alder, sycamore, elm, basswood, chestnut, walnut, hickory, apple, peach, poplar, and birch trees, one, or more, or all together, in finishing leather tanned by the use of other liquids or processes.

3,753.—H. B. DURFEE, Decatur, Ill.—*Plow.*—Patented May 18, 1869, No. 90,246; reissued November 30, 1869.

Claim.—1. The construction and arrangement of the beam and short handle, for the purpose of leaving an open landside space and clearance, for the clogging material that drops over the mold-board, substantially as described.

2. In combination with the short handle D, a brace,

e, extending therefrom to the standard or beam, or both, substantially as and for the purpose described.

3,754.—LIVERUS HULL, Charlestown, Mass.—*Manufacture of Whip-Stocks.*—Patented January 8, 1867, No. 61,070; reissued November 30, 1869.

Claim.—1. In a whip-stock composed of a center-piece of one material, surrounded by several outside pieces or strips, the mode of producing the requisite shape or taper therein, by a turning-machine, the said process consisting of first butting each outside strip laterally against its contiguous strip, securing them together by glue, substantially as above described, and afterwards turning the same into proper shape by tools working transversely, without disarrangement of its several pieces or parts.

2. The improved whip-stock, when arranged and turned substantially as described.

3,755.—METROPOLITAN WASHING-MACHINE COMPANY, Middlefield, Conn., assignee of ALFRED M. BAILEY and JOHN O. COUCH.—*Clothes-Wringer.*—Patented January 14, 1862, No. 34,178; reissued November 30, 1869.

Claim.—1. In a clothes-wringer, of otherwise ordinary or suitable construction, elastic rolls so mounted in the frame and combined with springs that one end shall be free to play within the capacity of the springs, while the other is confined.

2. In combination with elastic rolls, mounted in the frame of a wringing-machine, as herein shown, so as to have a more limited play at the geared end than at the other, the employment of a spring or springs, having a central or common bearing at a point intermediate between the ends of the rolls.

3. The construction of wringing-machines in which the rolls are operated by gear-wheels in such manner as to allow play to the rolls at the end nearest the wheels, to an extent as will not permit them to be thrown out of gear, and at the other end allow a larger play against a spring or its equivalent, so as to operate upon masses of clothing of different thicknesses, as herein set forth.

3,756.—GEORGE W. LEE, Sandy, Ohio.—*Feed-Cutting Attachment to Thrashing Machines.*—Patented May 4, 1869, No. 89,669; reissued December 7, 1869.

Claim.—1. The combination of a series of fixed saws with a spiked cylinder or its equivalent, for cutting feed, substantially as herein set forth.

2. The combination, with the toothed cylinder and toothed shell of a thrashing-machine, of the attachment D, provided with saws, and either permanently or detachably connected thereto, substantially as specified.

3. The aprons F G, combined with the attachment D and the casing H, and arranged substantially as specified.

4. The plate L, combined with the apron G, the casing H, and attachment D, when arranged substantially as specified.

3,757.—CHARLES GREEN, WILLIAM WILSON, Jr., HENRY DU PONT, E. I. DU PONT, L. DU PONT, and EUGENE DU PONT, Wilmington, Del., and CHARLES PRATT, New York, N. Y., assignees of JAMES WILSON, CHARLES GREEN, and WILLIAM WILSON, Jr.—*Powder-Keg.*—Patented July 12, 1859, No. 24,772; reissued January 6, 1863, No. 1,383; again reissued December 7, 1869.

Claim.—1. The method of closing the ends of sheet-metal cans by means of a countersunk head or cap fitting within the orifice to be closed, and provided with a flange, which rests upon the upright edges of the can around the orifice, and is formed, with said edges, into a lap-seam, against an external mandrel, as a support, substantially as shown and set forth.

2. The flaring lap-seam, formed by the union of the flange of the countersunk head with the upright edges of the can surrounding the orifice to which said head is applied, substantially as and for the purposes shown and set forth.

3. A sheet-metal can, composed of flanged and countersunk heads, in combination with corrugated or bulging sides, the two being united by a lap-seam, formed as specified, and brought within the compass of the bulging sides, so that the seam or seams may be protected from injury, as herein set forth.

4. The formation of a groove or recess in the body of the can, parallel with the lap-seam, and adjoining the edge of the turned-down flange of the countersunk head or cap, as and for the purposes set forth.

5. A sheet-metal can, one or both ends of which are closed by means of a flanged or countersunk head or cap, applied and secured to the can in the manner substantially as shown and set forth.

3,758.—SMITH, LATROBE AND COMPANY, Baltimore, Md., assignees of FREDERICK H. SMITH.—*Bridge.*—Patented October 26, 1869, No. 96,278; reissued December 7, 1869.

Claim.—1. The combination, in a beam-truss, of the strut or post with the adjusting-devices herein described, or their mechanical equivalent, applied directly to the foot or base of said post, for the purpose of contracting or elongating its working-length, substantially as set forth.

2. The herein-described construction and combination of the loops and pin constituting an adjusting-device applied to the foot of the post, in either beam or suspension-trusses, substantially as shown and set forth.

3. The arrangement of the chord-bars, provided, at their upper edge or edges, with flanges or stiffening-irons, for the purpose specified, and jointed to the pins upon which their ends are supported, substantially as shown and set forth.

4. The attachment of the lateral-bracing systems to the joint-pins, by means of the bolt which at once combines the pin, strut, loops, and adjustable ties into a hinged joint in the lateral plane of the truss, substantially as shown and specified.

5. The combination, with the feet of the struts or posts, of the adjustable loops and joint-pins, with which the lateral-bracing system is connected substantially as herein shown and set forth.

3,759.—REUBEN KIDEN HUNTOON, for himself and JOHN AUGUSTUS LYNCH, assignee, by mesne assignments, of REUBEN KIDEN HUNTOON, Boston, Mass.—*Steam-Engine Governor.*—Patented December 4, 1866, No. 60,192; reissued December 14, 1869.

Claim.—1. The combination of the bearing C, its passage *c* and stop-cock *d*, with the shaft B, the propeller D, and the cistern or vessel A, arranged as and for the purpose set forth.

2. The combination and arrangement of the deflector *e* with the cistern A, the shaft B, and the propeller D, arranged as and for the purpose set forth.

3. The combination and arrangement of the wings *a* with the cistern A, the shaft B, and propeller D, arranged as set forth.

4. The governor, as constructed of the propeller D, its shaft B, and case A, and with the long gear *g* applied to, so as to move endwise with the shaft B, and to operate with and be operated by the driving-gear of a shaft, *i*, as set forth.

3,760.—THEODORE MACE, New York, N. Y., assignee of GEORGE C. TAFT.—*Variable Crank for Boring-Machines.*—Patented December 10, 1867, No. 72,114; reissued December 14, 1869.

Claim.—1. Combining with the shaft *g* and gearing of the boring-machine, a crank-handle that is variable in its length, so that the leverage of the crank may be adapted to the work to be performed by the boring-tool, substantially as specified.

2. The arm *i*, attached at the end of the shaft *g*, and provided with the hub *k*, through which passes the rod *m*, to the handle *n*, substantially as set forth.

3,761.—H. OLDS, Syracuse, N. Y.—*Slide for Extension-Table.*—Patented September 10, 1867, No. 68,782; reissued December 14, 1869.

Claim.—The metal slides *a*, made in the form of a cross, as herein specifically set forth, and working in corresponding grooves in the slide-bars *b*, constructed, arranged, and combined as herein specified.

3,762.—CHARLES PRATT, New York, N. Y.—*Nozzle for Cans.*—Patented April 20, 1869, No. 89,167; reissued December 14, 1869.

Claim.—1. As a new article of manufacture, a combined nozzle and seal for cans, composed of a metallic nozzle, in combination with a cap of thin soft metal, applied and secured to the same, substantially as herein described.

2. The combination, with a nozzle for cans, of a soft-metal cap covering the mouth of the nozzle, and extending downward upon the sides of the same a sufficient distance to admit of the cap being soldered to the nozzle at a point removed from or below its mouth, substantially as and for the purposes set forth.

3. The formation, upon the soft-metal cap which covers the mouth of the nozzle, of a shoulder or ridge for the guidance of the cutting-instrument, as shown and set forth.

3,763.—CYRUS ROBERTS and JOHN A. THROP, Three Rivers, Mich.—*Horse-Power.*—Patented December 8, 1868, No. 84,766; reissued December 14, 1869.

Claim.—1. The combination of a V-shaped truck-frame, and its tranverse bolsters, with the bed-plate and gearing, the whole constructed for joint operation, substantially as set forth.

2. The combination, with the sweeps, of the diagonal braces, having their leading ends respectively connected with the sweeps, in advance thereof, at points outside of the sockets through which said sweeps pass, all constructed for joint operation substantially as set forth.

3. The combination of the line-shaft, the bed-plate, and the dished bevel-wheel, arranged below the bed-plate, all constructed for joint operation, substantially as set forth.

4. The combination of the bevel-wheel, united by the clutch to the pinion above it, the friction-roller rotating upon the upper surface of the wheel, above the pinion of the line-shaft, and the friction-roller at right angles thereto, all these parts being constructed to operate as set forth.

5. The combination of the annular master-wheel, the friction-rollers, the fixed bed-plates, and the guides, all these parts being constructed to operate as set forth.

6. The arrangement of the frame, the bed-plate, the line-shaft, and the hangers B^2, constructed as described.

3,764.—EDWARD SEELEY, Scranton, Pa.—*Composition for Concrete Pavements.*—Patented September 6, 1864, No. 44,117; reissued December 14, 1869.

Claim.—1. The combination of silica, gas-tar, and sulphur, substantially as and for the purposes described.

2. The within-described composition of silica and gas-tar, when prepared substantially in the manner and for the purposes set forth.

3. The herein-described process of preparing the composition, by heating the silica, and then mixing it with the heated gas-tar, substantially as and for the purposes described.

3,765.—BERNARD STEINMETZ, Paris, France.—*Carpet-Bag Lock.*—Patented August 1, 1865, No. 49,207; reissued December 14, 1869.

Claim.—1. The pivoted spring-lever D, with its catch-projection *m*, and the spring tumbling-block or bolt *v*, operated by a key, combined and arranged substantially as herein described, when applied to the jaws of a satchel, bag, or portmanteau, for the purpose specified.

2. The combination of the "eagle," or shield-knob T, constructed so as to cover the slot 2 in the lock-case C, the catch *m* of the spring-bar D, and the staple *h* of the jaw-frame B, as herein specified.

3,766.—A. J. WARREN and D. W. WILSON, West Eau Claire, Wis., assignors to themselves and NOAH SHAW, same place, and URIAH M. STONE, Augusta, Wis.—*Steam-Generator Furnaces.*—Patented June 22, 1869, No. 91,800; reissued December 14, 1869.

Claim.—1. The arrangement, upon the forward end of the boiler, of one or more inclined spouts, E E, which spouts are provided with self-acting valves, *y*, whereby the sawdust may be fed down from over the top of the boiler to the fire-box, and the valves close themselves to prevent the ascension of flame or other products of combustion, as set forth.

2. The combination of the boiler A, dome *d*, superheating-pipe C, inclined spouts E, and valves *y*, all substantially as set forth.

3,767.—PATRICK ADIE, of the Strand, London, England.—*Machine for Clipping Horses' Hair.*—Patented June 30, 1868, No. 97,293; patented in England April 24, 1867; reissued December 21, 1869.

Claim.—1. The arrangement and combination of the teethed plates A and B, screws I and I, and handle A H, with handle or lever L K D H, the whole constructed and operated substantially in the manner and for the purpose set forth and described.

2. The combination of the two teeth-plates of the clipping-machine, whereby the faces of the teeth are kept in proper contact, by reason of the elasticity of the teeth-cutting plates, all constructed substantially in the manner and for the purpose described.

3,768.—WILLIAM H. BLISS, Newport, R. I., assignee of himself and ROBERT B. LAWTON.—*Hose-Coupling.*—Patented February 22, 1859, No. 23,033; reissued December 21, 1869.

Claim.—1. The combination of the two thimbles C and D, by means of a pin, operating longitudinally through the outer thimble C, and against the inclined side of the groove in the thimble D, so that the two thimbles will be forced together by the inward movement of the pin, and be liberated by its outward movement, substantially as described.

2. The side of the groove in D nearest to the joint to be formed, or to the flanch, constructed with an incline, substantially as described.

3. The combination of the thimbles C and D, cap *i*, and pin *g*, when constructed and operated substantially as described.

3,769.—HENRY BUNDELL, Dayton, Ohio.—*Seeding-Machine.*—Patented January 23, 1866, No. 52,135; reissued December 21, 1869.

Claim.—1. Combining, with the shaft of seed-drills, the sets of zigzag channels *a a*, in the seed-delivery cylinder, with or without the interposed agitating-wheels E, when said channels are made substantially in the manner and for the purpose specified.

2. In combination with the zigzag channels and agitating wheel or wheels E, the sectional case and shield F, arranged substantially in the manner and for the purpose set forth.

3,770.—BETHEL BURTON, Brooklyn, and WILLIAM C. WARD, New York N. Y., assignees of BETHEL BURTON.—*Breech-Loading Fire-Arms.*—Patented December 20, 1859, No. 26,475; reissued December 21, 1869.

Claim.—1. The opening 13, arranged as described, in connection with the breech-piece and stock, for the purpose of allowing the escape of gas and smoke, preventing heating and clogging, and facilitating the lubrication of the parts, substantially as shown and described.

2. A breech-pin made in two or more pieces, with a broken joint or joints, when the front end has a reciprocating motion only, and the rear end a reciprocating and rotary motion, substantially as shown and described.

3. One or more projections on the forward end of the breech-pin, for guiding it and holding it in place, when made and operating as shown and described.

4. The L-shaped groove 11 in the breech-pin, in combination with the pin or projection 12 on the inside of the breech-piece, when arranged and operating as shown and described.

5. A concavity or depression on the front end of the reciprocating breech-pin receiving the conical rear end of the barrel, in combination with a sliding packing-ring in the rear end of the barrel, when made as shown and described.

6. The combination of the breech-piece, and the reciprocating breech-pin made to slide therein, when provided with sectional screws as shown and described.

3,771.—S. J. GENUNG, Waterloo, N. Y.—*Extension-Slide for Tables.*—Patented September 7, 1869, No. 94,486; reissued December 21, 1869.

Claim.—1. The combination, with the wooden bars of an extension-table, of separators at the ends, which receive the frictional contact at those points, without any intermediate connection of the bars, as herein described.

2. Forming the slides B with the dovetailed lugs *g* for attaching to the wood, in the manner and for the purpose specified.

3. In combination with the outside slides B B′, the central connection *a b*, substantially as described.

3,772.—The Kennedy Electric-Clock Company, New York, N. Y., assignees of Samuel A. Kennedy, S. W. Holt, and Joseph Gerlach.—*Electric Clock.*—Patented December 3, 1867, No. 71,624; reissued December 21, 1869.

Claim.—1. Vibrating a pendulum having a magnet attached thereto, by means of two electric coils, arranged, one at each end of the magnet, the said maget and coils having their corresponding poles placed opposite to each other, as shown and described.

2. Actuating the driving-pawl of a clock-mechanism by a weight moved from a state of rest to a certain distance, and retracted by its own gravity.

3. Carrying the weighted pawl-driver intermittently to its point of limitation, and then leaving it to the action of gravity by means of an oscillating pendulum, in the manner set forth.

4. The combination of the ratchet-wheel E with the pendulum H, by means of the lever F, forked bar G, and pawl I, arranged and operating, in relation to each other, substantially as described and for the purposes specified.

3,773.—B. F. Koller, Shrewsbury, Pa., assignee of Samuel Gibson.—*Scrubbing-Brush.*—Patented October 6, 1868, No. 82,705; reissued December 21, 1869.

Claim.—1. Attaching a strip of rubber to one side of a long-handle scrubbing-brush, so that it will be parallel with the rows of the bristles thereof, substantially as described.

2. In a long-handle scrubbing-brush, the arrangement of the strip of rubber D, so as to project from one and the same side of the brush with the bristles thereof, substantially as and for the purpose specified.

3. The arrangement of the shouldered plate A and flanged keeper E, inclosing the strips of rubber D upon the forward part of the bristle-brush G, all as herein shown and described.

3,774.—Henry R. Sensenig and Moses W. Martin, Earl Township, Pa., assignees, by mesne assignments, of Martin W. Zimmerman and John Zimmerman.—*Pump.*—Patented May 3, 1864, No. 42,617; reissued December 21, 1869.

Claim.—1. The rocker-heads B H, with their arms D C I J, and counterpoise L, when operated in unison by a single wire, W, by means of a crank, N, and wheel, M, substantially in the manner and for the purpose specified.

2. In combination with the foregoing arrangement, the adjusting-screw Y, with its burrs V V, when applied in the manner and for the purpose set forth.

3,775.—John Ralston, Abraham L. Thomas, and William Parkinson, for themselves and William A. Shoemaker, Schuylkill County, and George E. Buckley, Philadelphia, Pa., assignees of said Ralston, Thomas, and Parkinson.—*Manufacture of Iron and Steel.*—Patented March 23, 1869, No. 88,208; reissued December 21, 1869.

Claim.—1. The manufacture of an improved article of wrought iron in the puddling-furnace, by using, in combination with molten cast iron therein, the micaceous, gray, magnetic iron-ore, substantially as described.

2. The manufacture of steel direct in the puddling-furnace, by using, in combination with molten cast iron therein, the micaceous, gray, magnetic iron-ore, substantially as herein described.

3,776.—P. J. Clever, Goliad, Texas.—*Sewing-Machine.*—Patented November 16, 1869, No. 96,866; reissued December 28, 1869.

Claim.—1. The combination of the treadle A and clamp A^2 with the machine-frame, whereby the treadle may be adjusted to either side or end of the frame, according to the direction of the feeding-movement, all substantially as specified.

2. The arrangement of the driving-wheel A^{11}, hinged supporting-frame B, eccentric plate B^3, adjustable hanger B^5, and spring D^4, substantially as specified.

3. The combination and arrangement of the vertically-adjustable driving friction-wheel A^{11}, loose friction-wheel B^7, ratchet-clutch B^{11}, spring B^{12}, fly-wheel B^{13}, and friction-lever B^{14}, all substantially as specified.

4. The combination, with the stand and table-plate, of the jointed brace B^{18} and sleeve B^{19}, when constructed and arranged as specified.

5. The crank-shaft B^3, adjustable connecting-rod C^1, oscillating plate C^3, rod C^4, connected by ball-joints with oscillating plate and needle-arm C^5, all constructed as described, and arranged as specified.

6. The combination, with the curved pivoted shuttle-carrying arm having spring-forks to retain the shuttle, of the crank-shaft B^3, when the shaft and shuttle-carrier are connected by the adjustable connecting-rod D^3, constructed as described, to compensate for the wear of parts, substantially as specified.

7. The combination, with the shuttle, of the tension-spring D^8, set-screw D^{10}, and guards D^{11}, when arranged, substantially as specified, to prevent the thread from catching on the adjusting-screw.

8. The combination of the feed-shoe E, vertically-sliding plate E^1, adjusting-spring E^5, set-screw E^8, carrier E^2, and cam E^7, all substantially as specified.

9. The combination, with the feed-carrier E^2 and notched bar F, of the inverted V-shaped frame F^2, stud-pins H, spring H^1, bar F^8, with stud F^9, vertical slide F^4, and cam F^7, all substantially as specified.

10. The combination, with the vertical slide F^4, and stud-pin F^6, of the bent arm H^3 H^4, and adjusting-screw, H^7, substantially as specified.

11. The combination, with tension-spring K, connected to the needle-arm support, as described, of the right-and-left threaded screw K^2, with movable nuts, the disk K^4, and friction-block K^5, all substantially as specified.

12. The spooling-device L, consisting of the vertical stock, arm L^4, grooved pulleys L^1 and L^2, and arranged relatively to the table and friction-wheel B^7, all substantially as specified.

3,777.—John A. McClelland, Louisville, Ky.—(Division A.) *Preparing Compounds Containing Collodion.*—Patented April 28, 1868, No. 77,304; reissued December 28, 1869.

Claim.—1. The method of redissolving and working collodion and its compounds, prepared substantially as described.

2. Collodion and its compounds, dried and reduced to a granular or powdered state preparatory to being treated with the proper solvents, substantially as described.

3,778.—John A. McClelland, Louisville, Ky.—(Division B.) *Material for Forming Dental Plates.*——Patented April 28, 1868, No. 77,304; reissued December 28, 1869.

Claim.—1. A base for artificial gums or dental plates, in which pyroxyline or collodion forms a component part, substantially as described.

2. A dental base, composed of a granulated compound of collodion and coloring-matter, substantially as described.

3. A dental base, composed of collodion and a resinous matter, substantially as described.

3,779.—Blakey Pilkington, Oakland, Cal., assignee, by mesne assignments, of James D. Jenkins.—*Carbureting Air for the Production of Light and Heat.*—Patented January 28, 1868, No. 73,900; reissued December 28, 1869.

Claim.—1. The carbureting of air for lighting and heating purposes by driving a current of the same through a metallic chamber filled with absorbent material saturated with gasoline, or other carbon-oil, by means of a fan-blower, as is hereinbefore specified.

2. An apparatus for producing light or heat, consisting of a vessel or chamber filled with absorbent material saturated with gasoline or other carbon-fluid, and of a fan-blower for forcing air through said saturated material, substantially as herein shown and described.

3,780.—HENRY E. SHAFFER, Rochester, N. Y. —*Fruit-Jar.*—Patented August 31, 1869, No. 94,248; reissued December 28, 1869.

Claim.—The arrangement of the clamp C, spring-bar E, and screw D, either connected or disconnected, when combined with the cover B, having the concavity *a*, whereby a natural spring of the bar is allowed, for giving elasticity to the cover, as herein described.

3,781.—THOMAS H. WHITNEY and S. A. WHITNEY, Glassborough, N. J., assignees of JOHN FOCER. —*Fruit-Jar.*—Patented June 12, 1866, No. 55,581; reissued December 28, 1869.

Claim.—1. The thin metal ring D, having screw-threads adapted to similar threads on the cover B and neck A of a preserving-jar, all substantially as and for the purpose herein set forth.

2. The combination, with a preserve-jar, the neck of which is constructed substantially as herein set forth, of the cover B, gasket C, and ring D, as and for the purpose specified.

3,782.—THOMAS J. HALL, Bryan, Texas, for himself, and HENRY P. STOCKTON and ROBERT P. LANE, Rockford, Ill., assignees of THOMAS J. HALL. —*Plow.*—Patented April 3, 1855, No. 12,627; extended seven years; reissued December 28, 1869.

Claim.—1. The cutter or colter-wheel B, freely revolving on its own axis, when attached to the beam A of a plow, so that it will swivel or turn in such attachment, and the wheel-colter be free to vibrate laterally, and follow the line of draught or direction given to the beam of the plow, in the manner described.

2. The combination of the slotted rod *b*, curved arms *c c*, and wheel-colter B, with the swiveling of the rod *b* in the beam A, in the manner and for the purpose substantially as herein described.

3,783.—J. M. JONES, HENRY JOHNSON and GEORGE M. BOWMAN, Palmyra, N. Y., assignees of J. M. JONES.—*Printing-Press.*—Patented August 11, 1868, No. 80,865; reissued December 28, 1869.

Claim.—1. The arm or arms N, or its or their equivalents, in combination with the platen Q, or its equivalent, when arranged to engage with the said platen or its yoke, and to draw it against the form, to which it has been previously raised, substantially as and for the purpose described.

2. The rocker-arm or arms Q^2, or its or their equivalents, arranged for operation upon the arm or arms N, or equivalent therefor, substantially as described, for the purpose specified.

3. The lever or levers M^3, or equivalent therefor, when arranged for operation upon the rocker-arm or arms Q^2, of the lifting device, to the impression-arms N, substantially as and for the purpose described.

4. A movable hook or clasp, for holding the chase to the bed of the press, when operated by lever *d*, and arranged for operation substantially as specified.

5. The lever G^3, or its equivalent, in combination with the frame carrying the ink-rollers to the press, when arranged for operation therewith, substantially as and for the purpose described.

6. A box or receptacle, in combination with the frame carrying the platen, when arranged thereon for operation, substantially as and for the purpose set forth.

7. As a means of distribution, and for other purposes, detaining the inking-rollers in contact with the distributing-cylinder, during the will or requirements of the operator, with or without stopping the other parts of the machine, such detention being produced by means of the lever G^3, or its equivalent, substantially as and for the purpose described.

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